Modular Matrix Switcher
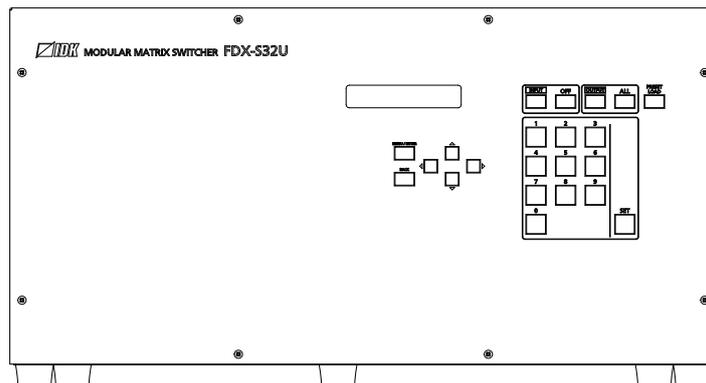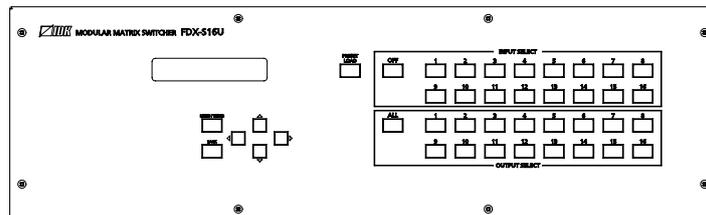
FDX-S Series

FDX-S08U/S16U/S32U/S64U

<Command Reference Guide>

Ver.4.9.0

- Thank you for choosing our product.
- To ensure the best performance of this product, please read this user guide fully and carefully before using it and keep this manual together with the product for future reference as needed.

IDK Corporation

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Before reading this manual

● Some information contained in this Command guide such as exact product appearance, communication commands, and so on may differ depending on the product version.
● This Command guide is subject to change without notice. You can download the latest version from IDK's website at: www.idkav.com

The reference manual consists of the following two volumes:
■ User guide: Please download the User guide from the website above.
  Provides explanations and procedures for operations, installation, connections among devices, I/O adjustment and settings.
■ Command guide (this document):
  Provides explanations and procedures for external control using RS-232C and LAN communications.

Table of Contents

1 About this Guide

This guide contains the procedure for controlling the FDX-S using commands via RS-232C communication or LAN communication.

2 Communication configuration and Specifications

2.1 RS-232C communication

2.1.1 RS-232C connector specification

Insert and secure the wires from the RS-232C cable into the supplied 3-pin captive screw connector, and then insert the captive screw connector into the mating connector on the FDX-S.
28 AWG to 16 AWG conductor gauge is recommended. The recommended wire strip length is 0.28 in. (7 mm).
Short RTS/CTS and DTR/DSR as needed.
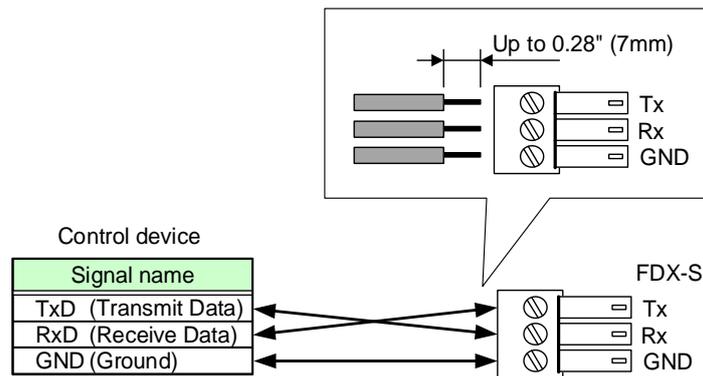
[Fig. 2.1] RS-232C connector

2.1.2 RS-232C communication specification

[Table 2.1] RS-232C specification

Compliant standard	RS-232C
Baud rate	4800/9600/14400/19200/38400 [bps]
Data bit length	7/8 [bit]
Parity check	NONE, EVEN, ODD
Stop bit	1/2 [bit]
X parameter	Invalid
Flow control	None
Delimiter	CR LF (Carriage return and line feed, 0D and 0A in hex)
Communication method	Full duplex

2.1.3 **Setting up RS-232C communication**

(1) Connect the FDX-S and the control device via an RS-232C cable.

(2) Set the RS-232C communication.

【Reference: User Guide】

(3) For the control device, set the same values in the same way as RS-232C communication (baud rate, data bit length, parity check, and stop bit) in step (2) above.

(4) Send a communication command from the control device to the FDX-S in order to check the control status of the FDX-S.
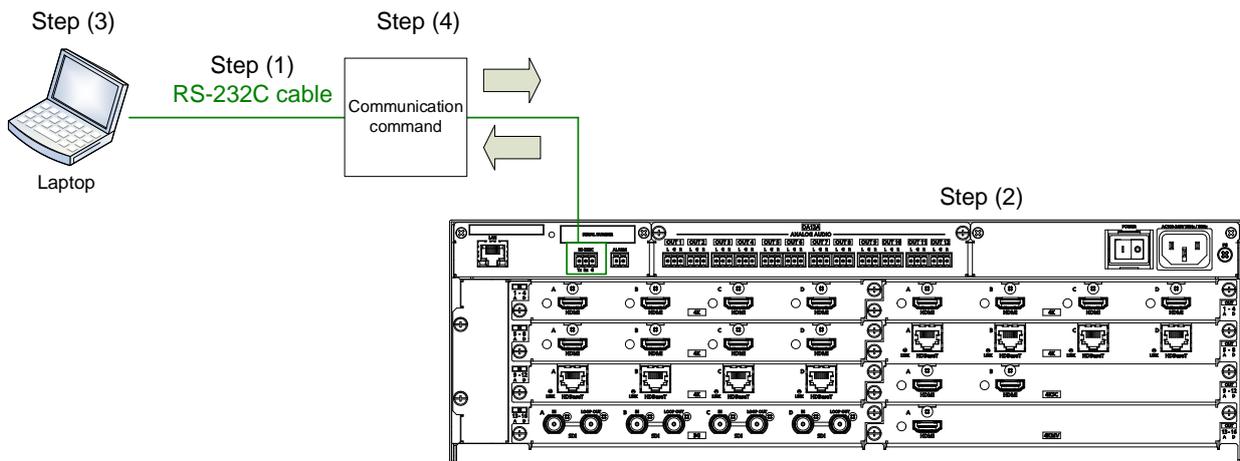
[Fig. 2.2] Setting RS-232C communication

2.1.4 RS-232C transmission mode

Since the FDX-S supports RS-232C transmission over HDBaseT/SDVoE I/O boards, the received data from the RS-232C connector can be transmitted to external devices (camera and projector in the following example) that are connected to HDC series/NJR series products via RS-232C.
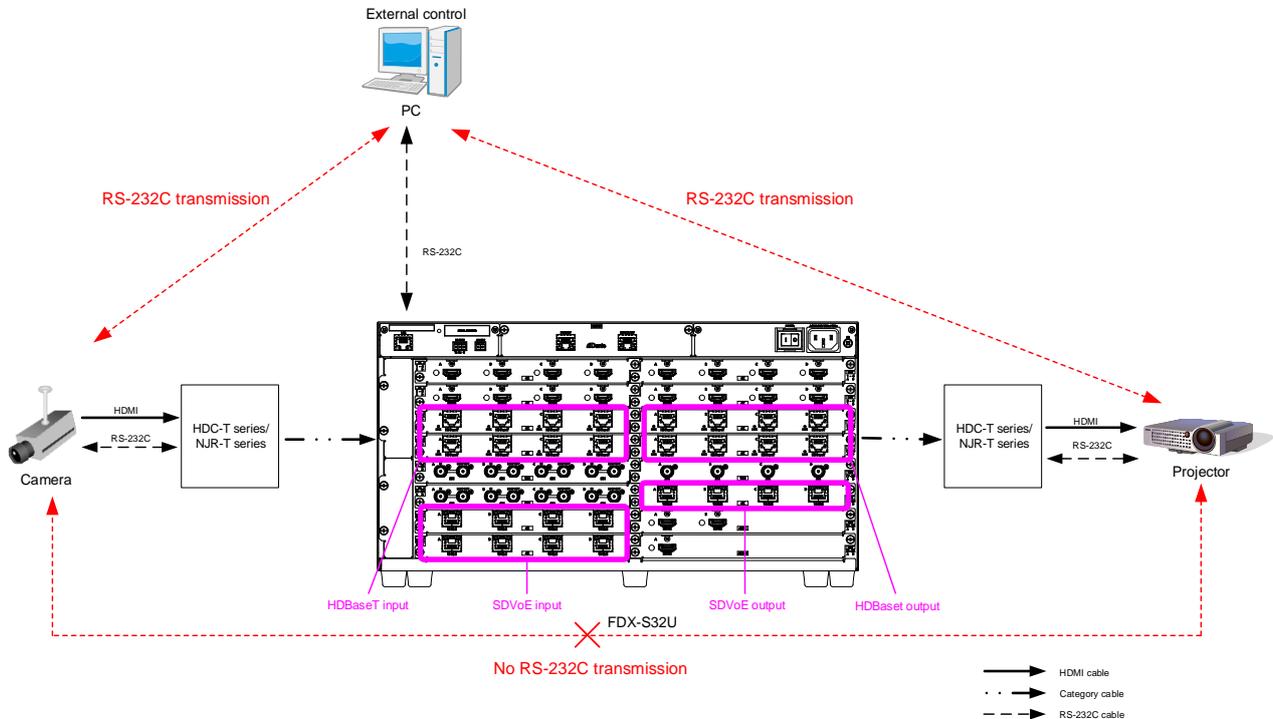
[Fig. 2.3] RS-232C transmission mode application example

When "**3.4.20 Transmission mode**" is set to RS-232C mode, received data will be sent to the specified I/O output channels until the mode is switched to normal mode.

Received data from the specified I/O channel can be sent from an RS-232C connector of the FDX-S. If data that is received from channels other than the specified channel will be deleted.

【See: @G++ / @S++ RS-232C transmission sending channel】
【See: @G+R / @S+R RS-232C transmission receiving channel】
【See: @G+S / @S+S RS-232C transmission mode】

Note:
RS-232C communication is not available between an HDBaseT/SDVoE input board and HDBaseT/SDVoE output board.

Example: Sending data to OUT12 and receiving the response from OUT12

①	@SCT,1,1,0,0 <CR><LF>	Setting RS-232C communication as follows: baud rate: 9600bps; data bit length: 8 bit; parity check: None; stop bit: 1 bit
②	@S++,12<CR><LF>	Setting RS-232C transmission sending channel, specifying OUT12
③	@S+R,12<CR><LF>	Setting RS-232C transmission receiving channel, specifying OUT12
④	@S+S,1<CR><LF>	Setting to RS-232C transmission mode. After this, received data is sent to OUT12 set by @S++.
⑤	POWER ON	Sending projector powered ON command
⑥	OK	Receiving projector powered ON command
⑦	@S+S,0<CR><LF>	Setting to Normal mode. After this, command can be sent to the FDX-S.
⑧	@GIV<CR><LF>	Getting versions

[Starting RS-232C transmission mode]
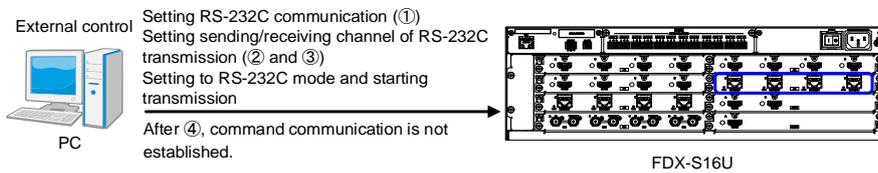
[Operating with RS-232C transmission mode]
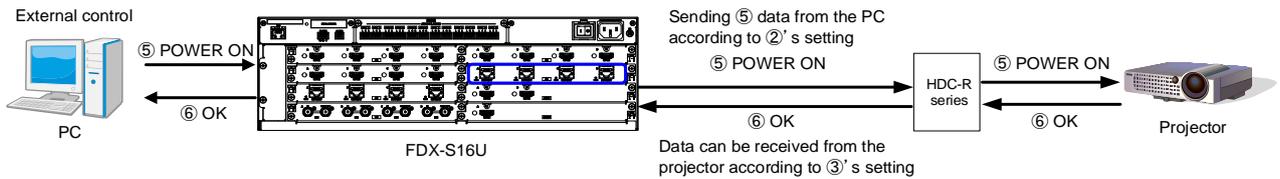
[Terminating RS-232C transmission mode]
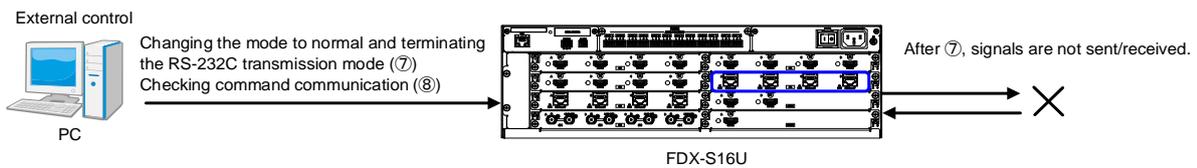
[Fig. 2.4] RS-232C transmission mode communication example

2.2 LAN communication

2.2.1 LAN connector specification

Pin assignment of the LAN connector is as follows.

Since Auto MDI/MDI-X that distinguishes and switches straight/cross cables automatically is supported, extra care is not necessary to connect the FDX-S to PC, HUB or the like.

Light in amber if the send/receive rate is 100 Mbps.
Goes off if it is 10 Mbps.

Light in green while link is established.
Blinks in green while data is being sent/received.

LAN connector
1 ➝ 8

8-pin RJ-45 connector
(Rear panel)
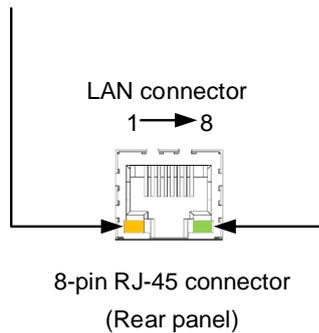
Pin#	Signal Name	
	MDI	MDI-X
1	TX+(Transmitted Data +)	RX+(Received Data +)
2	TX- (Transmitted Data -)	RX- (Received Data -)
3	RX+(Received Data +)	TX+(Transmitted Data +)
4	N.C.(Not Connected)*	N.C.(Not Connected)*
5	N.C.(Not Connected)*	N.C.(Not Connected)*
6	RX- (Received Data -)	TX- (Transmitted Data -)
7	N.C.(Not Connected)*	N.C.(Not Connected)*
8	N.C.(Not Connected)*	N.C.(Not Connected)*

*Not used

[Fig. 2.5] LAN connector

2.2.2 LAN communication specification

[Table 2.2] Specification of LAN communication

Physical layer	10Base-T (IEEE802.3i)/100Base-TX (IEEE802.3u)
Network layer	ARP, IP, ICMP
Transport layer	TCP Port used for command control : 1100, 6000 to 6999 Port used for WEB browser control (HTTP) : 80

Note:

Up to 8 connections can be used for communication command control.

2.2.3 **Setting up LAN communication**

(1) Connect the FDX-S and the control device via a LAN cable.
(2) Set up LAN communication as follows:
  ・ Set IP address and subnet mask
  ・ TCP pot number: 1100, 6000 to 6999

【Reference: User guide】

(3) Establish the connection from the control device to the IP address and TCP port that are set to the FDX-S in step (2) above.
(4) Send a communication command from the control device to the FDX-S in order to check the control status of the FDX-S.
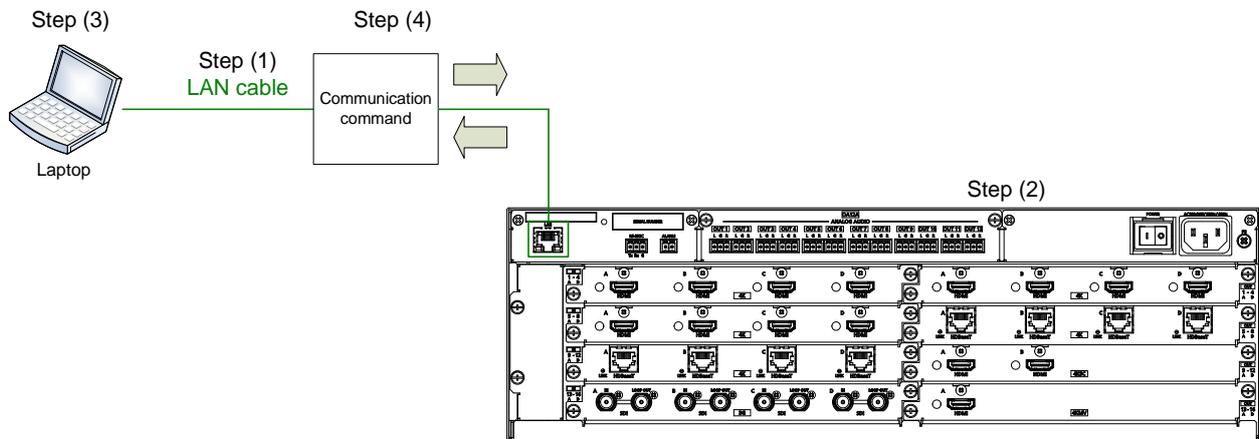
[Fig. 2.6] Setting LAN communication

2.2.4 The number of TCP-IP connections

The FDX-S supports up to eight simultaneous TCP-IP connections (eight logical ports).
To maintain optimal system accessibility, it is advisable to issue "port-open" and "port-close" commands before and after command or query strings are issued. This approach enables eight or more control devices to be effectively interfaced simultaneously and without concern for communication errors.

[Table 2.3] Increasing connections

Your PC software		FDX-S
Connecting TCP-IP	→	(Occupying 1 port)
Sending command (@xxx)	→	
	←	Replying command (@xxx)
Closing TCP-IP	→	(Releasing 1port)

Note:

If no command is received from the PC side for the specified period, the FDX-S disconnects the connection automatically. In this case, connection establish from the PC side is required.

If the automatic disconnection is not desired, you can change the setting in "**@GLP / @SLPTCP port number (P.76**)".

(The FDX-S has eight ports. If PC is turned off with connection connected, the port is occupied, for example. To avoid these problems, the FDX-S incorporates the automatic disconnection function.)

2.2.5 LAN transmission mode

Since the FDX-S supports RS-232C transmission over HDBaseT/SDVoE I/O boards, the received data from the LAN connector can be transmitted to external devices (camera and projector in the following example) that are connected to HDC series/NJR series products via RS-232C.
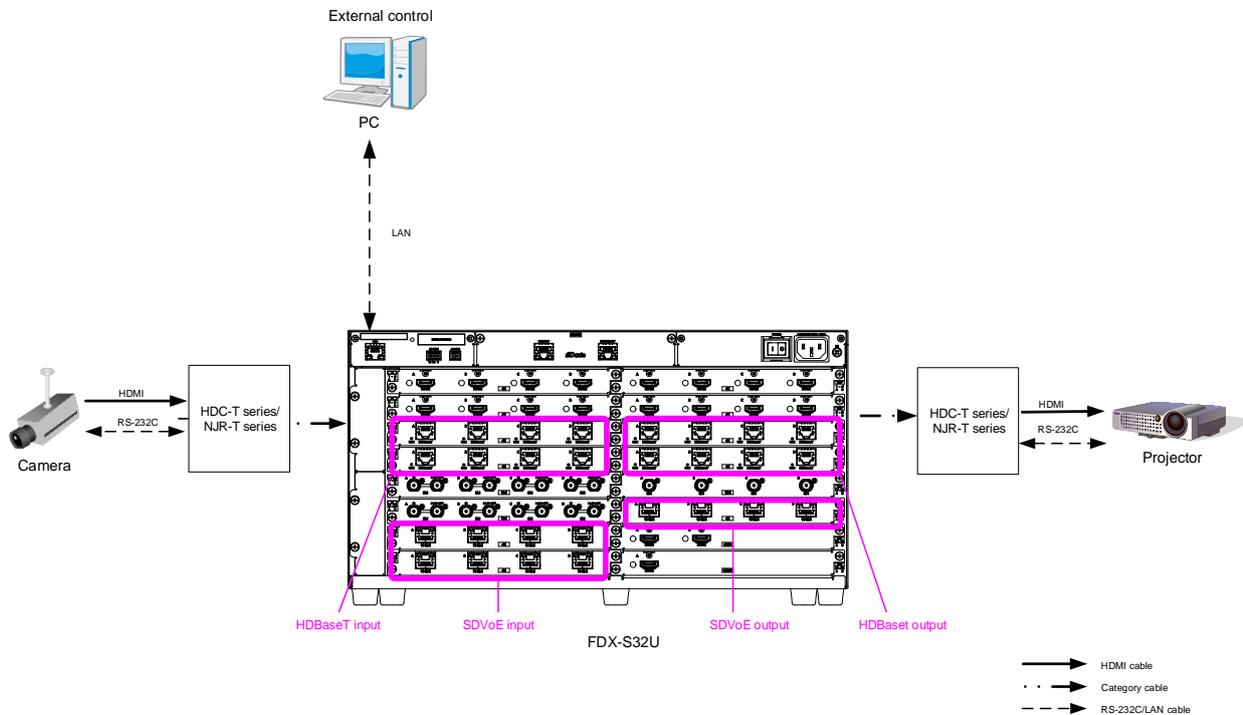
[Fig. 2.7] LAN transmission mode application example

When "**3.4.20 Transmission mode**" is set to LAN mode, received data will be sent to the specified I/O output channels until the mode is switched to normal mode or LAN connection is disconnected.
Received data from the specified I/O channel can be sent from an LAN connector of the FDX-S.

【See: @G-- / @S-- LAN transmission sending channel】
【See: @G-R / @S-R LAN transmission receiving channel】
【See: @G-S / @S-S LAN transmission mode】

Note:
LAN communication is not available between an HDBaseT/SDVoE input board and HDBaseT/SDVoE output board.

Example: Sending data to OUT12 and receiving the response from OUT12

①	@SCT,1,1,0,0 <CR><LF>	Setting RS-232C communication as follows: baud rate: 9600bps; data bit length: 8 bit; parity check: None; stop bit: 1 bit
②	@S--,12<CR><LF>	Setting LAN transmission sending channel, specifying OUT12
③	@S-R,12<CR><LF>	Setting LAN transmission receiving channel, specifying OUT12
④	@S-S,1<CR><LF>	Setting to LAN transmission mode. After this, received data is sent to OUT12 set by @S--.
⑤	POWER ON	Sending projector powered ON command
⑥	OK	Receiving projector powered ON command
⑦	@S-S,0<CR><LF>	Setting to Normal mode. After this, command can be sent to the FDX-S.
⑧	@GIV<CR><LF>	Getting versions

[Starting LAN transmission mode]
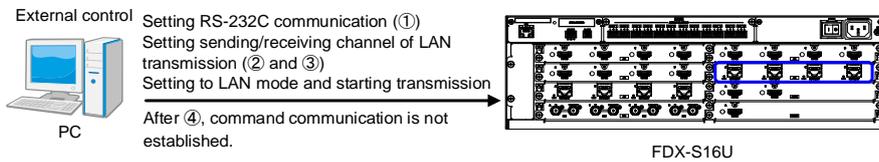
[Operating with LAN transmission mode]
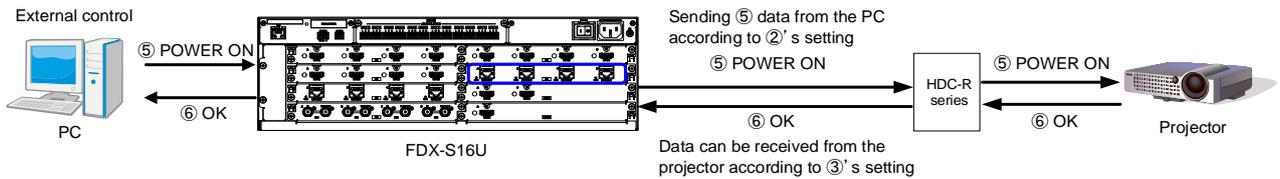
[Terminating LAN transmission mode]
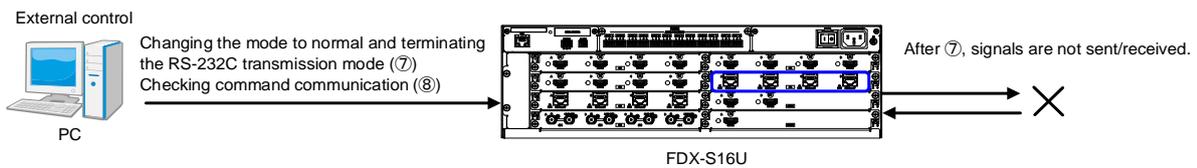
[Fig. 2.8] LAN transmission mode communication example

2.3 Unsolicited status notification

The FDX-S can notify status changes and problems in a system.

2.3.1 UDP

Changes in internal statuses can be sent immediately after the FDX-S is powered on. To enable the unsolicited notification, set the interval in "**@GUH / @SUH Unsolicited notification interval using UDP**".

The notice is sent only to the UDP port of the IP address that is set in "**@GDA / @SDA Unsolicited notification IP address/UDP port number of destination**".

If no change is detected during the interval, status is sent immediately after detecting a change.
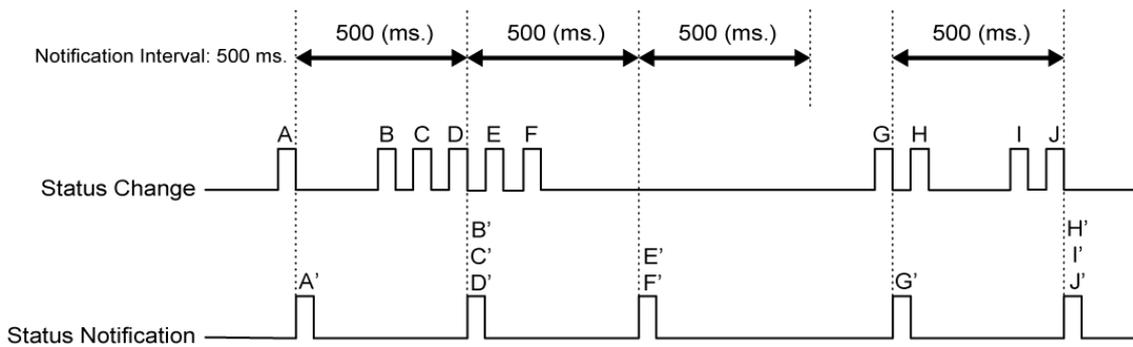
[Fig. 2.9] Notification interval

■ **Example:**
  (1) Set the IP address and UDP port using "**@GDA / @SDA Unsolicited notification IP address/UDP port number of destination**".
  (2) Enable the unsolicited notice by setting the interval using "**@GUH / @SUH Unsolicited notification interval using UDP**".
  (3) If any status changes, the notification is sent to the set control device.
  (4) The control device sent "**@AIN Input signal status (For each channel)**" command to the FDX-S.
  (5) The FDX-S returns the current status to the control device.
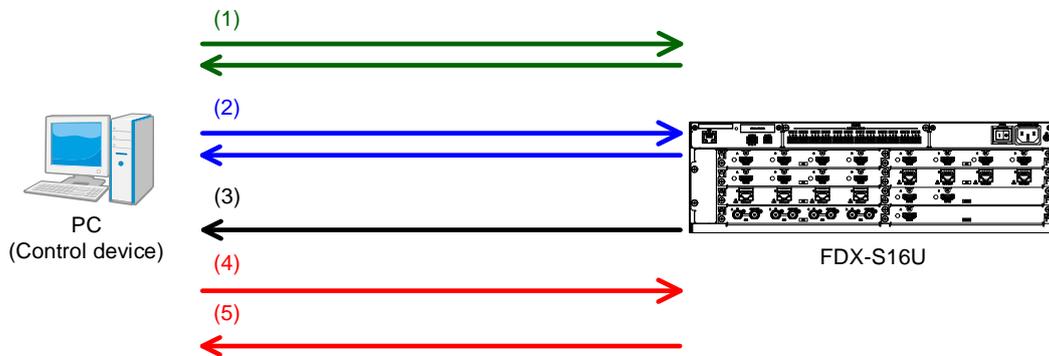
[Fig. 2.10] Notifying status

2.3.2 TCP and RS-232C

Changes in internal statuses can be noticed using TCP and RS-232C.
This feature is disabled when the FDX-S is powered on. To enable the unsolicited notification, set the interval in "**@GPH / @SPH Unsolicited notification interval using TCP/RS-232C**".

The notice is sent only to the port that is set in "**@GPH / @SPH Unsolicited notification interval using TCP/RS-232C**".

■ **Example:**
(1) Enable the unsolicited notice by setting the interval using "**@GPH / @SPH Unsolicited notification interval using TCP/RS-232C**".
(2) If any status changes, the notification is sent to the set control device.
(3) The control device sent "**@AIN Input signal status (For each channel)**" command to the FDX-S.
(4) The FDX-S returns the current status to the control device.
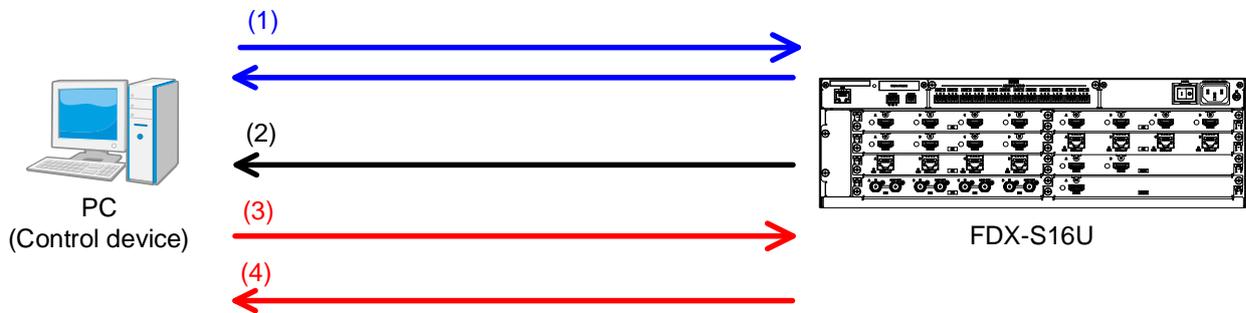
[Fig. 2.11] Notifying status

Note:
If "**@G+S / @S+S RS-232C transmission mode**" is set to RS-232C transmission mode, this feature cannot be used.

3 Command

3.1 Board channel configuration

・ The output board is changed the channel configuration depending on board type.
  4K@60 scan conversion output board　　　　　　: An output board has two channels.
  4K@60 scan conversion multiview output board　: An output board has one channel.
  Other output boards　　　　　　　　　　　　: An output board has four channels.
・ The channel numbers of 4K@60 scan conversion output board are the first two channels only; the rest of two channels cannot be set.
・ For the 4K@60 scan conversion multiview output board, the channel number is the top channel number. For some menus, four channels including the top channel are assigned as multi windows.
・ Example: Valid channels in the configuration below:
  SLOT1 and 2 : An output board has four channels. No.1 to 8 are valid.
  SLOT3　　　 : For 4K@60 scan conversion multiview output board: No, 9 and No. 10 are valid; No.11 and No.12 cannot be used.
  SLOT4　　　 : For 4K@60 scan conversion multiview output board: No.13 is valid; No.14 to No.16 cannot be used, but No.13 to No.16 are assigned to multi windows A to D for some menus.
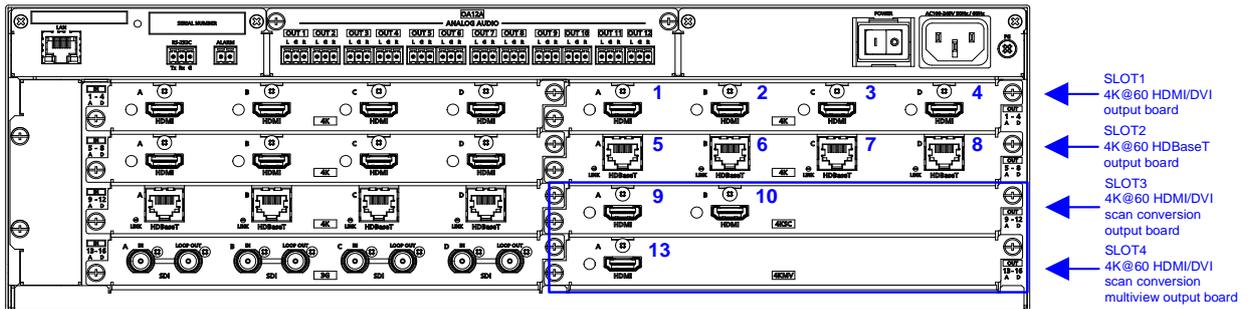
With FDX-SOA12A

[Fig. 3.1] Board channel configuration (Example: FDX-S16U)

3.2 Summary

The number of I/O channels depends on models.

Setting and getting command examples in this manual are for the FDX-S16U.

"n" in this section shows the number of channels.

"m" in this section shows the number of boards.

[Table 3.1] The number of channels

P/N	n (number of channels)	m (number of boards)
FDX-S08U	8	2
FDX-S16U	16	4
FDX-S32U	32	8
FDX-S64U	64	16

A command consists of "@" ("40" in hexadecimal), 3 one-byte alphabetical characters (upper and lower cases), and parameters (one-byte numbers). For some commands, multiple parameter values can be specified or parameters are not necessary.

","(a comma, "2C" in hex) is indicated between a command and parameter and between two parameters. Processing is executed by sending <CR><LF> (return+line feed, "0D" and "0A" in hex) at the end of the command.

Example: @SPM,2<CR><LF>

■ **If there is an error:**
An error command is returned if an undefined command or wrong parameter is included.

Example: @SOT,2<CR><LF>
        @ERR,1<CR><LF>

■ **Using as HELP**
If only <CR><LF> (return+line feed, "0D" and "0A" in hex) are sent, command list as the help command is returned.

3.3 Command list

■ **Error status**

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■ **I/O channel selection**

Command	Function	Page
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@GSW / @SSW	I/O channel switching	23
@GCY / @SCY	Input channel selection copy	23

■ **Output position, size, and masking**

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@GUM / @SUM	Aspect ratio for sink device	25
@GSD / SSD	Image size/Image position	26
@GBC / @SBC	Background color	27
@GTP / @STP	Test pattern	28
@GVW / @SVW	Videowall configuration/Image position	29
@GDL / @SDL	Frame delay	30
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@GES / @SES	Video synchronization	31
@GOH / @SOH	Output settings	32

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@GDM / @SDM	Output format	38
@GDC / @SDC	Deep Color output	39
@GFA / @SFA	Video transition effect	40
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@GDF / @SDF	SDI output format conversion	42
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■ **Input position, size, and masking**

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@GEF / @SEF	Input settings	45

■ **Input**

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@GHE / @SHE	HDCP input	48
@GDU / @SDU	3G-SDI Dual Stream	48
@GIG / @SIG	SDI input gearbox mode	49

■ **Input timing**

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@GSI / @SSI	Horizontal/Vertical active area	51

■ **Picture controls**

Command	Function	Page
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@GFL / @SFL	Input sharpness	53
@GIB / @SIB	Input brightness	54
@GIC / @SIC	Input contrast	55
@GHU / @SHU	Input hue	56
@GST / @SST	Input saturation	57

■ **Output audio**

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@GLO / @SLO	Output Lip Sync	58
@GAS / @SAS	Audio embedding/Audio de-embedding	61
@GWO / @SWO	Audio setting	63
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■ **Input audio**

Command	Function	Page
@GAW / @SAW	Stable audio input wait	65
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■ **EDID**

Command	Function	Page
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@GDI / @SDI	Deep Color	70
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@GSP / @SSP	Speaker configuration	72

■ RS-232C

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■ LAN

Command	Function	Page
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@GSB / @SSB	Subnet mask	74
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@GMC	MAC address	75
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@GLD / @SLD	Automatic disconnection time (Timeout)	76

■ Preset memory

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@RCM	Recalling crosspoint	77
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@SEM	Saving crosspoint memory	78
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Command	Function	Page
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■ Multi window output

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@GEW / @SEW	Window synchronous mode	90
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Command	Function	Page
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■ **Status indication**

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@GPS	Power supply voltage status	99
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@GPH / @SPH	Unsolicited notification interval	107
@PSH	Unsolicited status notification	108
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■ **Transmission mode**

Command	Function	Page
@G++ / @S++	RS-232C transmission sending channel	123
@G+R / @S+R	RS-232C transmission receiving channel	123
@G+S / @S+S	RS-232C transmission mode	124
@G-- / @S--	LAN transmission sending channel	124
@G-R / @S-R	LAN transmission receiving channel	125
@G-S / @S-S	LAN transmission mode	125

3.4 Details of commands

3.4.1 Error status

@ERR		Error status
Description		Response in case the command is not executed
Response		@ERR, error<CR><LF>

Parameter		error: Error status
		    1 = Erroneous parameter format or value
		    2 = Undefined command or wrong format
		    3 = Currently cannot be used
		    4 = Loading EDID from the sink device failed

Getting example	Command	@SSW<CR><LF>
	Response	@ERR,1<CR><LF>
	Description	@SSW is sent. Command format error
Remarks		─

3.4.2 I/O channel selection

@SSC		Straight channel switching
Setting	Command	@SSC<CR><LF>
	Response	@SSC<CR><LF>
Parameter		─
Setting example	Command	@SSC<CR><LF>
	Response	@SSC<CR><LF>
	Description	Setting I/O channel to the same number I/O Completed
Remarks		Straight channel switching: For example, OUT1 is connected to IN1; OUT2 is connected to IN2; OUT16 is connected to IN16.

@GSW / @SSW		I/O channel switching
Getting	Command	@GSW<CR><LF>
	Response	@GSW, v_1, v_2, ···, v_8 (, v_9, ···, v_n)<CR><LF>
Setting	Command	@SSW, in_1, out_1 (, in_2, out_2, ···)<CR><LF>
	Response	@SSW, in_1, out_1 (, in_2, out_2, ···)<CR><LF>
Parameter		v_1-n: Input channel assigned to output channel
		0 = OFF [Default], 1 to n = IN1 to INn,
		-1 = No output board is installed.
		in_1-n: Input channel
		0 = OFF, 1 to n = IN1 to INn
		out_1-n: Output channel
		0 = All outputs, 1 to n = OUT1 to OUTn
Getting example	Command	@GSW<CR><LF>
	Response	@GSW,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16<CR><LF>
	Description	Getting the I/O channels that is assigned to the I/O channels OUT1 to OUT16 are assigned to IN1 to IN16.
Setting example	Command	@SSW,1,3<CR><LF>
	Response	@SSW,1,3<CR><LF>
	Description	Setting the OUT3 to IN1 OUT3 is assigned to IN1. Completed
Remarks		－

@GCY / @SCY		Input channel selection copy
Getting	Command	@GCY, sch<CR><LF>
	Response	@GCY, sch, dch_1, ···, dch_8 (, dch_9, ···, dch_n)<CR><LF>
Setting	Command	@SCY, sch, dch_1 (, dch_2, ···)<CR><LF>
	Response	@SCY, sch, dch_1 (, dch_2, ···)<CR><LF>
Parameter		sch: Source output channel
		1 to n = OUT1 to OUTn,
		-2 = No output board is installed. (For response only)
		dch_1-n: Destination output channel
		0 =All outputs (For setting only), 1 to n = OUT1 to OUTn
Getting example	Command	@GCY,1<CR><LF>
	Response	@GCY,1,2,3,4<CR><LF>
	Description	Getting the output channel with the same setting as the input channel assigned to OUT1 OUTs 2, 3, and 4 have the same input channel as OUT1.
Setting example	Command	@SCY,1,3<CR><LF>
	Response	@SCY,1,3<CR><LF>
	Description	Copying input channel selection of OUT1 to that of OUT3 Completed
Remarks		This command is for displaying video that is being output to a sink device to other sink devices.

3.4.3 Output position, size, and masking

Scan conversion output only

@GOT / @SOT		Output resolution
Getting	Command	@GOT, out_ch<CR><LF>
	Response	@GOT, out_ch, auto, resolution<CR><LF>
Setting	Command	@SOT, out_ch, auto, resolution<CR><LF>
	Response	@SOT, out_ch, auto, resolution<CR><LF>
Parameter		out_ch: Output channel 1 to n = OUT1 to OUTn

		auto: Output resolution mode
		    0 = Resolution can be specified for the "resolution" parameter below.
		    1 = Resolution can be selected automatically [Default],
		    -2 = No scan conversion output board is installed. (For response only)

		resolution: Output resolution
		    1 = VGA (640x480), 3 = XGA (1024x768),
		    4 = WXGA (1280x768), 5 = WXGA (1280x800),
		    6 = Quad-VGA (1280x960), 7 = SXGA (1280x1024),
		    8 = WXGA (1360x768), 9 = WXGA (1366x768),
		    10 = SXGA+ (1400x1050), 11 = WXGA+ (1440x900),
		    12 = WXGA++ (1600x900), 13 = UXGA (1600x1200),
		    14 = WSXGA+ (1680x1050), 15 = VESAHD (1920x1080),
		    16 = WUXGA (1920x1200), 17 = QWXGA (2048x1152),
		    18 = WQHD (2560x1440)*, 19 = WQXGA (2560x1600)*,
		    20 = 480p 59.94Hz, 21 = 576p 50Hz,
		    22 = 720p 50Hz, 23 = 720p 59.94Hz,
		    24 = 1080i 50Hz, 25 = 1080i 59.94Hz,
		    26 = 1080p 50Hz, 27 = 1080p 59.94Hz,
		    33 = 720p 60Hz, 35 = 1080i 60Hz,
		    37 = 1080p 60Hz, 50 = 2160p 23.98Hz (3840x2160)*,
		    51 = 2160p 24Hz (3840x2160)*, 52 = 2160p 25Hz (3840x2160)*,
		    53 = 2160p 29.97Hz (3840x2160)*, 54 = 2160p 30Hz (3840x2160)*,
		    55 = 2160p 50Hz (3840x2160)*, 56 = 2160p 59.94Hz (3840x2160)*,
		    57 = 2160p 60Hz (3840x2160)*, 60 = 4096x2160 23.98Hz*,
		    61 = 4096x2160 24Hz*, 62 = 4096x2160 25Hz*,
		    63 = 4096x2160 29.97Hz*, 64 = 4096x2160 30Hz*,
		    65 = 4096x2160 50Hz*, 66 = 4096x2160 59.94Hz*,
		    67 = 4096x2160 60Hz*
		     -2 = No scan conversion output board is installed. (For response only)
		     *For 4K@60 scan conversion output boards and 4K@60 scan conversion
		       multiview output boards only

Getting example	Command	@GOT,1<CR><LF>
	Response	@GOT,1,0,7<CR><LF>
	Description	Getting the OUT1 output resolution SXGA (1280x1024)

@GOT / @SOT		Output resolution (Cont'd)
Setting example	Command	@SOT,1,0,11<CR><LF>
	Response	@SOT,1,0,11<CR><LF>
	Description	Setting the OUT1 output resolution to WXGA+ (1440x900)
		Completed
Remarks		―

Scan conversion output only

@GUM / @SUM		Aspect ratio for sink device
Getting	Command	@GUM, out_ch<CR><LF>
	Response	@GUM, out_ch, aspect<CR><LF>
Setting	Command	@SUM, out_ch, aspect<CR><LF>
	Response	@SUM, out_ch, aspect<CR><LF>
Parameter		out_ch: Output channel
		1 to n = OUT1 to OUTn
		aspect: Aspect ratio for sink device
		0 = RESOLUTION [Default], 1 = 4:3, 2 = 5:3,
		3 = 5:4, 4 = 16:9, 5 = 16:10,
		-2 = No scan conversion output board is installed. (For response only)
Getting example	Command	@GUM,1<CR><LF>
	Response	@GUM,1,4<CR><LF>
	Description	Getting the OUT1 aspect ratio for sink device
		16:9
Setting example	Command	@SUM,1,4<CR><LF>
	Response	@SUM,1,4<CR><LF>
	Description	Setting the OUT1 aspect ratio for sink device to 16:9
		Completed
Remarks		―

Scan conversion output only

@GSD / SSD		Image size/Image position
Getting	Command	@GSD, out_ch<CR><LF>
	Response	@GSD, out_ch, h_zoom, v_zoom, h_posi, v_posi<CR><LF>
Setting	Command	@SSD, out_ch, h_zoom, v_zoom, h_posi, v_posi<CR><LF>
	Response	@SSD, out_ch, h_zoom, v_zoom, h_posi, v_posi<CR><LF>
Parameter		out_ch: Output channel 1 to n = OUT1 to OUTn

		h_zoom: Horizontal image size
		   2000 to 210000 = 20.00% to 2100.00% [Default] 10000 (100.00%)
		   -2 = No scan conversion output board is installed. (For response only)[*]
		   [*]"h_zoom", "v_zoom", h_posi", and "v_posi" are not displayed.

		v_zoom: Vertical image size 2000 to 210000 = 20.00% to 2100.00% [Default] 10000 (100.00%)
		h_posi: Horizontal image position -210000 to +210000 = -2100.00% to +2100.00% [Default] +0 (0.00%)
		v_posi: Vertical image position -210000 to +210000 = -2100.00% to +2100.00% [Default] +0 (0.00%)
Getting example	Command	@GSD,1<CR><LF>
	Response	@GSD,1,10000,10000,+0,+0<CR><LF>
	Description	Getting the OUT1 image size and position Horizontal and vertical image size : 100.00% Horizontal and vertical image position : 0.00%
Setting example	Command	@SSD,1,10000,10000,0,0<CR><LF>
	Response	@SSD,1,10000,10000,0,0<CR><LF>
	Description	Setting the OUT1 horizontal sizes, vertical sizes. Horizontal position, and vertical position to 100.00% 100.00%, 0.00%, and 0.00%, respectively. Completed
Remarks		―

Scan conversion output only

@GBC / @SBC		Background color
Getting	Command	@GBC, out_ch<CR><LF>
	Response	@GBC, out_ch, b_red, b_green, b_blue, m_red, m_green, m_blue<CR><LF>
Setting	Command	@SBC, out_ch, b_red, b_green, b_blue, m_red, m_green, m_blue<CR><LF>
	Response	@SBC, out_ch, b_red, b_green, b_blue, m_red, m_green, m_blue<CR><LF>
Parameter		out_ch: Output channel 1 to n = OUT1 to OUTn

		b_red : Background color (Red)
		b_green : Background color (Green)
		b_blue : Background color (Blue)
		m_red : Blank color (Red)
		m_green: Blank color (Green)
		m_blue : Blank color (Blue)
		    0 to 255 [Default] 0 (Black)
		    -2 = No scan conversion output board is installed. (For response only)
		Background color : Blank space color that is output when display position and
		                display size are set.
		Blank color : Background color that is output when input channel is set to
		                OFF or no video is input.

Getting example	Command	@GBC,1<CR><LF>
	Response	@GBC,1,0,0,0,0,0,0<CR><LF>
	Description	Getting the OUT1 background and blank colors All: "0" (Black)
Setting example	Command	@SBC,1,0,0,0,0,0,0<CR><LF>
	Response	@SBC,1,0,0,0,0,0,0<CR><LF>
	Description	Setting the OUT1 all background and blank colors to "0" (black) Completed
Remarks		─

Scan conversion output only

@GTP / @STP		Test pattern
Getting	Command	@GTP, out_ch<CR><LF>
	Response	@GTP, out_ch, pattern<CR><LF>
Setting	Command	@STP, out_ch, pattern<CR><LF>
	Response	@STP, out_ch, pattern<CR><LF>
Parameter		out_ch: Output channel 1 to n = OUT1 to OUTn

		pattern: Test pattern
		    0 = OFF [Default], 1 = COLOR BAR,
		    2 = 16 STEP GRAY, 3 = 256 STEP GRAY,
		    4 = WHITE RASTER, 5 = RED RASTER,
		    6 = GREEN RASTER, 7 = BLUE RASTER,
		    8 = CROSS HATCH, 9 = VERTICAL STRIPE,
		  10 = OUTPUT FRAME,
		    -2 = No scan conversion output board is installed. (For response only)

Getting example	Command	@GTP,1<CR><LF>
	Response	@GTP,1,1<CR><LF>
	Description	Getting the OUT1 test pattern COLOR BAR
Setting example	Command	@STP,1,1<CR><LF>
	Response	@STP,1,1<CR><LF>
	Description	Setting the OUT1 test pattern to COLOR BAR Completed
Remarks		―

Scan conversion output only

@GVW / @SVW		Videowall configuration/Image position
Getting	Command	@GVW, out_ch<CR><LF>
	Response	@GVW, out_ch, h_type, v_type, h_posi, v_posi<CR><LF>
Setting	Command	@SVW, out_ch, h_type, v_type, h_posi, v_posi<CR><LF>
	Response	@SVW, out_ch, h_type, v_type, h_posi, v_posi<CR><LF>
Parameter		out_ch: Output channel 　　1 to n = OUT1 to OUTn
		h_type: Videowall horizontal screen number 　　0 = Not control, 1 to 20 = 1 to 20 screens　[Default] 1 (1 screen), 　　-2 = No scan conversion output board is installed. (For response only)
		v_type: Videowall vertical screen number 　　0 = Not control, 1 to 20 = 1 to 20 screens　[Default] 1 (1 screen), 　　-2 = No scan conversion output board is installed. (For response only)
		h_posi: Videowall horizontal image position 　　0 = Not control, 1 to 20 = 1 to 20 from left　[Default] 1 (1 from left), 　　-2 = No scan conversion output board is installed. (For response only)
		v_posi: Videowall vertical image position 　　0 = Not control, 1 to 20 = 1 to 20 from top　[Default] 1 (1 from top), 　　-2 = No scan conversion output board is installed. (For response only)
Getting example	Command	@GVW,1<CR><LF>
	Response	@GVW,1,2,2,1,1<CR><LF>
	Description	Getting the OUT1 videowall configuration 2x2; 1 from left, 1 from top
Setting example	Command	@SVW,1,2,2,1,1<CR><LF>
	Response	@SVW,1,2,2,1,1<CR><LF>
	Description	Setting the OUT1 videowall configuration to 2x2; 1 from left, 1 from top Completed
Remarks		－

Scan conversion output only

@GDL / @SDL		Frame delay
Getting	Command	@GDL<CR><LF>
	Response	@GDL, delay_1, ・・・, delay_8 (, delay_9, ・・・, delay_n)<CR><LF>
Setting	Command	@SDL, out_ch, delay<CR><LF>
	Response	@SDL, out_ch, delay<CR><LF>

Parameter		delay_1-n, delay: Synchronization mode
		   0 = OFF (No frame delay) [Default],
		   1 = 1 frame delay,
		   2 = -1 frame delay,
		   -2 = No scan conversion output board is installed. (For response only)

		out_ch: Output channel 0 = All outputs, 1 to n = OUT1 to OUTn
Getting example	Command	@GDL<CR><LF>
	Response	@GDL,0,0,0,0,1,1,1,1,2,2,2,2,-2,-2,-2,-2<CR><LF>
	Description	Getting the frame delay - OUT1 to 4 : OFF - OUT5 to 8 : 1 frame delay - OUT9 to 12 : -1 frame delay - OUT13 to 16 : No scan conversion output board is installed.
Setting example	Command	@SDL,0,1<CR><LF>
	Response	@SDL,0,1<CR><LF>
	Description	Setting all outputs to 1 frame delay Completed
	Command	@SDL,1,2<CR><LF>
	Response	@SDL,1,2<CR><LF>
	Description	Setting the OUT1 to -1 frame delay Completed
Remarks		－

Scan conversion output only

@GIM / @SIM		Synchronization mode
Getting	Command	@GIM\<CR\>\<LF\>
	Response	@GIM, mode_1, mode_2 (, mode_3, ・・・, mode_x)\<CR\>\<LF\>
Setting	Command	@SIM, slot_1, mode_1 (, slot_2, mode_2, ・・・)\<CR\>\<LF\>
	Response	@SIM, slot_1, mode_1 (, slot_2, mode_2, ・・・)\<CR\>\<LF\>
Parameter		mode_1-x: Synchronization mode 　　0 = THROUGH　[Default], 　　1 = FOLLOWER, 　　2 = LEADER A, 3 = LEADER B, 4 = LEADER C, 5 = LEADER D, 　　-2 = No scan conversion output board is installed. (For response only)
		slot_1-x: Output board 　　1 to x = Output board 1 to Output board x
Getting example	Command	@GIM\<CR\>\<LF\>
	Response	@GIM,2,1,-2,-2\<CR\>\<LF\>
	Description	Getting the synchronization mode - Output board 1　　　: LEADER A - Output board 2　　　: FOLLOWER - Output board 3 and 4 : No scan conversion output board is installed.
Setting example	Command	@SIM,1,2\<CR\>\<LF\>
	Response	@SIM,1,2\<CR\>\<LF\>
	Description	Setting the synchronization mode of Output board 1 to LEADER A mode Completed
Remarks		―

Scan conversion output only

@GES / @SES		Video synchronization
Getting	Command	@GES, out_ch\<CR\>\<LF\>
	Response	@GES, out_ch, mode\<CR\>\<LF\>
Setting	Command	@SES, out_ch, mode\<CR\>\<LF\>
	Response	@SES, out_ch, mode\<CR\>\<LF\>
Parameter		out_ch: Output channel 　　0 = All outputs (For setting only), 1 to n = OUT1 to OUTn
		mode: Video synchronization 　　0 = OFF [Default], 1 = ON, 　　-2 = No scan conversion output board is installed. (For response only)
Getting example	Command	@GES,1\<CR\>\<LF\>
	Response	@GES,1,1\<CR\>\<LF\>
	Description	Getting the OUT1 video synchronization ON
Setting example	Command	@SES,1,1\<CR\>\<LF\>
	Response	@SES,1,1\<CR\>\<LF\>
	Description	Setting the OUT1 video synchronization to ON Completed
Remarks		―

Scan conversion output only

@GOH / @SOH		Output settings
Getting	Command	@GOH, out_ch<CR><LF>
	Response	@GOH, out_ch, auto, resolution, aspect, pattern, h_zoom, v_zoom, h_posi, v_posi, m_red, m_green, m_blue, b_red, b_green, b_blue, c_red, c_green, c_blue, brightness, mode, hdcp<CR><LF>
Setting	Command	@SOH, out_ch, auto, resolution, aspect, pattern, h_zoom, v_zoom, h_posi, v_posi, m_red, m_green, m_blue, b_red, b_green, b_blue, c_red, c_green, c_blue, brightness, mode, hdcp<CR><LF>
	Response	@SOH, out_ch, auto, resolution, aspect, pattern, h_zoom, v_zoom, h_posi, v_posi, m_red, m_green, m_blue, b_red, b_green, b_blue, c_red, c_green, c_blue, brightness, mode, hdcp<CR><LF>
Parameter		out_ch: Output channel 　　1 to n = OUT1 to OUTn
		auto: Output resolution mode 　　0 = Resolution can be specified for the "resolution" parameter below. 　　1 = Resolution can be selected automatically　[Default], 　　-2 = No scan conversion output board is installed. (For response only)[*] 　　[*]Values after "auto" are not displayed.
		resolution: Output resolution

resolution: Output resolution

1 = VGA (640x480),	3 = XGA (1024x768),
4 = WXGA (1280x768),	5 = WXGA (1280x800),
6 = Quad-VGA (1280x960),	7 = SXGA (1280x1024),
8 = WXGA (1360x768),	9 = WXGA (1366x768),
10 = SXGA+ (1400x1050),	11 = WXGA+ (1440x900),
12 = WXGA++ (1600x900),	13 = UXGA (1600x1200),
14 = WSXGA+ (1680x1050),	15 = VESAHD (1920x1080),
16 = WUXGA (1920x1200),	17 = QWXGA (2048x1152),
18 = WQHD (2560x1440) ,	19 = WQXGA (2560x1600)[*],
20 = 480p 59.94Hz,	21 = 576p 50Hz,
22 = 720p 50Hz,	23 = 720p 59.94Hz,
24 = 1080i 50Hz,	25 = 1080i 59.94Hz,
26 = 1080p 50Hz,	27 = 1080p 59.94Hz,
33 = 720p 60Hz,	35 = 1080i 60Hz,
37 = 1080p 60Hz,	50 = 2160p 23.98Hz (3840x2160)[*],
51 = 2160p 24Hz (3840x2160)[*],	52 = 2160p 25Hz (3840x2160)[*],
53 = 2160p 29.97Hz (3840x2160)[*],	54 = 2160p 30Hz (3840x2160)[*],
55 = 2160p 50Hz (3840x2160)[*],	56 = 2160p 59.94Hz (3840x2160)[*],
57 = 2160p 60Hz (3840x2160)[*],	60 = 4096x2160 23.98Hz[*],
61 = 4096x2160 24Hz[*],	62 = 4096x2160 25Hz[*],
63 = 4096x2160 29.97Hz[*],	64 = 4096x2160 30Hz[*],
65 = 4096x2160 50Hz[*],	66 = 4096x2160 59.94Hz[*],
67 = 4096x2160 60Hz[*]	

　-2 = No scan conversion output board is installed. (For response only)
　　[*]For 4K@60 scan conversion output boards only and 4K@60 scan conversion
　　　multiview output boards

@GOA / @SOA	Output settings (Cont'd)
Parameter	aspect: Aspect ratio for sink device 　　0 = RESOLUTION　[Default],　1 = 4:3,　　2 = 5:3,　　3 = 5:4, 　　4 = 16:9,　　　　　　　　5 = 16:10,　6 = 256:135
	pattern: Test pattern 　　0 = OFF　[Default],　　　1 = COLOR BAR, 　　2 = 16 STEP GRAY,　　　3 = 256 STEP GRAY, 　　4 = 100% WHITE RASTER,　5 = 100% RED RASTER, 　　6 = 100% GREEN RASTER,　7 = 100% BLUE RASTER, 　　8 = CROSS HATCH,　　　9 = VERTICAL STRIPE, 　10 = OUTPUT FRAME
	h_zoom　: Horizontal image size v_zoom　: Vertical image size 　2000 to 210000 = 20.00% to 2100.00%　[Default] 10000 (100.00%)
	h_posi　　: Horizontal image position v_posi　　: Vertical image position 　-210000 to +210000 = -2100.00% to +2100.00%　[Default] +0 (0.00%)
	m_red　　: Blank color (Red) m_green: Blank color (Green) m_blue　: Blank color (Blue) b_red　　: Background color (Red) b_green : Background color (Green) b_blue　: Background color (Blue) 　0 to 255　[Default] 0 (Black)
	c_red　　: Output contrast (Red) c_green : Output contrast (Green) c_blue　: Output contrast (Blue) 　0 to 200　[Default] 100
	brightness: Output brightness 　0 to 200　[Default] 100
	mode: Fade out/Fade in 　0 = Disabled, 1 = Enabled　[Default]
	hdcp: HDCP output 　0 = HDCP 2.2 has priority. 　　　[Default for 4K@60 scan conversion output board and 4K@60 scan 　　　conversion multiview output board], 　1 = HDCP 1.4 is encrypted. 　　　[Default for 1080p scan conversion output board] 　2 = HDCP is encrypted only if input signal is with HDCP., 　3 = HDCP is not encrypted.

@GOH / @SOH		Output settings (Cont'd)
Getting example	Command Response	@GOH,1<CR><LF> @GOH,1,1,17,0,0,10000,10000,+0,+0,0,0,0,0,0,0,0,100,100,100,100,1,1 <CR><LF>
	Description	Getting the OUT1 output settings - Output resolution mode : Automatically output with WXGA@60(2048x1152) - Aspect ratio for sink device : To be output with aspect ratio of output resolution - Test pattern : OFF - Horizontal image size : 100.00% - Vertical image size : 100.00% - Horizontal image position : 0.00% - Vertical image position : 0.00% - Blank color : "0" (black) for all (red, green, and blue) - Background color : "0" (black) for all (red, green, and blue) - Output contrast : 100% for all (red, green, and blue) - Output brightness : 100% - Video transition effect : Fade out/Fade in - HDCP output : HDCP 1.4 is encrypted.
Setting example	Command Response	@SOH,1,0,27,0,0,10000,10000,0,0,0,0,0,0,0,0,0,100,100,100,100,0,2<CR><LF> @SOH,1,0,27,0,0,10000,10000,0,0,0,0,0,0,0,0,0,100,100,100,100,0,2<CR><LF>
	Description	Setting the OUT1 output settings as follows: - Output resolution mode : 1080p@59(1920x1080) fixed - Aspect ratio for sink device : To be output with aspect ratio of output resolution - Test pattern : OFF - Horizontal image size : 100.00% - Vertical image size : 100.00% - Horizontal image position : 0.00% - Vertical image position : 0.00% - Blank color : "0" (black) for all (red, green, and blue) - Background color : "0" (black) for all (red, green, and blue) - Output contrast : 100% for all (red, green, and blue) - Output brightness : 100% - Video transition effect : Fade out/Fade in - HDCP output : HDCP is encrypted only if input signal is with HDCP. Completed
Remarks		―

3.4.4 Output

Scan conversion output only

@GUY / @SUY		Disabling synchronous signal output when no video signal is input
Getting	Command	@GUY, out_ch<CR><LF>
	Response	@GUY, out_ch, time<CR><LF>
Setting	Command	@SUY, out_ch, time<CR><LF>
	Response	@SUY, out_ch, time<CR><LF>
Parameter		out_ch: Output channel 　　1 to n = OUT1 to OUTn
		time: Time from when video signal is not input to when synchronous signal output 　　is stopped. 　　4 = OFF (Continue to output synchronous signal output)　[Default], 　　5 to 60 = 5 sec. to 60 sec., 　　-2 = No scan conversion output board is installed. (For response only)
Getting example	Command	@GUY,1<CR><LF>
	Response	@GUY,1,4<CR><LF>
	Description	Getting the setting of current output channel1 OFF (Continue to output synchronous signal output)
Setting example	Command	@SUY,1,5<CR><LF>
	Response	@SUY,1,5<CR><LF>
	Description	Setting the time of output channel1 to five seconds Completed
Remarks		－

Scan conversion output only

@GBO / @SBO		Output video for when no input video
Getting	Command	@GBO, out_ch<CR><LF>
	Response	@GBO, out_ch, video<CR><LF>
Setting	Command	@SBO, out_ch, video<CR><LF>
	Response	@SBO, out_ch, video<CR><LF>
Parameter		out_ch: Output channel 1 to n = OUT1 to OUTn

		video: Output video for when no input video
		   0 = BACK COLOR [Default],
		   1 to 4 = BITMAP1 to BITMAP4,
		   -2 = No scan conversion output board is installed. (For response only)

Getting example	Command	@GBO,1<CR><LF>
	Response	@GBO,1,0<CR><LF>
	Description	Getting the setting of current output channel1 BACK COLOR
Setting example	Command	@SBO,1,1<CR><LF>
	Response	@SBO,1,1<CR><LF>
	Description	Setting the output video of output channel1 to BITMAP1 Completed
Remarks		4K@60 scan conversion multiview output board cannot be set.

Scan conversion output only

@GEN / @SEN		HDCP output
Getting	Command	@GEN, out_ch<CR><LF>
	Response	@GEN, out_ch, hdcp<CR><LF>
Setting	Command	@SEN, out_ch, hdcp<CR><LF>
	Response	@SEN, out_ch, hdcp<CR><LF>
Parameter		out_ch: Output channel 0 = All outputs (For setting only), 1 to n = OUT1 to OUTn

		hdcp: HDCP output
		   0 = HDCP 2.2 has priority.*
		      [Default for 4K@60 scan conversion output board and 4K@60 scan
		      conversion multiview output board],
		   1 = HDCP 1.4 is encrypted.
		      [Default for 1080p scan conversion output board],
		   2 = HDCP is encrypted only if input signal is with HDCP.,
		   3 = HDCP is not encrypted.,
		   -2 = No scan conversion output board is installed. (For response only)
		   *"HDCP 2.2" cannot be selected for 1080p scan conversion output board.

Getting example	Command	@GEN,1<CR><LF>
	Response	@GEN,1,2<CR><LF>
	Description	Getting the OUT1 HDCP output OUT1: HDCP is encrypted only if input signal is with HDCP.
Setting example	Command	@SEN,1,2<CR><LF>
	Response	@SEN,1,2<CR><LF>
	Description	Setting the OUT1 HDCP output to "2" (HDCP is encrypted only if input signal is with HDCP.) Completed
Remarks		―

Boards other than 12G-SDI

@GDM / @SDM		Output format
Getting	Command	@GDM<CR><LF>
	Response	@GDM, mode_1, ・・・, mode_8 (, mode_9, ・・・, mode_n)<CR><LF>
Setting	Command	@SDM, out_1, mode_1 (, out_2, mode_2, ・・・)<CR><LF>
	Response	@SDM, out_1, mode_1 (, out_2, mode_2, ・・・)<CR><LF>
Parameter		mode_1-n: Output format mode 0 = AUTO [Default], 1 = DVI, 2 = HDMI YCbCr 4:4:4, 3 = HDMI YCbCr 4:2:2, 4 = HDMI RGB, 5 = HDMI YCbCr 4:2:0 (For 4K@60/59.94/50 output only), -2 = No output board is installed or 12G-SDI output board is installed. (For response only)
		out_1-n: Output channel 0 = All outputs, 1 to n = OUT1 to OUTn
Getting example	Command	@GDM<CR><LF>
	Response	@GDM,4,4,4,4,4,4,4,4,4,4,4,4,4,4,4,4<CR><LF>
	Description	Getting the output format mode All output channels: HDMI RGB
Setting example	Command	@SDM,0,4<CR><LF>
	Response	@SDM,0,4<CR><LF>
	Description	Setting the output format of all output channels to HDMI RGB Completed
Remarks		－

Boards other than 12G-SDI

@GDC / @SDC		Deep Color output
Getting	Command	@GDC<CR><LF>
	Response	@GDC, color_1, ···, color_8 (, color_9, ··· , color_n)<CR><LF>
Setting	Command	@SDC, out_1, color_1 (, out_2, color_2, ···)<CR><LF>
	Response	@SDC, out_1, color_1 (, out_2, color_2, ···)<CR><LF>

Parameter		color_1-n: Color depth
		    0 = 24 bit/pixel (8 bit/component) [Default],
		    1 = 30 bit/pixel (10 bit/component),
		    2 = 36 bit/pixel (12 bit/component),
		    -2 = No output board is installed. or 12G-SDI output board is installed.
		        (For response only)

		out_1-n: Output channel 0 = All outputs, 1 to n = OUT1 to OUTn
Getting example	Command	@GDC<CR><LF>
	Response	@GDC,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0<CR><LF>
	Description	Getting the color depth All output channels: 24 bit/pixel (8 bit/component)
Setting example	Command	@SDC,0,1<CR><LF>
	Response	@SDC,0,1<CR><LF>
	Description	Setting the color depth of all output channels to 30 bit/pixel (10 bit/component)
Remarks		1080p scan conversion output board supports up to "30Bit" Deep Color. With 4K@60 scan conversion output board and 4K@60 scan conversion multiview output board, "24Bit" is supported for 4K@50/59.94 RGB/YCbCr 4:4:4, and "30Bit" is supported for other resolutions.

Scan conversion output only

@GFA / @SFA		Video transition effect
Getting	Command	@GFA, out_ch<CR><LF>
	Response	@GFA, out_ch, mode<CR><LF>
Setting	Command	@SFA, out_ch, mode<CR><LF>
	Response	@SFA, out_ch, mode<CR><LF>
Parameter		out_ch: Output channel 0 = All outputs (For setting only), 1 to n = OUT1 to OUTn

		mode: Fade out/Fade in
		    0 = OFF, 1 = ON [Default],
		    -2 = No scan conversion output board is installed. (For response only)

Getting example	Command	@GFA,1<CR><LF>
	Response	@GFA,1,1<CR><LF>
	Description	Getting the OUT1 switching effect mode ON
Setting example	Command	@SFA,1,1<CR><LF>
	Response	@SFA,1,1<CR><LF>
	Description	Setting the OUT1 switching effect mode to ON Completed
Remarks		—

Boards other than SDVoE and 12G-SDI

@GHM / @SHM		Sink device EDID check
Getting	Command	@GHM<CR><LF>
	Response	@GHM, mode_1, ···, mode_8 (, mode_9, ···, mode_n)<CR><LF>
Setting	Command	@SHM, out_1, mode_1 (, out_2, mode_2, ···)<CR><LF>
	Response	@SHM, out_1, mode_1 (, out_2, mode_2, ···)<CR><LF>

Parameter		mode_1-n: Sink device EDID check method
		  0 = In case of EDID load error, the sink device is treated as a DVI device [Default],
		  1 = In case of EDID load error, the sink device is treated as a HDMI device without SCDC,
		  2 = Always treats sink device as a HDMI device without SCDC,
		  3 = In case of EDID load error, the sink device is treated as a HDMI device with SCDC[*],
		  4 = Always treats sink device as a HDMI device with SCDC[*],
		  -2 = SDVoE output board or 12G-SDI output board is installed or no output board is installed. (For response only)
		  [*]For 4K@60 output board only

		out_1-n: Output channel 0 = All outputs, 1 to n = OUT1 to OUTn
Getting example	Command Response	@GHM<CR><LF> @GHM,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0<CR><LF>
	Description	Getting the sink device EDID check All output channels: "0" (In case of EDID load error, the sink device is treated as a DVI device.)
Setting example	Command Response	@SHM,0,0<CR><LF> @SHM,0,0<CR><LF>
	Description	Setting the sink device EDID check method of all output channels to "0" (In case of EDID load error, the sink device is treated as a DVI device.) Completed
Remarks		Scan conversion output board: This setting is available if the output mode is set to a value other than "DVI". Other boards: This setting is available if HDMI signal is input and the output mode is set to a value other than "DVI". 【See: @GDM / @SDM Output format】

Boards other than SDVoE and 12G-SDI

@GMK / @SMK		Hot plug ignoring duration
Getting	Command	@GMK<CR><LF>
	Response	@GMK, mask_1, ・・・, mask_8(, mask_9, ・・・, mask_n)<CR><LF>
Setting	Command	@SMK, out_1, mask_1 (, out_2, mask_2, ・・・)<CR><LF>
	Response	@SMK, out_1, mask_1 (, out_2, mask_2, ・・・)<CR><LF>
Parameter		mask_1-n: Hot plug ignoring duration 　　1 = OFF　[Default], 2 to 15 = 2 sec. to 15 sec., 　　-2 = SDVoE output board or 12G-SDI output board is installed or no output 　　　　board is installed. (For response only)
		out_1-n: Output channel 　　0 = All outputs, 1 to n = OUT1 to OUTn
Getting example	Command	@GMK<CR><LF>
	Response	@GMK,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1<CR><LF>
	Description	Getting the hot plug ignoring duration All output channels: OFF
Setting example	Command	@SMK,0,1<CR><LF>
	Response	@SMK,0,1<CR><LF>
	Description	Setting the hot plug ignoring duration of all output channels to OFF Completed
Remarks		―

12G-SDI output only

@GDF / @SDF		SDI output format conversion
Getting	Command	@GDF<CR><LF>
	Response	@GDF, conv_1, ・・・, conv_8 (, conv_9, ・・・, conv_n)<CR><LF>
Setting	Command	@SDF, out_1, conv_1 (, out_2, conv_2, ・・・)<CR><LF>
	Response	@SDF, out_1, conv_1 (, out_2, conv_2, ・・・)<CR><LF>
Parameter		conv_1-n: Conversion 　　0 = OFF　(Outputs color space as input color space.) 　　1 = ON　(Converts to YCbCr 4:2:2 10 bit (standard format) and outputs.) 　　　　　　[Default] 　　-2 = No 12G-SDI output board is installed. (For response only)
		out_1-n: Output channel 　　0 = All outputs, 1 to n = OUT1 to OUTn
Getting example	Command	@GDF<CR><LF>
	Response	@GDF,1,1,1,1,1,1,1,1,1,1,1,1,-2,-2,-2,-2<CR><LF>
	Description	Getting the SDI output format conversion Output channel 1 to 12　: ON Output channel 13 to 16 : No 12G-SDI output board is installed.
Setting example	Command	@SDF,0,0<CR><LF>
	Response	@SDF,0,0<CR><LF>
	Description	Setting the SDI output format conversion of all output channels to OFF Completed
Remarks		―

12G-SDI output only

@GOG / @SOG		SDI output gearbox mode
Getting	Command	@GOG<CR><LF>
	Response	@GOG, mode_1, mode_2 (, mode_3, ···, mode_m)<CR><LF>
Setting	Command	@SOG, slot_1, mode_1 (, slot_2, mode_2, ···)<CR><LF>
	Response	@SOG, slot_1, mode_1 (, slot_2, mode_2, ···)<CR><LF>
Parameter		mode_1-m: Gearbox mode 1 = Single link signal output [Default] 2 = 3G dual link signal output 3 = 6G dual link signal output 4 = 3G quad link signal output -2 = No 12G-SDI output board is installed. (For response only)
		slot_1-m: Output board 0 = All output boards, 1 to m = Output board 1 to Output board m
Getting example	Command	@GOG<CR><LF>
	Response	@GOG,1,1,4,-2<CR><LF>
	Description	Getting the SDI output gearbox mode Output board 1 and 2: Signal link signal output mode is set Output board 3: 3G quad link signal output mode is set Output board 4: No 12G-SDI output board is installed.
Setting example	Command	@SOG,1,4<CR><LF>
	Response	@SOG,1,4<CR><LF>
	Description	Setting the gearbox mode of Output board 1 to 3G quad link signal output Completed
Remarks		―

3.4.5 Input position, size, and masking

		Scan conversion output only

@GAP / @SAP		Aspect ratio
Getting	Command	@GAP, in_ch<CR><LF>
	Response	@GAP, in_ch, aspect<CR><LF>
Setting	Command	@SAP, in_ch, aspect<CR><LF>
	Response	@SAP, in_ch, aspect<CR><LF>
Parameter		in_ch: Input channel 1 to n = IN1 to INn

		aspect: Aspect ratio of input signal
		   0 = AUTO [Default], 1 = FULL,
		   2 = 4:3, 3 = 5:3, 4 = 5:4,
		   5 = 16:9, 6 = 16:10, 7 = 16:9 LETTER BOX,
		  -1 = No input board is installed. (For response only),
		  -3 = No input signal (For response only)

Getting example	Command	@GAP,1<CR><LF>
	Response	@GAP,1,0<CR><LF>
	Description	Getting the IN1 aspect ratio of input signal AUTO
Getting example	Command	@GAP,1<CR><LF>
	Response	@GAP,1,-3<CR><LF>
	Description	No video is input to IN1.
Setting example	Command	@SAP,1,0<CR><LF>
	Response	@SAP,1,0<CR><LF>
	Description	Setting the IN1 aspect ratio of input signal to AUTO Completed
Remarks		If no signal is input, the setting command is not applied.

Scan conversion output only

@GEF / @SEF		Input settings
Getting	Command	@GEF, in_ch<CR><LF>
	Response	@GEF, in_ch, h_size, v_size, h_posi, v_posi, aspect, red, green, blue, brightness, sharpness, hue, saturation<CR><LF>
Setting	Command	@SEF, in_ch, h_size, v_size, h_posi, v_posi, aspect, red, green, blue, brightness, sharpness, hue, saturation<CR><LF>
	Response	@SEF, in_ch, h_size, v_size, h_posi, v_posi, aspect, red, green, blue, brightness, sharpness, hue, saturation<CR><LF>
Parameter		in_ch: Input channel 1 to n = IN1 to INn

		h_size: Horizontal active area [dot]
		    -100 to +100 [Default] +0,
		    -1 = No input board is installed. (For response only)*,
		    -3 = No input signal (For response only)*
		    *"v_size to saturation" is not displayed.

		v_size: Vertical active area [line] -30 to +30 [Default] +0
		h_posi: Horizontal start position [dot] -100 to +100 [Default] +0
		v_posi: Vertical start position [line] -30 to +30 [Default] +0

		aspect: Aspect ratio of input signal
		    0 = AUTO [Default], 1 = FULL,
		    2 = 4:3, 3 = 5:3, 4 = 5:4,
		    5 = 16:9, 6 = 16:10, 7 = 16:9 LETTER BOX

		red : Input contrast (Red) green : Input contrast (Green) blue : Input contrast (Blue) 0 to 200 [Default] 100
		bright: Input brightness 0 to 200 [Default] 100
		sharpness: Sharpness -5 to 15 [Default] 0
		hue: Hue 0 to 359 [Default] 0
		saturation: Saturation 0 to 200 [Default] 100

@GEF / @SEF		Input settings (Cont'd)	
Getting example	Command	@GEF,1\<CR\>\<LF\>	
	Response	@GEF,1,+0,+0,+0,+0,0,100,100,100,100,0,0,100\<CR\>\<LF\>	
	Description	Getting the IN1 input settings	
		- Horizontal and vertical active area	: 0
		- Horizontal and vertical start position	: 0
		- Aspect ratio of input signal	: AUTO
		- Input contrast	: 100% for all (red, green, and blue)
		- Input brightness	: 100%
		- Sharpness	: 0
		- Hue	: 0°
		- Saturation	: 100%
Getting example	Command	@GEF,1\<CR\>\<LF\>	
	Response	@GEF,1,-3\<CR\>\<LF\>	
	Description	No video is input to IN1.	
Setting example	Command	@SEF,1,0,0,0,0,0,100,100,100,100,0,0,100\<CR\>\<LF\>	
	Response	@SEF,1,0,0,0,0,0,100,100,100,100,0,0,100\<CR\>\<LF\>	
	Description	Setting the IN1 input settings as follows:	
		- Horizontal and vertical active area	: 0
		- Horizontal and vertical start position	: 0
		- Aspect ratio of input signal	: AUTO
		- Input contrast	: 100% for all (red, green, and blue)
		- Input brightness	: 100%
		- Sharpness	: 0
		- Hue	: 0°
		- Saturation	: 100%
		Completed	
Remarks		If no signal is input, the setting command is not applied.	

3.4.6 Input

Boards other than SDVoE and SDI

@GDT / @SDT		No-signal input monitoring
Getting	Command	@GDT<CR><LF>
	Response	@GDT, time_1, ···, time_8 (, time_9, ···, time_n)<CR><LF>
Setting	Command	@SDT, in_1, time_1 (, in_2, time_2, ···)<CR><LF>
	Response	@SDT, in_1, time_1 (, in_2, time_2, ···)<CR><LF>

Parameter		time_1-n: No-signal input monitoring time
		    0 = OFF, 3 to 15 = 3 sec. to 15 sec. [Default] 10 sec.,
		    -1 = No HDMI/DVI input board or HDBaseT input board is installed.
		        (For response only)

		in_1-n: Input channel 0 = All inputs, 1 to n = IN1 to INn
Getting example	Command Response	@GDT<CR><LF> @GDT,10,10,10,10,10,10,10,10,10,10,10,10,10,10,10,10<CR><LF>
	Description	Getting the no-signal input monitoring time All input channels: 10 seconds
Setting example	Command Response	@SDT,0,4<CR><LF> @SDT,0,4<CR><LF>
	Description	Setting the monitoring time of all input channels to 4 seconds Completed
Remarks		—

Boards other than SDI

@GHE / @SHE		HDCP input
Getting	Command	@GHE<CR><LF>
	Response	@GHE, hdcp_1, ・・・, hdcp_8 (, hdcp_9, ・・・, hdcp_n)<CR><LF>
Setting	Command	@SHE, in_1, hdcp_1 (, in_2, hdcp_2, ・・・)<CR><LF>
	Response	@SHE, in_1, hdcp_1 (, in_2, hdcp_2, ・・・)<CR><LF>
Parameter		hdcp_1-n: HDCP input enabled/disabled 　　0 = DISABLE, 　　1 = HDCP 1.4, 　　2 = HDCP 2.2　[Default], 　　-1 = No HDMI/DVI input board or HDBaseT/SDVoE input board is installed. 　　　　(For response only)
		in_1-n: Input channel 　　0 = All inputs, 1 to n = IN1 to INn
Getting example	Command	@GHE<CR><LF>
	Response	@GHE,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1<CR><LF>
	Description	Getting HDCP input enabled/disabled All input channels: Enables HDCP 1.4 input
Setting example	Command	@SHE,0,0<CR><LF>
	Response	@SHE,0,0<CR><LF>
	Description	Setting the HDCP input of all input channels to be disabled Completed
Remarks		―

3G-SDI input only

@GDU / @SDU		3G-SDI Dual Stream
Getting	Command	@GDU<CR><LF>
	Response	@GDU, select_1, ・・・, select_8 (, select_9, ・・・, select_n)<CR><LF>
Setting	Command	@SDU, in_1, select_1 (, in_2, select_2, ・・・)<CR><LF>
	Response	@SDU, in_1, select_1 (, in_2, select_2, ・・・)<CR><LF>
Parameter		select_1-n: Input video 　　1 = Video stream 1　[Default], 2 = Video stream 2, 　　-1 = No 3G-SDI/HD-SDI/SD-SDI input board is installed. (For response only)
		in_1-n: Input channel 　　0 = All inputs, 1 to n = IN1 to INn
Getting example	Command	@GDU<CR><LF>
	Response	@GDU,1,1,1,1,1,1,1,1,1,1,1,1,-1,-1,-1,-1<CR><LF>
	Description	Getting the SDI Dual Stream input video Input video of IN1 to 12 : Video stream 1 IN13 to 16　　　　　　　 : No 3G-SDI/HD-SDI/SD-SDI input board is installed.
Setting example	Command	@SDU,0,2<CR><LF>
	Response	@SDU,0,2<CR><LF>
	Description	Setting input video of all input channels to Video stream 2 Completed
Remarks		―

12G-SDI input only

@GIG / @SIG		SDI input gearbox mode
Getting	Command	@GIG<CR><LF>
	Response	@GIG, mode_1, mode_2 (, mode_3, ···, mode_m)<CR><LF>
Setting	Command	@SIG, slot_1, mode_1 (, slot_2, mode_2, ···)<CR><LF>
	Response	@SIG, slot_1, mode_1 (, slot_2, mode_2, ···)<CR><LF>
Parameter		mode_1-m: Gearbox mode 　　0 = Determines automatically by CH-A input payload ID. 　　1 = Single link signal input　[Default] 　　2 = 3G dual link signal input 　　3 = 6G dual link signal input 　　4 = 3G quad link signal input 　　-2 = No 12G-SDI input board is installed. (For response only)
		slot_1-m: Input board 　　0 = All input boards, 1 to m = Input board 1 to Input board m
Getting example	Command	@GIG<CR><LF>
	Response	@GIG,1,1,0,-1<CR><LF>
	Description	Getting the SDI input gearbox mode Input board 1 and 2: Single link signal input Input board 3: Determines automatically by CH-A input payload ID. Input board 4: No 12G-SDI input board is installed.
Setting example	Command	@SIG,1,4<CR><LF>
	Response	@SIG,1,4<CR><LF>
	Description	Setting the SDI input gearbox mode of Input board 1 to 3G quad link signal input Completed
Remarks		For FDX-S64U, @GIG/@SIG is not supported.

3.4.7 Input timing

<div align="right">

Scan conversion output only

</div>

@GPI / @SPI		Horizontal/Vertical start position
Getting	Command	@GPI, in_ch<CR><LF>
	Response	@GPI, in_ch, h_posi, v_posi<CR><LF>
Setting	Command	@SPI, in_ch, h_posi, v_posi<CR><LF>
	Response	@SPI, in_ch, h_posi, v_posi<CR><LF>
Parameter		in_ch: Input channel 1 to n = IN1 to INn

		h_posi: Horizontal start position [dot]
		    -100 to +100　　[Default] +0,
		    -1 = No input board is installed. (For response only)[*],
		    -3 = No input signal (For response only)[*]
		     [*]"v_posi" is not displayed.

		v_posi: Vertical start position [line] -30 to +30　　[Default] +0
Getting example	Command Response	@GPI,1<CR><LF> @GPI,1,+0,+0<CR><LF>
	Description	Getting the IN1 start positions Horizontal and vertical start position: 0
Getting example	Command Response	@GPI,1<CR><LF> @GPI,1,-3<CR><LF>
	Description	No video is input to IN1.
Setting example	Command Response	@SPI,1,0,0<CR><LF> @SPI,1,0,0<CR><LF>
	Description	Setting the IN1 horizontal and vertical start positions to "0" Completed
Remarks		If no signal is input, the setting command is not applied.

Scan conversion output only

@GSI / @SSI		Horizontal/Vertical active area
Getting	Command	@GSI, in_ch<CR><LF>
	Response	@GSI, in_ch, h_size, v_size<CR><LF>
Setting	Command	@SSI, in_ch, h_size, v_size<CR><LF>
	Response	@SSI, in_ch, h_size, v_size<CR><LF>
Parameter		in_ch: Input channel 1 to n = IN1 to INn

		h_size: Horizontal active area [dot]
		    -100 to +100 [Default] +0,
		    -1 = No input board is installed. (For response only)[*],
		    -3 = No input signal (For response only)[*]
		     [*]"v_size" is not displayed.

		v_size: Vertical active area [line] -30 to +30 [Default] +0
Getting example	Command	@GSI,1<CR><LF>
	Response	@GSI,1,+0,+0<CR><LF>
	Description	Getting the IN1 active area Horizontal and vertical active area: 0
Getting example	Command	@GSI,1<CR><LF>
	Response	@GSI,1,-3<CR><LF>
	Description	No video is input to IN1.
Setting example	Command	@SSI,1,0,0<CR><LF>
	Response	@SSI,1,0,0<CR><LF>
	Description	Setting the IN1 horizontal and vertical active area to "0" Completed
Remarks		If no signal is input, the setting command is not applied.

3.4.8 Picture controls

Scan conversion output only

@GOB / @SOB		Output brightness
Getting	Command	@GOB, out_ch<CR><LF>
	Response	@GOB, out_ch, brightness<CR><LF>
Setting	Command	@SOB, out_ch, brightness<CR><LF>
	Response	@SOB, out_ch, brightness<CR><LF>
Parameter		out_ch: Output channel 1 to n = OUT1 to OUTn

		brightness: Output brightness
		    0 to 200 [Default] 100,
		    -2 = No scan conversion output board is installed. (For response only)

Getting example	Command Response	@GOB,1<CR><LF> @GOB,1,110<CR><LF>
	Description	Getting the OUT1 brightness 110%
Setting example	Command Response	@SOB,1,110<CR><LF> @SOB,1,110<CR><LF>
	Description	Setting the OUT1 brightness to 110% Completed
Remarks		―

Scan conversion output only

@GOC / @SOC		Output contrast
Getting	Command	@GOC, out_ch<CR><LF>
	Response	@GOC, out_ch, red, green, blue<CR><LF>
Setting	Command	@SOC, out_ch, red, green, blue<CR><LF>
	Response	@SOC, out_ch, red, green, blue<CR><LF>
Parameter		out_ch: Output channel 1 to n = OUT1 to OUTn

		red : Output contrast (Red)
		green : Output contrast (Green)
		blue : Output contrast (Blue)
		    0 to 200 [Default] 100,
		    -2 = No scan conversion output board is installed. (For response only)

Getting example	Command Response	@GOC,1<CR><LF> @GOC,1,105,100,95<CR><LF>
	Description	Getting the OUT1 contrast Red: 105%, Green: 100%, Blue: 95%
Setting example	Command Response	@SOC,1,105,100,95<CR><LF> @SOC,1,105,100,95<CR><LF>
	Description	Setting the OUT1 contrast to 105% for red, 100% for green, 95% for blue Completed
Remarks		―

Scan conversion output only

@GGM / @SGM		**Output gamma**
Getting	Command	@GGM, out_ch<CR><LF>
	Response	@GGM, out_ch, gamma<CR><LF>
Setting	Command	@SGM, out_ch, gamma<CR><LF>
	Response	@SGM, out_ch, gamma<CR><LF>
Parameter		out_ch: Output channel 　　1 to n = OUT1 to OUTn
		gamma: Gamma 　　1 to 30 = 0.1 to 3.0　[Default] 10 = 1.0, 　　-2 = No scan conversion output board is installed. (For response only)
Getting example	Command	@GGM,1<CR><LF>
	Response	@GGM,1,10<CR><LF>
	Description	Getting the OUT1 gamma 1.0
Setting example	Command	@SGM,1,10<CR><LF>
	Response	@SGM,1,10<CR><LF>
	Description	Setting the OUT1 gamma to 1.0 Completed
Remarks		—

Scan conversion output only

@GFL / @SFL		**Input sharpness**
Getting	Command	@GFL, in_ch<CR><LF>
	Response	@GFL, in_ch, sharp<CR><LF>
Setting	Command	@SFL, in_ch, sharp<CR><LF>
	Response	@SFL, in_ch, sharp<CR><LF>
Parameter		in_ch: Input channel 　　1 to n = IN1 to Inn
		sharp: Sharpness 　　-5 to 15　[Default] 0, 　　-1 = No input board is installed. (For response only), 　　-3 = No input signal (For response only)
Getting example	Command	@GFL,1<CR><LF>
	Response	@GFL,1,0<CR><LF>
	Description	Getting the IN1 sharpness "0"
Getting example	Command	@GFL,1<CR><LF>
	Response	@GFL,1,-3<CR><LF>
	Description	No video is input to IN1.
Setting example	Command	@SFL,1,0<CR><LF>
	Response	@SFL,1,0<CR><LF>
	Description	Getting the IN1 sharpness to "0" Completed
Remarks		If no signal is input, the setting command is not applied.

Scan conversion output only

@GIB / @SIB		Input brightness
Getting	Command	@GIB, in_ch<CR><LF>
	Response	@GIB, in_ch, brightness<CR><LF>
Setting	Command	@SIB, in_ch, brightness<CR><LF>
	Response	@SIB, in_ch, brightness<CR><LF>
Parameter		in_ch: Input channel 1 to n = IN1 to INn

		brightness: Input brightness
		    0 to 200 [Default] 100,
		    -1 = No input board is installed. (For response only),
		    -3 = No input signal (For response only)

Getting example	Command	@GIB,1<CR><LF>
	Response	@GIB,1,110<CR><LF>
	Description	Getting the IN brightness 110%
Getting example	Command	@GIB,1<CR><LF>
	Response	@GIB,1,-3<CR><LF>
	Description	No video is input to IN1.
Setting example	Command	@SIB,1,110<CR><LF>
	Response	@SIB,1,110<CR><LF>
	Description	Setting the IN1 brightness to 110% Completed
Remarks		If no signal is input, the setting command is not applied.

Scan conversion output only

@GIC / @SIC		Input contrast
Getting	Command	@GIC, in_ch<CR><LF>
	Response	@GIC, in_ch, red, green, blue<CR><LF>
Setting	Command	@SIC, in_ch, red, green, blue<CR><LF>
	Response	@SIC, in_ch, red, green, blue<CR><LF>
Parameter		in_ch: Input channel 1 to n = IN1 to INn

		red : Input contrast (Red)
		green : Input contrast (Green)
		blue : Input contrast (Blue)
		    0 to 200 [Default] 100,
		   -1 = No input board is installed. (For response only),
		   -3 = No input signal (For response only)

Getting example	Command	@GIC,1<CR><LF>
	Response	@GIC,1,105,100,95<CR><LF>
	Description	Getting the IN1 contrast Red: 105%, Green: 100%, Blue: 95%
Getting example	Command	@GIC,1<CR><LF>
	Response	@GIC,1,-3,-3,-3<CR><LF>
	Description	No video is input to IN1.
Setting example	Command	@SIC,1,105,100,95<CR><LF>
	Response	@SIC,1,105,100,95<CR><LF>
	Description	Setting the IN1 contrast to 105% for red, 100% for green, 95% for blue Completed
Remarks		If no signal is input, the setting command is not applied.

Scan conversion output only

@GHU / @SHU		Input hue
Getting	Command	@GHU, in_ch<CR><LF>
	Response	@GHU, in_ch, hue<CR><LF>
Setting	Command	@SHU, in_ch, hue<CR><LF>
	Response	@SHU, in_ch, hue<CR><LF>
Parameter		in_ch: Input channel 　　1 to n = IN1 to INn
		hue: Hue 　　0 to 359　[Default] 0, 　　-1 = No input board is installed. (For response only), 　　-3 = No input signal (For response only)
Getting example	Command	@GHU,1<CR><LF>
	Response	@GHU,1,0<CR><LF>
	Description	Getting the IN1 hue 0°
Getting example	Command	@GHU,1<CR><LF>
	Response	@GHU,1,-3<CR><LF>
	Description	No video is input to IN1.
Setting example	Command	@SHU,1,0<CR><LF>
	Response	@SHU,1,0<CR><LF>
	Description	Setting the IN1 hue to 0° Completed
Remarks		If no signal is input, the setting command is not applied.

Scan conversion output only

@GST / @SST		Input saturation
Getting	Command	@GST, in_ch<CR><LF>
	Response	@GST, in_ch, saturation<CR><LF>
Setting	Command	@SST, in_ch, saturation<CR><LF>
	Response	@SST, in_ch, saturation<CR><LF>
Parameter		in_ch: Input channel 1 to n = IN1 to Inn

		saturation: Saturation
		    0 to 200 [Default] 100,
		    -1 = No input board is installed. (For response only),
		    -3 = No input signal (For response only)

Getting example	Command	@GST,1<CR><LF>
	Response	@GST,1,100<CR><LF>
	Description	Getting the IN1 saturation 100%
Getting example	Command	@GST,1<CR><LF>
	Response	@GST,1,-3<CR><LF>
	Description	No video is input to IN1.
Setting example	Command	@SST,1,105<CR><LF>
	Response	@SST,1,105<CR><LF>
	Description	Setting the IN1 saturation to 105% Completed
Remarks		If no signal is input, the setting command is not applied.

3.4.9 Output audio

@GAM / @SAM		Mute
Getting	Command	@GAM<CR><LF>
	Response	@GAM, mode_1, ・・・, mode_8 (, mode_9, ・・・, mode_n)<CR><LF>
Setting	Command	@SAM, out_1, mode_1 (, out_2, mode_2, ・・・)<CR><LF>
	Response	@SAM, out_1, mode_1 (, out_2, mode_2, ・・・)<CR><LF>

Parameter		mode_1-n: Digital audio output
		    0 = Not outputting audio, 1 = Outputting audio [Default],
		    -2 = No output board is installed. (For response only)

		out_1-n: Output channel 0 = All outputs, 1 to n = OUT1 to OUTn
Getting example	Command	@GAM<CR><LF>
	Response	@GAM,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1<CR><LF>
	Description	Getting the digital audio output All output channels: Outputting audio
Setting example	Command	@SAM,0,0<CR><LF>
	Response	@SAM,0,0<CR><LF>
	Description	Setting digital audio of all output channels not to be output. Completed
Remarks		―

Scan conversion output and analog audio output only

@GLO / @SLO		Output Lip Sync
Getting	Command	@GLO<CR><LF>
	Response	@GLO, time_1, ・・・, time_8 (, time_9, ・・・, time_n) (, time_a1, time_a2, ・・・, time_a12, time_b1, time_b2, ・・・, time_b12)<CR><LF>
Setting	Command	@SLO, out_1, time_1 (, out_2, time_2, ・・・)<CR><LF>
	Response	@SLO, out_1, time_1 (, out_2, time_2, ・・・)<CR><LF>

Parameter		time_1-n : Lip Sync of scan conversion output board [ms.]
		time_a1-a12 : Lip Sync of analog audio output [ms.]
		time_b1-b12 : Lip Sync of analog audio output [ms.]
		   0 to 256 [Default] 0,
		  -2 = No scan conversion output board or no analog audio output board
		      (For response only)
		 [FDX-SAB4A is installed]
		  (time_a5-a12,time_b5-b12) = "-2"
		 [For models other than FDX-S64U]
		   (time_a1-a12) is only for when an analog audio output board is installed.
		   (time_b1-b12) cannot be gotten.
		 [For FDX-S64U]
		   (time_a1-a12) and (time_b1-b12) are only for when an analog audio output
		   board is installed to SLOT-A or SLOT-B.
		   (time_a1-a12) is for SLOT-A; (time_b1-b12) is for SLOT-B. If one slot is used,
		   the other slot is "-2".

@GLO / @SLO		Output Lip Sync (Cont'd)

Parameter		out_1-n: Output channel
		  [For models other than FDX-S64U]
		    0 = All outputs of output boards (OUT1 to OUTn), 1 to n = OUT1 to OUTn,
		    300 = All outputs of analog audio (ANALOG OUT1 to ANALOG OUT12),
		    301 to 312 = ANALOG OUT1 to ANALOG OUT12
		  [For FDX-S64U]
		    0 = All outputs of output boards (OUT1 to OUTn), 1 to n = OUT1 to OUTn,
		    300 = All analog audio outputs of SLOT-A (ANALOG-A OUT1 to ANALOG-A OUT12),
		    301 to 312 = ANALOG-A OUT1 to ANALOG-A OUT12,
		    400 = All analog audio outputs of SLOT-B (ANALOG-B OUT1 to ANALOG-B OUT12),
		    401 to 412 = ANALOG-B OUT1 to ANALOG-B OUT12

Getting example	Command Response	@GLO<CR><LF> @GLO,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100<CR><LF>
	Description	(No analog audio output board is installed to the FDX-S16U) Getting the lip sync settings 100 ms.
	Command Response	@GLO<CR><LF> @GLO,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100, 200,200,200,200,-2,-2,-2,-2,-2,-2,-2,-2<CR><LF>
	Description	(FDX-SAB4A is installed to the FDX-S16U) Getting the lip sync settings 100 ms. Analog audio outputs ANALOG OUT1 to 4 : 200 ms Analog audio ANALOG OUT5 to 12 : Not installed (FDX-SAB4A: Four outputs)
	Command Response	@GLO<CR><LF> @GLO,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100, 200,200,200,200,200,200,200,200,200,200,200,200<CR><LF>
	Description	(FDX-SOA12A is installed to the FDX-S16U) Getting the lip sync settings 100 ms. All outputs of analog audio channel: 200 ms. (FDX-SOA12A: 12 outputs)

@GLO / @SLO		Output Lip Sync (Cont'd)
	Command Response	@GLO<CR><LF> @GLO,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100, 100,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100, 100,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100, 100,100,100,100,100,100,100,100,100,100,100,100,200,200,200,200,200,200, 200,200,200,200,200,200,-2,-2,-2,-2,-2,-2,-2,-2,-2,-2,-2,-2<CR><LF>
	Description	(FDX-S64U: FDX-SOA12A is installed to SLOT-A; no board is installed to SLOT-B) Getting the lip sync settings 100 ms for all channels of output boards SLOT-A: 200 ms for all analog audio output channels No analog audio board is installed to SLOT-B.
Setting example	Command Response	@SLO,0,2<CR><LF> @SLO,0,2<CR><LF>
	Description	Setting the lip sync settings of all outputs of output boards channel to "2 ms". Completed
	Command Response	@SLO,300,2<CR><LF> @SLO,300,2<CR><LF>
	Description	(FDX-S16U: FDX-SOA12A is installed FDX-S64U: FDX-SOA12A is installed to SLOT-A) Setting the lip sync settings of all outputs of analog audio channel (or SLOT-A only) to "2 ms". Completed
Remarks		─

@GAS / @SAS		Audio embedding/Audio de-embedding
Getting	Command	@GAS, out_1<CR><LF>
	Response	@GAS, out_1, select_1 (, select_2, select_3, ···)<CR><LF>
Setting	Command	@SAS, out_1, select_1 (, out_2, select_2, ···)<CR><LF>
	Response	@SAS, out_1, select_1 (, out_2, select_2, ···)<CR><LF>

Parameter		out_1-n: Output channel
		[For models other than FDX-S64U]
		  0 = All outputs of output boards (OUT1 to OUTn), 1 to n = OUT1 to OUTn,
		  300 = All outputs of analog audio (ANALOG OUT1 to ANALOG OUT12),
		  301 to 312 = ANALOG OUT1 to ANALOG OUT12,
		  500 = All outputs of Dante (DANTE OUT1 to DANTE OUT32),
		  501 to 532 = DANTE OUT1 to DANTE OUT32
		[For FDX-S64U]
		  0 = All outputs of output boards (OUT1 to OUTn), 1 to n = OUT1 to = OUTn,
		  300 = All analog audio outputs of SLOT-A (ANALOG-A OUT1 to ANALOG-A OUT12),
		  301 to 312 = ANALOG-A OUT1 to ANALOG-A OUT12,
		  400 = All analog audio outputs of SLOT-B (ANALOG-B OUT1 to ANALOG-B OUT12),
		  401 to 412 = ANALOG-B OUT1 to ANALOG-B OUT12,
		  500 = Dante all outputs of SLOT-A (DANTE-A OUT1 to DANTE-A OUT32),
		  501 to 532 = DANTE-A OUT1 to = DANTE-A OUT32,
		  600 = Dante all outputs of SLOT-B (DANTE-B OUT1 to DANTE-B OUT32),
		  601 to 632 = DANTE-B OUT1 to DANTE-B OUT32

		select_1-n: Selecting output audio
		Setting and default values vary depending on specified output channel. Refer to the User Guide for these values.
		 [Output board outputs (OUT1 to OUTn)]
		  [For models other than FDX-S64U]
		   0 = Video input channel audio that is being selected,
		   301 to 304 = ANALOG IN1 to ANALOG IN4,
		   501 to 532 = DANTE IN1 to DANTE IN32,
		   -2 = No output board is installed. (For response only)
		  [For FDX-S64U]
		   0 = Video input channel audio that is being selected,
		   301 to 304 = ANALOG-A IN1 to ANALOG-A IN4,
		   401 to 404 = ANALOG-B IN1 to ANALOG-B IN4,
		   501 to 532 = DANTE-A IN1 to DANTE-A IN32,
		   601 to 632 = DANTE-B IN1 to DANTE-B IN32,
		   -2 = No output board is installed. (For response only)
		 [Analog audio output (ANALOG OUT1 to 12, ANALOG-A OUT1 to 12, ANALOG-B OUT1 to 12) or Dante output (DANTE OUT1 to 32, DANTE-A OUT1 to 32, DANTE-B OUT1 to 32)]
		   1 to n = Audio of video input channel IN1 to INn,
		   101 to 100+n = Video input channel audio of OUT1 to OUTn,
		   -2 = No analog audio/Dante audio board (For response only)

@GAS / @SAS		Audio embedding/Audio de-embedding (Cont'd)
Getting example	Command	@GAS,0<CR><LF>
	Response	@GAS,0,301,302,303,304,0,0,0,0,0,0,0,0,0,0,0,0<CR><LF>
	Description	(FDX-SAB4A is installed)
		Getting audio for all outputs of output boards
		OUT1 : ANALOG IN1
		OUT2 : ANALOG IN2
		OUT3 : ANALOG IN3
		OUT4 : ANALOG IN4
		OUT5 to 16 : Video input channel audio that is being selected
	Command	@GAS,300<CR><LF>
	Response	@GAS,300,1,1,1,1,101,101,101,101,101,101,101,101<CR><LF>
	Description	(FDX-SOA12A is installed)
		Getting audio for all outputs of analog audio boards
		ANALOG OUT1 to 4 : Audio of IN1
		ANALOG OUT5 to 12 : Audio of OUT1
	Command	@GAS,501<CR><LF>
	Response	@GAS,501,116<CR><LF>
	Description	(FDX-SAB64D is installed)
		Getting the DANTE OUT1 audio
		Video input channel audio of OUT16
Setting example	Command	@SAS,0,0<CR><LF>
	Response	@SAS,0,0<CR><LF>
	Description	Setting audio for all outputs of output boards to audio of selected video input channel
		Completed
	Command	@SAS,1,301<CR><LF>
	Response	@SAS,1,301<CR><LF>
	Description	(FDX-SAB4A is installed)
		Setting audio of ANALOG IN1 to OUT1 of output boards
		(For FDX-S64U, setting to ANALOG-A IN1 of SLOT-A)
		Completed
	Command	@SAS,500,1<CR><LF>
	Response	@SAS,500,1<CR><LF>
	Description	(FDX-SAB64D is installed)
		Setting audio of input channel IN1 to all Dante outputs
		(For FDX-S64U, setting to Dante all outputs of SLOT-A)
		Completed
	Command	@SAS,501,101<CR><LF>
	Response	@SAS,501,101<CR><LF>
	Description	(FDX-SAB64D is installed)
		Setting audio of input channel audio OUT1 to DANTE OUT1
		(For FDX-S64U, setting to DANTE OUT1 of SLOT-A)
		Completed
Remarks		―

Scan conversion multiview output only

@GWO / @SWO		Audio setting
Getting	Command	@GWO<CR><LF>
	Response	@GWO, window_1, window_2 (, window_3, ・・・, window_n)<CR><LF>
Setting	Command	@SWO, out_ch_1, window_1 (, out_ch_2, window_2, ・・・)<CR><LF>
	Response	@SWO, out_ch_1, window_1 (, out_ch_2, window_2, ・・・)<CR><LF>
Parameter		window_1-n: Audio selection window 　　1 to 4 = Window A to Window D　[Default] Window A 　-2 = No scan conversion output board is installed. (For response only)
		out_ch_1-n: Output channel 　　0 = All output channels 　　1 to n = OUT1 to OUTn
Getting example	Command	@GWO<CR><LF>
	Response	@GWO,1,1,1,1<CR><LF>
	Description	Getting audio setting All output channels: Window A
Setting example	Command	@SWO,1,2<CR><LF>
	Response	@SWO,1,2<CR><LF>
	Description	Setting the audio setting of Output channel 1 to Window B Completed
Remarks		This command is enabled for only the first channel of each scan conversion multiview output board. 　　　　　　　　　　　　　　【See: 3.1 Board channel configuration】

12G-SDI output only

@GGO / @SGO		SDI output audio group
Getting	Command	@GGO<CR><LF>
	Response	@GGO, primary_1, secondary_1, ···, primary_8, secondary_8 (, primary_9, secondary_9, ···, primary_n, secondary_n)<CR><LF>
Setting	Command	@SGO, out_1, primary_1, secondary_1 (, out_2, primary_2, secondary_2, ···)<CR><LF>
	Response	@SGO, out_1, primary_1, secondary_1 (, out_2, primary_2, secondary_2, ···)<CR><LF>

Parameter		primary_1-n : Primary audio
		secondary_1-n: Secondary audio
		    1 = Audio group 1 (1ch to 4ch) [Default] (primary),
		    2 = Audio group 2 (5ch to 8ch) [Default] (secondary),
		    3 = Audio group 3 (9ch to 12ch),
		    4 = Audio group 4 (13ch to 16ch),
		    -1 = No 12G-SDI output board is installed. (For response only)

		in_1-n: Output channel 0 = All outputs, 1 to n = OUT1 to OUTn
Getting example	Command Response	@GGO<CR><LF> @GGO,1,2,1,2,1,2,1,2,1,2,1,2,1,2,1,2,1,2,1,2,1,2,1,2,-2,-2,-2,-2,-2,-2,-2,-2<CR><LF>
	Description	Getting the SDI output audio group Primary audio of OUT1 to OUT12 : Audio group 1 Secondary audio : Audio group 2 OUT13 to 16 : No 12G-SDI output board is installed.
Setting example	Command Response	@SGO,0,3,4<CR><LF> @SGO,0,3,4<CR><LF>
	Description	Setting the primary audio of all output channels to Audio group 3, secondary audio to Audio group 4 Completed
Remarks		The same audio group cannot be set for primary audio and secondary audio.

3.4.10 Input audio

<table>
<tr><td colspan="2"></td><td style="text-align:right">Boards other than SDI</td></tr>
</table>

@GAW / @SAW		Stable audio input wait
Getting	Command	@GAW<CR><LF>
	Response	@GAW, wait_1, ···, wait_8 (, wait_9, ···, wait_n)<CR><LF>
Setting	Command	@SAW, in_1, wait_1 (, in_2, wait_2, ···)<CR><LF>
	Response	@SAW, in_1, wait_1 (, in_2, wait_2, ···)<CR><LF>

Parameter		wait_1-n: Waiting time
		    0 = OFF, 1 = SHORT, 2 = MID [Default], 3 = LONG,
		   -2 = No HDMI/DVI input board or HDBaseT input board is installed.
		       (For response only)

		in_1-n: Input channel 0 = All inputs, 1 to n = IN1 to INn
Getting example	Command	@GAW<CR><LF>
	Response	@GAW,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2<CR><LF>
	Description	Getting the mode of stable audio input wait All input channels: MID
Setting example	Command	@SAW,1,0<CR><LF>
	Response	@SAW,1,0<CR><LF>
	Description	Disabling stable audio input wait of IN1 Completed
Remarks		―

		SDI input only

@GAG / @SAG		SDI input audio group
Getting	Command	@GAG<CR><LF>
	Response	@GAG, primary_1, secondary_1, ···, primary_8, secondary_8 (, primary_9, secondary_9, ···, primary_n, secondary_n)<CR><LF>
Setting	Command	@SAG, in_1, primary_1, secondary_1 (, in_2, primary_2, secondary_2, ···)<CR><LF>
	Response	@SAG, in_1, primary_1, secondary_1 (, in_2, primary_2, secondary_2, ···)<CR><LF>

Parameter		primary_1-n : Primary audio
		secondary_1-n : Secondary audio
		  1 = Audio group 1 (1ch to 4ch) [Default] (primary),
		  2 = Audio group 2 (5ch to 8ch) [Default] (secondary),
		  3 = Audio group 3 (9ch to 12ch),
		  4 = Audio group 4 (13ch to 16ch),
		  -1 = No SDI input board is installed. (For response only)

		in_1-n: Input channel 0 = All inputs, 1 to n = IN1 to INn
Getting example	Command Response	@GAG<CR><LF> @GAG,1,2,1,2,1,2,1,2,1,2,1,2,1,2,1,2,1,2,1,2,1,2,1,2,-1,-1,-1,-1,-1,-1,-1,-1<CR><LF>
	Description	Getting the SDI input audio group Primary audio of IN1 to 12 : Audio group 1 Secondary audio : Audio group 2 IN13 to 16 : No SDI input board is installed.
Setting example	Command Response	@SAG,0,3,4<CR><LF> @SAG,0,3,4<CR><LF>
	Description	Setting the primary audio of all input channels to Audio group 3, secondary audio to Audio group 4 Completed
Remarks		The same audio group cannot be set for primary audio and secondary audio.

3.4.11 EDID

Boards other than SDI

@GVF / @SVF		Resolution
Getting	Command	@GVF<CR><LF>
	Response	@GVF, edid_1, ···, edid_8 (, edid_9, ···, edid_n)<CR><LF>
Setting	Command	@SVF, in_1, edid_1 (, in_2, edid_2, ···)<CR><LF>
	Response	@SVF, in_1, edid_1 (, in_2, edid_2, ···)<CR><LF>
Parameter		edid_1-n: EDID resolution

edid_1-n: EDID resolution

0 = External EDID,

1 = Copied EDID 1,	2 = Copied EDID 2,
3 = Copied EDID 3,	4 = Copied EDID 4,
5 = 1080p(1920x1080),	6 = 720p(1280x720),
7 = 1080i(1920x1080),	8 = SVGA(800x600),
9 = XGA(1024x768),	10 = VESA720(1280x720),
11 = WXGA(1280x768),	12 = WXGA(1280x800),
13 = Quad-VGA(1280x960),	14 = SXGA(1280x1024),
15 = WXGA(1360x768),	16 = WXGA(1366x768),
17 = SXGA+(1400x1050),	18 = WXGA+(1440x900),
19 = WXGA++(1600x900),	20 = UXGA(1600x1200),
21 = WSXGA+(1680x1050),	22 = VESA1080(1920x1080),
23 = WUXGA(1920x1200),	24 = QWXGA(2048x1152),
25 = WQHD(2560x1440),	26 = WQXGA(2560x1600),
40 = 2160p@30(3840x2160),	41 = 2160p@60(4:2:0)(3840x2160),
42 = 2160p@60(4:4:4)(3840x2160)[1],	43 = 4096x2160@30,
44 = 4096x2160@60(4:2:0),	45 = 4096x2160@60(4:4:4)[1],

-1 = No HDMI/DVI input board or HDBaseT/SDVoE input board is installed.
   (For response only)

[Default] (Depending on input board or unit.)

Input boards	Default
4K@60 HDMI/DVI (FDX-SIV4UH) 4K@60 SDVoE (FDX-SIV4UC)	Other than FDX-S64U: 42 = 2160p@60(4:4:4)(3840x2160) FDX-S64U: 41 = 2160p@60(4:2:0)(3840x2160)
4K@60 HDBaseT (FDX-SIV4UT)	41 = 2160p@60(4:2:0)(3840x2160)

[1] HDBaseT input board (FDX-SIV4UT) and FDX-S64U are not supported.

in_1-n: Input channel
   1 to n = IN1 to INn

@GVF / @SVF		Resolution (Cont'd)
Getting example	Command	@GVF<CR><LF>
	Response	@GVF,5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,5<CR><LF>
	Description	Getting the EDID resolution All input channels: 1080p
Setting example	Command	@SVF,1,5<CR><LF>
	Response	@SVF,1,5<CR><LF>
	Description	Setting the IN1 EDID resolution to 1080p Completed
Remarks		If selecting Copied EDID, execute "**@RME Copying EDID**" beforehand to load the EDID.

Boards other than SDI

@RME		Copying EDID
Setting	Command	@RME, out, number<CR><LF>
	Response	@RME, out, number<CR><LF>

Parameter		out: Channel to be read
		   1 to n = OUT1 to OUTn
		    *12G-SDI output channel cannot be selected.

		number: Destination memory number 1 to 4 = Destination 1 to Destination 4
Setting example	Command	@RME,1,1<CR><LF>
	Response	@RME,1,1<CR><LF>
	Description	Setting destination for saving sink device's EDID that is connected to OUT1 Completed
Remarks		―

Boards other than SDI

@GEC / @SEC		External EDID
Getting	Command	@GEC<CR><LF>
	Response	@GEC, out_1, ···, out_8 (, out_9, ···, out_n)<CR><LF>
Setting	Command	@SEC, in_1, out_1 (, in_2, out_2, ···)<CR><LF>
	Response	@SEC, in_1, out_1 (, in_2, out_2, ···)<CR><LF>
Parameter		out_1-n: External EDID channel 　　1 to n = OUT1 to OUTn　[Default] 1 = OUT1, 　　*12G-SDI output channel cannot be selected. 　　-1 = No HDMI/DVI input board or HDBaseT/SDVoE input board is installed. 　　　(For response only) 　　-2 = No output board is installed or 12G-SDI output board is installed. 　　　(For response only)
		in_1-n: Input channel 　　0 = All inputs, 1 to n = IN1 to INn
Getting example	Command	@GEC<CR><LF>
	Response	@GEC,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1<CR><LF>
	Description	Getting the external EDID channels All input channels: EDID from OUT1
Setting example	Command	@SEC,0,1<CR><LF>
	Response	@SEC,0,1<CR><LF>
	Description	Setting all input channels' EDID to external EDID from OUT1 Completed
Remarks		—

Boards other than SDI

@GHZ / @SHZ		Frame rate
Getting	Command	@GHZ<CR><LF>
	Response	@GHZ, mode_1, ···, mode_8 (, mode_9, ···, mode_n)<CR><LF>
Setting	Command	@SHZ, in_1, mode_1 (, in_2, mode_2, ···)<CR><LF>
	Response	@SHZ, in_1, mode_1 (, in_2, mode_2, ···)<CR><LF>
Parameter		mode_1-n: Frame rate 　　0 = 60 Hz/30 Hz　[Default], 1 = 50 Hz/25 Hz, 　　-1 = No HDMI/DVI input board or HDBaseT/SDVoE input board is installed. 　　　(For response only)
		in_1-n: Input channel 　　0 = All inputs, 1 to n = IN1 to INn
Getting example	Command	@GHZ<CR><LF>
	Response	@GHZ,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0<CR><LF>
	Description	Getting the frame rate All input channels: 60 Hz/30 Hz
Setting example	Command	@SHZ,0,0<CR><LF>
	Response	@SHZ,0,0<CR><LF>
	Description	Setting the frame rate of all input channels to 60 Hz/30 Hz Completed
Remarks		This command is valid only if "**@GVF / @SVF Resolution**" is set to "5" to "26" and "40" to "45" (Built-in EDID).

Boards other than SDI

@GDI / @SDI		Deep Color
Getting	Command	@GDI<CR><LF>
	Response	@GDI, color_1, ･･･, color_8 (, color_9, ･･･, color_n)<CR><LF>
Setting	Command	@SDI, in_1, color_1 (, in_2, color_2, ･･･)<CR><LF>
	Response	@SDI, in_1, color_1 (, in_2, color_2, ･･･)<CR><LF>
Parameter		color_1-n: Color depth 　　0 = 24 bit/pixel (8 bit/component)　　[Default], 　　1 = 30 bit/pixel (10 bit/component), 　　2 = 36 bit/pixel (12 bit/component), 　　-1 = No HDMI/DVI input board or HDBaseT/SDVoE input board is installed. 　　　　(For response only)
		in_1-n: Input channel 　　0 = All inputs, 1 to n = IN1 to INn
Getting example	Command	@GDI<CR><LF>
	Response	@GDI,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0<CR><LF>
	Description	Getting the color depth All input channels: 24 bit/pixel (8 bit/component)
Setting example	Command	@SDI,0,0<CR><LF>
	Response	@SDI,0,0<CR><LF>
	Description	Setting the color depth of all input channels to 24 bit/pixel (8 bit/component) Completed
Remarks		This command is valid only if "**@GVF / @SVF Resolution**" is set to "5" to "26" and "40" to "45" (Built-in EDID).

Boards other than SDI

@GAF / @SAF		Audio format
Getting	Command	@GAF,in<CR><LF>
	Response	@GAF, in, format_1, frequency_1, ···, format_7, frequency_7<CR><LF>
Setting	Command	@SAF, in, format_1, frequency_1 (, format_2, frequency_2, ···)<CR><LF>
	Response	@SAF, in, format_1, frequency_1 (, format_2, frequency_2, ···)<CR><LF>
Parameter		in: Input channel 　　1 to n = IN1 to INn
		format_1-7: Audio format 　　0 = LPCM,　　　　　　1 = AC-3/Dolby Digital,　2 = AAC, 　　3 = Dolby Digital Plus,　4 = DTS,　　　　　　　5 = DTS-HD, 　　6 = Dolby TrueHD
		frequency_1-7: Maximum sampling frequency 　　0 = OFF (Not output),　1 = 32 kHz,　　　　　　2 = 44.1 kHz, 　　3 = 48 kHz,　　　　　4 = 88.2 kHz,　　　　　5 = 96 kHz, 　　6 = 176.4 kHz,　　　　7 = 192 kHz, 　-1 = No HDMI/DVI input board or HDBaseT/SDVoE input board is installed. 　　　(For response only)

Audio format	Maximum sampling frequency (kHz)	Default
LPCM	32/44.1/48/88.2/96/176.4/192	48
AC-3/Dolby Digital	OFF/32/44.1/48	OFF
AAC	OFF/32/44.1/48/88.2/96	OFF
Dolby Digital Plus	OFF/32/44.1/48	OFF
DTS	OFF/32/44.1/48/96	OFF
DTS-HD	OFF/44.1/48/88.2/96/176.4/192	OFF
Dolby TrueHD	OFF/44.1/48/88.2/96/176.4/192	OFF

Getting example	Command Response	@GAF,1<CR><LF> @GAF,1,0,3,1,0,2,0,3,0,4,0,5,0,6,0<CR><LF>
	Description	Getting the IN1 audio format and maximum sampling frequency Maximum sampling frequency of LPCM : 48 kHz Other audio format　　　　　　　　　　: OFF
Setting example	Command Response	@SAF,1,0,7<CR><LF> @SAF,1,0,7<CR><LF>
	Description	Setting the IN1 audio format and maximum sampling frequency to LPCM and 192 kHz
Remarks		Setting commands are for setting the audio formats and the maximum sampling frequencies. LPCM is always enabled, you can skip this menu unless you need to change the sampling frequency. This command is valid only if "**@GVF / @SVF Resolution**" is set to "5" to "26" and "40" to "45" (Built-in EDID).

Boards other than SDI

@GSP / @SSP		Speaker configuration
Getting	Command	@GSP<CR><LF>
	Response	@GSP, ch_1, ···, ch_8 (, ch_9, ···, ch_n)<CR><LF>
Setting	Command	@SSP, in_1, ch_1 (, in_2, ch_2, ···)<CR><LF>
	Response	@SSP, in_1, ch_1 (, in_2, ch_2, ···)<CR><LF>

Parameter		ch_1-n: Speaker configuration
		
		   0 = LR [Default], 1 = 2.1 channel surround sound,
		   2 = 5.1 channel surround sound, 3 = 7.1 channel surround sound,
		   -1 = No HDMI/DVI input board or HDBaseT/SDVoE input board is installed.
		      (For response only)
		
		FL : Front Left
		FC : Front Center
		FR : Front Right
		RL : Rear Left
		RR : Rear Right
		RLC : Rear Left Center
		RRC : Rear Right Center
		LFE : Low Frequency Effect
		
		{table below}
		
		in_1-n: Input channel
		   0 = All inputs, 1 to n = IN1 to INn

Getting example	Command	@GSP<CR><LF>
	Response	@GSP,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0<CR><LF>
	Description	Getting the speaker configuration All input channels: LR
Setting example	Command	@SSP,0,0<CR><LF>
	Response	@SSP,0,0<CR><LF>
	Description	Setting the speaker configuration of all input channels to LR Completed
Remarks		This command is valid only if "**@GVF / @SVF Resolution**" is set to "5" to "26" and "40" to "45" (Built-in EDID).

Sound type	FL/FR	LFE	FC	RL/RR	RLC/RRC
LR	ON	OFF	OFF	OFF	OFF
2.1 channel surround sound	ON	ON	OFF	OFF	OFF
5.1 channel surround sound	ON	ON	ON	ON	OFF
7.1 channel surround sound	ON	ON	ON	ON	ON

3.4.12 RS-232C

@GCT / @SCT		RS-232C communication
Getting	Command	@GCT<CR><LF>
	Response	@GCT, baudrate, length, parity, stop<CR><LF>
Setting	Command	@SCT, baudrate, length, parity, stop<CR><LF>
	Response	@SCT, baudrate, length, parity, stop<CR><LF>
Parameter		baudrate: Baud rate 　　0 = 4800 bps,　1 = 9600 bps　[Default], 2 = 14400 bps, 　　3 = 19200 bps,　4 = 38400 bps
		length: Data bit length 　　0 = 7 bit, 1 = 8 bit　[Default]
		parity: Parity check 　　0 = NONE　[Default], 1 = ODD, 2 = EVEN
		stop: Stop bit 　　0 = 1 bit　[Default], 1 = 2 bit
Getting example	Command	@GCT<CR><LF>
	Response	@GCT,1,1,0,0<CR><LF>
	Description	Getting the RS-232C communication setting - Baud rate　　　: 9600 bps - Data bit length　: 8 bit - Parity check　　: NONE - Stop bit　　　　: 1 bit
Setting example	Command	@SCT,1,1,0,0<CR><LF>
	Response	@SCT,1,1,0,0<CR><LF>
	Description	Setting the RS-232C communication setting as follows: - Baud rate　　　: 9600 bps - Data bit length　: 8 bit - Parity check　　: NONE - Stop bit　　　　: 1 bit Completed
Remarks		If RS-232C communication setting is changed, the communication may be disabled. Change the environmental settings based on the FDX-S settings.

3.4.13 LAN

@GIP / @SIP		IP address
Getting	Command	@GIP<CR><LF>
	Response	@GIP, unit_1, unit_2, unit_3, unit_4<CR><LF>
Setting	Command	@SIP, unit_1, unit_2, unit_3, unit_4<CR><LF>
	Response	@SIP, unit_1, unit_2, unit_3, unit_4<CR><LF>
Parameter		unit_1 to unit_4: Upper bit of the IP address to Lower bit of the IP address 0 to 255 = 8 bit (Decimal notation) [Default] 192.168.1.199
Getting example	Command	@GIP<CR><LF>
	Response	@GIP,192,168,3,2<CR><LF>
	Description	Getting the IP address of the FDX-S 192.168.3.2
Setting example	Command	@SIP,192,168,3,2<CR><LF>
	Response	@SIP,192,168,3,2<CR><LF>
	Description	Setting the IP address of the FDX-S to 192.168.3.2 Completed
Remarks		If IP address or communication setting is changed, the communication may be disabled. Change the environmental settings based on the FDX-S settings.

@GSB / @SSB		Subnet mask
Getting	Command	@GSB<CR><LF>
	Response	@GSB, unit_1, unit_2, unit_3, unit_4<CR><LF>
Setting	Command	@SSB, unit_1, unit_2, unit_3, unit_4<CR><LF>
	Response	@SSB, unit_1, unit_2, unit_3, unit_4<CR><LF>
Parameter		unit_1 to unit_4: Upper bit of the subnet mask to Lower bit of the subnet mask 0 to 255 = 8 bit (Decimal notation) [Default] 255.255.255.0
Getting example	Command	@GSB<CR><LF>
	Response	@GSB,255,255,192,0<CR><LF>
	Description	Getting the subnet mask of the FDX-S 255.255.192.0 (= 18bit)
Setting example	Command	@SSB,255,255,192,0<CR><LF>
	Response	@SSB,255,255,192,0<CR><LF>
	Description	Setting the subnet mask of the FDX-S to 255.255.192.0 (= 18 bit) Completed
Remarks		If IP address or communication setting is changed, the communication may be disabled. Change the environmental settings based on the FDX-S settings.

@GGW / @SGW		Gateway address
Getting	Command	@GGW<CR><LF>
	Response	@GGW, unit_1, unit_2, unit_3, unit_4<CR><LF>
Setting	Command	@SGW, unit_1, unit_2, unit_3, unit_4<CR><LF>
	Response	@SGW, unit_1, unit_2, unit_3, unit_4<CR><LF>
Parameter		unit_1 to unit_4 : Upper bit of the Gateway address to Lower bit of the Gateway address 　0 to 255 = 8 bit (in decimal)　Default: 0.0.0.0
Getting example	Command	@GGW<CR><LF>
	Response	@GGW,192,168,1,254<CR><LF>
	Description	Getting the Gateway address of the FDX-S 192.168.1.254
Setting example	Command	@SGW,192,168,1,254<CR><LF>
	Response	@SGW,192,168,1,254<CR><LF>
	Description	Setting the Gateway address of the FDX-S to 192.168.1.254 Completed
Remarks		If IP address or communication setting is changed, the communication may be disabled. Change the environmental settings based on the FDX-S settings.

@GMC		MAC address
Getting	Command	@GMC<CR><LF>
	Response	@GMC, unit_1, unit_2, unit_3, unit_4, unit_5, unit_6<CR><LF>
Parameter		unit_1 to unit_6: Upper bit of the MAC address to Lower bit of the MAC address 　00 to FF = 8 bit (in hexadecimal)
Getting example	Command	@GMC<CR><LF>
	Response	@GMC,00,08,E5,65,00,00<CR><LF>
	Description	Getting the MAC address 00-08-E5-65-00-00
Remarks		―

@GLP / @SLP		TCP port number
Getting	Command	@GLP<CR><LF>
	Response	@GLP, port, connection<CR><LF>
Setting	Command	@SLP, port, connection<CR><LF>
	Response	@SLP, port, connection<CR><LF>
Parameter		port: TCP port number 1100, 6000 to 6999 [Default] 1100
		connection 1 (Fixed)
Getting example	Command	@GLP<CR><LF>
	Response	@GLP,1100,1<CR><LF>
	Description	Getting the TCP port number of the FDX-S 1100; 8 connection setting disabled
Setting example	Command	@SLP,1100,1<CR><LF>
	Response	@SLP,1100,1<CR><LF>
	Description	Setting the port number and 8-connection setting of the FDX-S to 1100 and OFF, respectively Completed
Remarks		If IP address or communication setting is changed, the communication may be disabled. Change the environmental settings based on the FDX-S settings.

@GLD / @SLD		Automatic disconnection time (Timeout)
Getting	Command	@GLD, service<CR><LF>
	Response	@GLD, service, time<CR><LF>
Setting	Command	@SLD, service, time<CR><LF>
	Response	@SLD, service, time<CR><LF>
Parameter		service 1 (Fixed)

		time：Automatic disconnection time
		    0 = NOT DISCONNECT
		    1 to 180 = 1 to 180 sec. Default: 30 sec.

Getting example	Command	@GLD,1<CR><LF>
	Response	@GLD,1,120<CR><LF>
	Description	Getting the automatic disconnection time of the FDX-S 120 sec.
Setting example	Command	@SLD,1,120<CR><LF>
	Response	@SLD,1,120<CR><LF>
	Description	Setting the automatic disconnection time of the FDX-S Completed
Remarks		－

3.4.14 Preset memory

@RCM		Recalling crosspoint
Setting	Command	@RCM, memory<CR><LF>
	Response	@RCM, memory<CR><LF>
Parameter		memory: Crosspoint memory
		1 to 32
Setting example	Command	@RCM,1<CR><LF>
	Response	@RCM,1<CR><LF>
	Description	Recalling the crosspoint of Crosspoint memory 1
		Completed
Remarks		─

@SCM		Saving crosspoint memory
Setting	Command	@SCM, memory (, name)<CR><LF>
	Response	@SCM, memory (, name)<CR><LF>
Parameter		memory: Crosspoint memory
		1 to 32
		name: Memory name
		Up to 10 characters from 20 to 7D from ASCII code
		If you skip this parameter ("name"), only crosspoint settings are saved without changing its name.
Setting example	Command	@SCM,1,MEMORY1<CR><LF>
	Response	@SCM,1,MEMORY1<CR><LF>
	Description	Saving the crosspoint status to Crosspoint memory 1 with the name of MEMORY1
		Completed
Remarks		Even if some channels are set not to be controlled, settings of all output channels are saved. You can change channel control setting in "**@GCM / @ECM Editing crosspoint**".

@SEM		Saving crosspoint memory	
Setting	Command	@SEM, memory (, name)<CR><LF>	
	Response	@SEM, memory (, name)<CR><LF>	
Parameter		memory: Crosspoint memory 1 to 32	

		name: Memory name
		    Up to 10 characters from 20 to 7D from ASCII code
		    If you skip this parameter ("name"), only crosspoint settings are saved without
		    changing its name.	

Setting example	Command	@SEM,1,MEMORY1<CR><LF>	
	Response	@SEM,1,MEMORY1<CR><LF>	
	Description	Saving the crosspoint status to Crosspoint memory 1 with the name of MEMORY1 Completed	
Remarks		Even if some channels are set not to be controlled, settings of all output channels are saved. You can change channel control setting in "**@GCM / @ECM Editing crosspoint**".	

@GCM / @ECM		Editing crosspoint	
Getting	Command	@GCM, memory<CR><LF>	
	Response	@GCM, memory, v_1, ···, v_8 (, v_9, ···, v_n)<CR><LF>	
Setting	Command	@ECM, memory, v_1, ···, v_8 (, v_9, ···, v_n)<CR><LF>	
	Response	@ECM, memory, v_1, ···, v_8 (, v_9, ···, v_n)<CR><LF>	
Parameter		memory: Crosspoint memory 1 to 32	
		v_1-n: Input channel selected for output channel -1 = Not controlled [Default], 0 = OFF, 1 to n = IN1 to INn	
Getting example	Command	@GCM,1<CR><LF>	
	Response	@GCM,1,-1,-1,-1,-1,-1,-1,-1,-1,-1,-1,-1,-1,-1,-1,-1,-1<CR><LF>	
	Description	Getting the crosspoint of Crosspoint memory 1 All output channels: "-1" (Not controlled)	
Setting example	Command	@ECM,1,1,2,3···,15,-1<CR><LF>	
	Response	@ECM,1,1,2,3···,15,-1<CR><LF>	
	Description	For Crosspoint memory 1, setting OUT1 to OUT15 to the same number I/O channels; setting OUT16 not to be controlled Completed	
Remarks		―	

@RPM		Recalling preset memory
Setting	Command	@RPM, preset<CR><LF>
	Response	@RPM, preset<CR><LF>
Parameter		preset: Preset memory
		1 to 32
Setting example	Command	@RPM,1<CR><LF>
	Response	@RPM,1<CR><LF>
	Description	Recalling the Preset memory 1
		Completed
Remarks		―

@SPM		Saving preset memory
Setting	Description	Overwriting all
	Command	@SPM, preset (, name)<CR><LF>
	Response	@SPM, preset (, name)<CR><LF>
Parameter		preset: Preset memory
		1 to 32
		name: Memory name
		Up to 10 characters from 20 to 7D from ASCII code
		If you skip this parameter ("name"), only current settings are saved without
		changing its name.
Setting example	Command	@SPM,1,MEMORY1<CR><LF>
	Response	@SPM,1,MEMORY1<CR><LF>
	Description	Saving the current settings to Preset memory 1 with the name of MRMORY1
		Completed
Remarks		―

@GPM		Preset memory number matching I/O channel status
Getting	Command	@GPM<CR><LF>
	Response	@GPM, preset<CR><LF>
Parameter		preset: Preset memory number that includes preset memory matching the current
		FDX-S crosspoint.
		000 = None, 001 to 032 = Preset memory 1 to Preset memory 32
Getting example	Command	@GPM<CR><LF>
	Response	@GPM,000<CR><LF>
	Description	Getting the number of preset memory matching current FDX-S I/O crosspoint
		None
Remarks		If several memory numbers are matched, the smaller number will be returned.

3.4.15 Bitmap

Scan conversion output only

@GBM / @SBM		Bitmap image output
Getting	Command	@GBM<CR><LF>
	Response	@GBM, mode_1, ・・・, mode_8 (, mode_9, ・・・, mode_n)<CR><LF>
Setting	Command	@SBM, out_1, mode_1 (, out_2, mode_2, ・・・)<CR><LF>
	Response	@SBM, out_1, mode_1 (, out_2, mode_2, ・・・)<CR><LF>
Parameter		mode_1-n: Bitmap image output 　　0 = OFF　[Default], 1 to 4 = BITMAP1 to BITMAP4 　-2 = No scan conversion output board is installed. (For response only)
		out_1-n: Output channel 　　0 = All outputs, 1 to n = OUT1 to OUTn
Getting example	Command Response	@GBM<CR><LF> @GBM,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0<CR><LF>
	Description	Getting the output video OUT1　　　　　　　　: Outputting a BITMAP1 image Other output channels : Not outputting a BITMAP image
Setting example	Command Response	@SBM,1,1<CR><LF> @SBM,1,1<CR><LF>
	Description	Setting the OUT1 to output BITMAP1 Completed
Remarks		－

Scan conversion output only

@GBB / @SBB		Background color
Getting	Command	@GBB, ch<CR><LF>
	Response	@GBB, ch, red_1, green_1, blue_1, red_2, green_2, blue_2, red_3, green_3, blue_3, red_4, green_4, blue_4<CR><LF>
Setting	Command	@SBB, ch, bitmap, red, green, blue<CR><LF>
	Response	@SBB, ch, bitmap, red, green, blue<CR><LF>
Parameter		ch: Output channel 0 = All outputs, 1 to n = OUT1 to OUTn

		reg/red_1-4 : Background color (Red)
		green/green_1-4 : Background color (Green)
		blue/blue_1-4 : Background color (Blue)
		    0 to 255 [Default] 0 (Black),
		    -2 = No scan conversion output board is installed. (For response only)

		bitmap: Bitmap number
		    0 = ALL BITMAPS, 1 = BITMAP1, 2 = BITMAP2,
		    3 = BITMAP3, 4 = BITMAP4

Getting example	Command	@GBB,1<CR><LF>
	Response	@GBB,1,255,0,0,0,0,0,0,0,0,0,0,0<CR><LF>
	Description	Getting the background color for when BITMAP1 is output BITMAP1 : Red is 255 Green and Blue are 0 (Red) BITMAP2 to 4 : Red, Green, and Blue: 0 (Black)
Setting example	Command	@SBB,1,1,255,255,255<CR><LF>
	Response	@SBB,1,1,255,255,255<CR><LF>
	Description	Setting the OUT1 BITMAP1 background color to "255" for Red, Green, and Blue (white) Completed
Remarks		—

Scan conversion output only

@GBT / @SBT		Aspect ratio
Getting	Command	@GBT, ch<CR><LF>
	Response	@GBT, ch, aspect_1, aspect_2 aspect_3 aspect_4<CR><LF>
Setting	Command	@SBT, ch, bitmap, aspect<CR><LF>
	Response	@SBT, ch, bitmap, aspect<CR><LF>
Parameter		ch: Output channel 0 = All outputs, 1 to n = OUT1 to OUTn

		aspect/aspect_1-4: Aspect ratio
		    0 = AUTO [Default], 1 = FULL, 2 = THROUGH,
		    -2 = No scan conversion output board is installed. (For response only)

		bitmap: Bitmap number
		    0 = ALL BITMAPS, 1 = BITMAP1, 2 = BITMAP2,
		    3 = BITMAP3, 4 = BITMAP4

Getting example	Command	@GBT,1<CR><LF>
	Response	@GBT,1,1,0,0,0<CR><LF>
	Description	Getting the aspect ratio for when BITMAP1 is output BITMAP1 : FULL Other BITMAPS : AUTO
Setting example	Command	@SBT,1,1,1<CR><LF>
	Response	@SBT,1,1,1<CR><LF>
	Description	Setting the aspect ratio for when BITMAP1 is output to OUT1 to FULL Completed
Remarks		─

Scan conversion output only

@GZP / @SZP		Image position
Getting	Command	@GZP, ch<CR><LF>
	Response	@GZP, ch, position_1, position_2 , position_3, position_4<CR><LF>
Setting	Command	@SZP, ch, bitmap, position<CR><LF>
	Response	@SZP, ch, bitmap, position<CR><LF>
Parameter		ch: Output channel 0 = All outputs, 1 to n = OUT1 to OUTn

		position/position_1-4: Image position
		    0 = CENTER [Default], 1 = TOP-LEFT, 2 = BOTTOM-LEFT,
		    3 = TOP-RIGHT, 4 = BOTTOM-RIGHT,
		    -2 = No scan conversion output board is installed. (For response only)

		bitmap: Bitmap number
		    0 = ALL BITMAPS, 1 = BITMAP1, 2 = BITMAP2,
		    3 = BITMAP3, 4 = BITMAP4

Getting example	Command	@GZP,1<CR><LF>
	Response	@GZP,1,1,0,0,0<CR><LF>
	Description	Getting the image position for when BITMAP1 is output BITMAP1 : TOP-LEFT Other BITMAPS : CENTER
Setting example	Command	@SZP,1,1,1<CR><LF>
	Response	@SZP,1,1,1<CR><LF>
	Description	Setting the display position for when BITMAP1 is output to OUT1 to the upper left Completed
Remarks		―

Scan conversion output only

@GPB / @SPB		Start-up bitmap output
Getting	Command	@GPB<CR><LF>
	Response	@GPB, mode_1, ・・・, mode_8 (, mode_9, ・・・, mode_n)<CR><LF>
Setting	Command	@SPB, out_1, mode_1 (, out_2, mode_2, ・・・)<CR><LF>
	Response	@SPB, out_1, mode_1 (, out_2, mode_2, ・・・)<CR><LF>

Parameter		mode_1-n: Bitmap image output
		    0 = OFF [Default], 1 to 4 = BITMAP1 to BITMAP4,
		    -2 = No scan conversion output board is installed. (For response only)

		out_1-n: Output channel 0 = All outputs, 1 to n = OUT1 to OUTn
Getting example	Command	@GPB<CR><LF>
	Response	@GPB,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0<CR><LF>
	Description	Getting the start-up bitmap output OUT1 : Outputting a BITMAP1 image at start-up Other output channels : Not outputting a BITMAP image at start-up
Setting example	Command	@SPB,1,0<CR><LF>
	Response	@SPB,1,0<CR><LF>
	Description	Setting the OUT1 not to output BITMAP at start-up Completed
Remarks		―

3.4.16 Multi window output

Scan conversion multiview output only

@GOP / @SOP		Window size/Window position
Getting	Command	@GOP, out_ch<CR><LF>
	Response	@GOP, out_ch, h_zoom, v_zoom, h_posi, v_posi<CR><LF>
Setting	Command	@SOP, out_ch, h_zoom, v_zoom, h_posi, v_posi<CR><LF>
	Response	@SOP, out_ch, h_zoom, v_zoom, h_posi, v_posi<CR><LF>
Parameter		out_ch: Output window 1 to n = OUT1 to OUTn

		h_zoom: Horizontal image size
		500 to 40000 = 5.00% to 400.00% [Default] 5000 (50.00%)
		   -2 = No scan conversion multiview output board (For response only)[*]
		   [*]h_zoom, v_zoom, and h_posi, v_posi are not displayed.

		v_zoom: Vertical image size 500 to 40000 = 5.00% to 400.00% [Default] 5000 (50.00%)
		h_posi: Horizontal image position -40000 to +10000 = -400.00% to +100.00% [Default] +0 (0.00%),+5000 (50.00%)
		v_posi: Vertical image position -40000 to +10000 = -400.00% to +100.00% [Default] +0 (0.00%),+5000 (50.00%)
Getting example	Command	@GOP,1<CR><LF>
	Response	@GOP,1,10000,10000,+0,+0<CR><LF>
	Description	Getting the Output window 1 image size and position Horizontal and vertical image size : 100.00% Horizontal and vertical image position : 0.00%
Setting example	Command	@SOP,1,5000,5000,0,0<CR><LF>
	Response	@SOP,1,5000,5000,0,0<CR><LF>
	Description	Setting the Output window1 horizontal sizes, vertical sizes. Horizontal position, and vertical position to 50.00%, 50.00%, 0.00%, and 0.00%, respectively. Completed
Remarks		－

Scan conversion multiview output only

@GQP / @SQP		Image size/Image position
Getting	Command	@GQP, out_ch<CR><LF>
	Response	@GQP, out_ch, h_zoom, v_zoom, h_posi, v_posi<CR><LF>
Setting	Command	@SQP, out_ch, h_zoom, v_zoom, h_posi, v_posi<CR><LF>
	Response	@SQP, out_ch, h_zoom, v_zoom, h_posi, v_posi<CR><LF>
Parameter		out_ch: Output window 1 to n = OUT1 to OUTn

		h_zoom: Horizontal image size
		2000 to 40000 = 20.00% to 400.00% [Default] 10000 (100.00%)
		    -2 = No scan conversion multiview output board (For response only)[*]
		    [*]h_zoom, v_zoom, h_posi, and v_posi are not displayed.

		v_zoom: Vertical image size 2000 to 40000 = 20.00% to 400.00% [Default] 10000 (100.00%)
		h_posi: Horizontal image position -40000 to +10000 = -400.00% to +100.00% [Default] +0 (0.00%)
		v_posi: Vertical image position -40000 to +10000 = -400.00% to +100.00% [Default] +0 (0.00%)
Getting example	Command	@GQP,1<CR><LF>
	Response	@GQP,1,10000,10000,+0,+0<CR><LF>
	Description	Getting the image size and position the current Output window 1 Horizontal and vertical image size : 100.00% Horizontal and vertical image position : 0.00%
Setting example	Command	@SQP,1,10000,10000,0,0<CR><LF>
	Response	@SQP,1,10000,10000,0,0<CR><LF>
	Description	Setting the Output window 1 horizontal sizes, vertical sizes, horizontal position, and vertical position to 100.00%, 100.00%, 0.00%, and 0.00%, respectively. Completed
Remarks		―

Scan conversion multiview output only

@GEB / @SEB		Background color
Getting	Command	@GEB, out_ch<CR><LF>
	Response	@GEB, out_ch, red, green, blue<CR><LF>
Setting	Command	@SEB, out_ch, red, green, blue<CR><LF>
	Response	@SEB, out_ch, red, green, blue<CR><LF>
Parameter		out_ch: Output window 1 to n = OUT1 to OUTn

		red : Background color (Red)
		green : Background color (Green)
		blue : Background color (Blue)
		    0 to 255 [Default] 0 (Black)
		    -2 = No scan conversion multiview output board (For response only)

Getting example	Command Response	@GEB,1<CR><LF> @GEB,1,0,0,0<CR><LF>
	Description	Getting the Output window 1 background color All: "0" (Black)
Setting example	Command Response	@SEB,1,0,0,0<CR><LF> @SEB,1,0,0,0<CR><LF>
	Description	Setting all background colors of the Output window 1 to "0" (Black) Completed
Remarks		─

Scan conversion multiview output only

@GWP / @SWP		Window layer order
Getting	Command	@GWP, out_ch<CR><LF>
	Response	@GWP, out_ch, window_a, window_b, window_c, window_d<CR><LF>
Setting	Command	@SWP, out_ch, window_a, window_b, window_c, window_d<CR><LF>
	Response	@SWP, out_ch, window_a, window_b, window_c, window_d<CR><LF>
Parameter		out_ch: Channel of output board 1 to n = OUT1 to OUTn

		window_a to d: Window A to D layer order
		    1 to 4 = Front to back [Default] 1,2,3,4
		    -2 = No scan conversion multiview output board (For response only)

Getting example	Command Response	@GWP,1<CR><LF> @GWP,1,1,2,3,4<CR><LF>
	Description	Getting the current window layer order of Output board 1 window_a > window_b > window_c > window_d
Setting example	Command Response	@SWP,1,1,2,3,4<CR><LF> @SWP,1,1,2,3,4<CR><LF>
	Description	Setting the window layer order of Output board 1 to "window_a > window_b > window_c > window_d". Completed
Remarks		This command is enabled for only the first channel of each output board. 【See: 3.1 Board channel configuration】

Scan conversion multiview output only

@GSE / @SSE		Video transition effect
Getting	Command	@GSE, out_ch<CR><LF>
	Response	@GSE, out_ch, mode<CR><LF>
Setting	Command	@SSE, out_ch, mode<CR><LF>
	Response	@SSE, out_ch, mode<CR><LF>
Parameter		out_ch: Output window 0 = All outputs (For setting only), 1 to n = OUT1 to OUTn

		mode: Fade out/Fade in
		    0 = OFF, 1 = ON [Default],
		    -2 = No scan conversion multiview output board (For response only)

Getting example	Command	@GSE,1<CR><LF>
	Response	@GSE,1,1<CR><LF>
	Description	Getting the Output window 1 switching effect mode ON
Setting example	Command	@SSE,1,1<CR><LF>
	Response	@SSE,1,1<CR><LF>
	Description	Setting the Output window 1 switching effect mode to ON Completed
Remarks		―

Scan conversion multiview output only

@GWV / @SWV		Window ON/OFF
Getting	Command	@GWV, out_ch<CR><LF>
	Response	@GWV, out_ch, mode<CR><LF>
Setting	Command	@SWV, out_ch, mode<CR><LF>
	Response	@SWV, out_ch, mode<CR><LF>
Parameter		out_ch: Output window 0 = All outputs (For setting only), 1 to n = OUT1 to OUTn

		mode: Window ON/OFF
		    0 = OFF, 1 = ON [Default],
		    -2 = No scan conversion multiview output board (For response only)

Getting example	Command	@GWV,1<CR><LF>
	Response	@GWV,1,1<CR><LF>
	Description	Getting the Output window 1 ON/OFF ON
Setting example	Command	@SWV,1,1<CR><LF>
	Response	@SWV,1,1<CR><LF>
	Description	Setting the Output window 1 ON/OFF to ON Completed
Remarks		―

Scan conversion multiview output only

@GTO / @STO		Overlay text position
Getting	Command	@GTO, out_ch<CR><LF>
	Response	@GTO, out_ch, position<CR><LF>
Setting	Command	@STO, out_ch, position<CR><LF>
	Response	@STO, out_ch, position<CR><LF>
Parameter		out_ch: Output window 　　0 = All outputs (For setting only), 1 to n = OUT1 to OUTn
		position: Image position 　　0 = OFF,　　　　　1 = TOP-LEFT　[Default],　　2 = TOP- CENTER, 　　3 = TOP-RIGHT,　　4 = BOTTOM-LEFT,　　　　5 = BOTTOM-CENTER, 　　6 = BOTTOM-RIGHT 　　-2 = No scan conversion multiview output board (For response only)
Getting example	Command	@GTO,1<CR><LF>
	Response	@GTO,1,1<CR><LF>
	Description	Getting the Output window 1 overlay text position TOP-LEFT
Setting example	Command	@STO,1,1<CR><LF>
	Response	@STO,1,1<CR><LF>
	Description	Setting the Output window 1 overlay text position to TOP-LEFT Completed
Remarks		－

Scan conversion multiview output only

@GTS / @STS		Overlay text size
Getting	Command	@GTS, out_ch<CR><LF>
	Response	@GTS, out_ch, mode<CR><LF>
Setting	Command	@STS, out_ch, mode<CR><LF>
	Response	@STS, out_ch, mode<CR><LF>
Parameter		out_ch: Output window 　　0 = All outputs (For setting only), 1 to n = OUT1 to OUTn
		mode: Size 　　0 = SMALL, 1 = LARGE　[Default], 　　-2 = No scan conversion multiview output board (For response only)
Getting example	Command	@GTS,1<CR><LF>
	Response	@GTS,1,0<CR><LF>
	Description	Getting the Output window 1 overlay text size SMALL
Setting example	Command	@STS,1,0<CR><LF>
	Response	@STS,1,0<CR><LF>
	Description	Setting the Output window 1 overlay text size to SMALL Completed
Remarks		－

Scan conversion multiview output only

@GFW / @SFW		Window border size
Getting	Command	@GFW, out_ch<CR><LF>
	Response	@GFW, out_ch, width<CR><LF>
Setting	Command	@SFW, out_ch, width<CR><LF>
	Response	@SFW, out_ch, width<CR><LF>
Parameter		out_ch: Output window 1 to n = OUT1 to OUTn

		width: Window border size
		    0 to 15 = 0 pixel to 15 pixels [Default] 0 pixel
		    -2 = No scan conversion multiview output board (For response only)

Getting example	Command	@GFW,1<CR><LF>
	Response	@GFW,1,0<CR><LF>
	Description	Getting the window border size of Output window 1 0
Setting example	Command	@SFW,1,0<CR><LF>
	Response	@SFW,1,0<CR><LF>
	Description	Setting the Output window 1 window border size to "0" Completed
Remarks		―

Scan conversion multiview output only

@GFC / @SFC		Window border color
Getting	Command	@GFC, out_ch<CR><LF>
	Response	@GFC, out_ch, red, green, blue<CR><LF>
Setting	Command	@SFC, out_ch, red, green, blue<CR><LF>
	Response	@SFC, out_ch, red, green, blue<CR><LF>
Parameter		out_ch: Output window 1 to n = OUT1 to OUTn

		red : Window border color (Red)
		green : Window border color (Green)
		blue : Window border color (Blue)
		    0 to 255 [Default] 0 (Black)
		    -2 = No scan conversion multiview output board (For response only)

Getting example	Command	@GFC,1<CR><LF>
	Response	@GFC,1,0,0,0<CR><LF>
	Description	Getting the Output window 1 window border color All "0" (Black)
Setting example	Command	@SFC,1,0,0,0<CR><LF>
	Response	@SFC,1,0,0,0<CR><LF>
	Description	Setting all window border colors of the Output window 1 to "0" (Black) Completed
Remarks		―

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│ Scan conversion multiview output only │
└─────────────────────────────────────┘</div>

@GEW / @SEW		Window synchronous mode
Getting	Command	@GEW, out_ch<CR><LF>
	Response	@GEW, out_ch, mode<CR><LF>
Setting	Command	@SEW, out_ch, mode<CR><LF>
	Response	@SEW out_ch, mode<CR><LF>
Parameter		out_ch : Output channel 0 = All outputs (For setting only), 1 to n = OUT1 to OUTn

		mode : Synchronous mode of Window D
		    0 = OFF, 1 = ON [Default] 1
		    -2 = No scan conversion output board is installed. (For response only)

Getting example	Command Response	@GEW,1<CR><LF> @GEW,1,1<CR><LF>
	Description	Getting the synchronous mode of the Output window1 ON
Setting example	Command Response	@SEW,1,0<CR><LF> @SEW,1,0<CR><LF>
	Description	Setting the synchronous mode of the Output window1 to "0" (OFF). Completed
Remarks		This setting is enabled if "**@GES / @SES Video synchronization**" is set to "1" (ON). This command is only for the first channel of each output board. 【See : 3.1 Board channel configuration】

<div style="text-align: right">┌─────────────────────────────────────┐
│ Scan conversion multiview output only │
└─────────────────────────────────────┘</div>

@RWM		Recalling multi window memory
Setting	Command	@RWM, out_ch, preset<CR><LF>
	Response	@RWM, out_ch, preset<CR><LF>
Parameter		out_ch: Channel of output board 1 to n = OUT1 to OUTn
		preset: Multi window memory 1 to 10
Setting example	Command Response	@RWM,1,1<CR><LF> @RWM,1,1<CR><LF>
	Description	Recalling the Output windows 1 to 4 to Multi window memory 1 Completed
Remarks		This command recalls only the first channel of each output board. 【See: 3.1 Board channel configuration】

Scan conversion multiview output only

@SWM		Saving multi window memory
Setting	Description	Overwriting all
	Command	@SWM, out_ch, preset (, name)<CR><LF>
	Response	@SWM, out_ch, preset (, name)<CR><LF>
Parameter		out_ch: Channel of output board 1 to n = OUT1 to OUTn
		preset: Multi window memory 1 to 10

		name: Memory name
		    Up to 10 characters from 20 to 7D from ASCII code
		    If you skip this parameter ("name"), only current settings are saved without
		    changing its name.

Setting example	Command Response	@SWM,1,1,MEMORY1<CR><LF> @SWM,1,1,MEMORY1<CR><LF>
	Description	Saving the current Output windows 1 to 4 settings to Multi window memory 1 with the name of MRMORY1 Completed
Remarks		This command saves only the first channel of each output board. 【See: 3.1 Board channel configuration】

3.4.17 Configuring FDX-S

@GLS / @SLS		Front panel security lockout
Getting	Command	@GLS<CR><LF>
	Response	@GLS, lock<CR><LF>
Setting	Command	@SLS, lock<CR><LF>
	Response	@SLS, lock<CR><LF>
Parameter		lock: Front panel security lockout 0 = Unlocking [Default], 1 = Locking, 2 = Changing the current setting
Getting example	Command	@GLS<CR><LF>
	Response	@GLS,0<CR><LF>
	Description	Getting the lock status Unlocking
Setting example	Command	@SLS,1<CR><LF>
	Response	@SLS,1<CR><LF>
	Description	Enabling the front panel security lockout Completed
Remarks		─

@GLM / @SLM		Grouping front panel security lockout
Getting	Command	@GLM<CR><LF>
	Response	@GLM, channel, menu, preset<CR><LF>
Setting	Command	@SLM, channel, menu, preset<CR><LF>
	Response	@SLM, channel, menu, preset<CR><LF>

Parameter		channel : INPUT SELECT buttons, OUTPUT SELECT buttons,
		            I/O channel selection buttons
		menu : MENU/ENTER button, Navigation buttons
		preset : PRESET LOAD button
		    0 = Not locked, 1 = Locked [Default]

Getting example	Command	@GLM<CR><LF>
	Response	@GLM,1,1,1<CR><LF>
	Description	Getting the button security lockout target - INPUT SELECT buttons, OUTPUT SELECT buttons, I/O channel selection buttons - MENU/ENTER button, Navigation buttons - PRESET LOAD button
Setting example	Command	@SLM,1,1,1<CR><LF>
	Response	@SLM,1,1,1<CR><LF>
	Description	Setting the button security lockout target as follows: - INPUT SELECT buttons, OUTPUT SELECT buttons, I/O channel selection buttons - MENU/ENTER button, Navigation buttons - PRESET LOAD button Completed
Remarks		─

@RBT		Reboot
Setting	Command	@RBT<CR><LF>
	Response	@RBT<CR><LF>
Setting example	Command	@RBT<CR><LF>
	Response	@RBT<CR><LF>
	Description	Rebooting the FDX-S Completed
Remarks		―

@CLR		Initialization
Setting	Command	@CLR, mode<CR><LF>
	Response	@CLR, mode<CR><LF>

Parameter		mode
		   0 = Initializes all settings,
		   1 = Initializes settings other than communication settings

Setting example	Command	@CLR,0<CR><LF>
	Response	@CLR,0<CR><LF>
	Description	Initializing all settings Completed
Remarks		The FDX-S reboots after initialization.

3.4.18 Status indication

@GIS		Input signal status (For each channel)
Getting	Command	@GIS, in, mode<CR><LF>
	Response	@GIS, in, mode, status_1 (, status_2, status_3, status_4, status_5)<CR><LF>
Parameter		**in: Input channel** 1 to n = IN1 to INn

		mode: Target status
		    0 = All statuses of input signal, 1 = Input mode/Input color depth,
		    2 = Input resolution/Vertical sync frequency, 3 = Input color space,
		    4 = Input audio/Input sampling frequency, 5 = Presence of HDCP

		status_1: Input mode/Input color depth
		status_2: Input resolution/Vertical sync frequency
		status_3: Input color space
		status_4: Input audio/Input sampling frequency

status_1: Input mode/Input color depth

Input mode	Description
D	DVI signal, without HDCP
D	DVI signal, with HDCP
H	HDMI signal, without HDCP
H	HDMI signal, with HDCP
S	SDI signal
N	No signal is input

Input color depth	Description
08	24 bit/pixel (8 bit/component)
10	30 bit/pixel (10 bit/component)
12	36 bit/pixel (12 bit/component)

status_2: Input resolution/Vertical sync frequency

Value	Description
1920x1080p 59.94Hz	1080p@59.94
1600x1200p 60Hz	UXGA@60
NO SIGNAL	No signal is input.

status_3: Input color space

Value	Description
RGB	RGB input
YCbCr 4:2:2	YCbCr 4:2:2 input
YCbCr 4:4:4	YCbCr 4:4:4 input
YCbCr 4:2:0	YCbCr 4:2:0 input
NO SIGNAL	No signal is input.

status_4: Input audio/Input sampling frequency

Value	Description
L-PCM 48kHz	2-channel LPCM 48 kHz
L-PCM 48kHz M	Multi-channel LPCM 48 kHz
COMPRESSED AUDIO	Compressed audio
NO AUDIO	No audio is input

@GIS		Input signal status (For each channel) (Cont'd)
		status_5: Presence of HDCP <table><tr><th>Value</th><th>Description</th></tr><tr><td>HDCP OFF</td><td>Signal without HDCP is input</td></tr><tr><td>HDCP 1.4</td><td>HDCP 1.4 signal</td></tr><tr><td>HDCP 2.2 Type0</td><td>HDCP 2.2 stream Type 0 signal</td></tr><tr><td>HDCP 2.2 Type1</td><td>HDCP 2.2 stream Type 1 signal</td></tr><tr><td>NO SIGNAL</td><td>No signal is input.</td></tr></table>
Getting example	Command Response	@GIS,1,0<CR><LF> @GIS,1,0,H08,1920x1080p 59.94Hz,YCbCr 4:4:4,L-PCM 48kHz, HDCP 2.2 Type0<CR><LF>
	Description	Getting IN1 all input signal statuses - Input video : HDMI mode - Input color depth : 24 bit/pixel (8 bit/component) - Input resolution/Vertical sync frequency : 1080p59.94Hz - Input color space : YCbCr 4:4:4 - Audio input/Audio input sampling frequency : 2-channel LPCM 48kHz - Presence of HDCP : HDCP 2.2 Type 0
Remarks		—

@GOS		Output signal status (For each channel)
Getting	Command	@GOS, out, mode<CR><LF>
	Response	@GOS, out, mode, status_1 (, status_2)<CR><LF>
Parameter		out: Output channel 1 to n = OUT1 to OUTn

		mode: Target status
		   0 = All statuses of sink device,
		   1 = HDCP of sink device,
		   2 = HDCP authentication between the FDX-S and sink device

		status_1: HDCP of sink device | Value	Description | |---|---| | HDCP 2.2 SUPPORT | Device with HDCP 2.2 is connected. | | HDCP 1.4 SUPPORT | Device with HDCP 1.4 is connected. | | HDCP NOT SUPPORT | Device without HDCP is connected. | | HDCP NOT CHECK | HDCP of sink device is not checked. | | UNCONNECTED | Sink device is not connected. | | NO BOARD | No board is installed |
		status_2: HDCP authentication between the FDX-S and sink device | Value	Description | |---|---| | HDCP OFF | Signal with HDCP is not input | | HDCP OK | Authentication succeeded | | HDCP ERROR | Authentication failed | | HDCP CHECK NOW | Being encrypted | | NO BOARD | No board is installed |
Getting example	Command	@GOS,1,0<CR><LF>
	Response	@GOS,1,0,HDCP 2.2 SUPPORT,HDCP OK<CR><LF>
	Description	Getting all statuses of OUT1 sink device - HDCP of the sink device : HDCP 2.2 - HDCP authentication : Completed
Remarks		—

@GHC		System status
Getting	Command	@GHC<CR><LF>
	Response	@GHC, voltage, rpm, temp, in, out, audio<CR><LF>
Parameter		voltage: Power supply voltage status
		0 = Normal, 1 = Abnormal
		rpm: Fan status
		0 = Normal, 1 = Abnormal
		temp: Internal temperature status
		0 = Normal, 1 = Abnormal
		in: Input board communication status
		0 = Normal, 1 = Abnormal
		out: Output board communication status
		0 = Normal, 1 = Abnormal
		audio: Audio board status
		0 = Normal, 1 = Abnormal
Getting example	Command	@GHC<CR><LF>
	Response	@GHC,0,0,0,0,0,0<CR><LF>
	Description	Getting the system check result Normal
Remarks		—

@GBS		Board status
Getting	Command	@GBS, board, slot<CR><LF>
	Response	@GBS, board, slot, temp, status<CR><LF>
Parameter		board: Input/Output board
		0 = Input board, 1 = Output board, 2 = Audio board
		slot: Board position
		1 to x = Board 1 to Board x "x": The number of output boards
		(Audio board: "1" or "2" fixed for FDX-S64U; "1" fixed for other models)
		temp: Temperature
		The value of temperature x 100 (e.g. 38.75°C: 3875),
		-1 = No board is installed.
		(Installed audio board: "0" fixed)
		status: Board status
		0 = Normal, 1 = Abnormal, -1 = No board is installed.
Getting example	Command	@GBS,0,1<CR><LF>
	Response	@GBS,0,1,3425,0<CR><LF>
	Description	Getting the status of the Input board 1 Temperature : 34.25°C Status : Normal
Remarks		—

@GSS		Board mounting status
Getting	Command	@GSS, board<CR><LF>
	Response	@GSS, board, slot_1, slot_2 (, slot_3, ・・・, slot_m)<CR><LF>
Parameter		board: Board selection 0 = Input board, 1 = Output board, 2 = Audio board

		slot_1-m: Board mounting status
		    If "board" is set to "0":
		        0 = No board is installed.,
		        4 = 3G-SDI/HD-SDI/SD-SDI input (FDX-SIV4S) is installed,
		      101 = 4K@60 HDMI/DVI input (FDX-SIV4UH) is installed,
		      102 = 4K@60 HDBaseT input (FDX-SIV4UT) is installed,
		      104 = 12G-SDI/6G-SDI/3G-SDI/HD-SDI input (FDX-SIV4US) is installed,
		      108 = 4K@60 SDVoE input (FDX-SIV4UC) is installed
		    If "board" is set to "1":
		        0 = No board is installed.,
		        4 = 1080p HDMI/DVI scan conversion output (FDX-SOV4HS) is installed,
		        5 = 1080p HDBaseT scan conversion output (FDX-SOV4TS) is installed,
		      101 = 4K@60 HDMI/DVI output (FDX-SOV4UH) is installed,
		      102 = 4K@60 HDBaseT output (FDX-SOV4UT) is installed,
		      104 = 4K@60 HDMI/DVI scan conversion output (FDX-SOV2UHS)
		          is installed,
		      106 = 4K@60 HDMI/DVI scan conversion multiview output
		          (FDX-SOV1UHM) is installed,
		      107 = 12G-SDI/6G-SDI/3G-SDI/HD-SDI output (FDX-SOV4US) is installed,
		      108 = 4K@60 SDVoE output (FDX-SOV4UC) is installed
		    If "board" is set to "2":
		        0 = No board is installed.,
		        1 = 4 I/Os analog audio (FDX-SAB4A) is installed,
		        2 = 12 outputs analog audio (FDX-SOA12A) is installed,
		        3 = 64 I/Os network audio (Dante) (FDX-SAB64D) is installed

Getting example	Command	@GSS,0<CR><LF>
	Response	@GSS,0,101,101,101,101,0,0,0,0<CR><LF>
	Description	Getting the input board status Input boards 5 to 8 of FDX-S32U : No board is installed. Other input boards : 4K@60 HDMI/DVI input board (FDX-SIV4UH) is installed.
Remarks		－

@GFS		**Fan status**
Getting	Command	@GFS\<CR\>\<LF\>
	Response	@GFS, rpm_1, s_1, rpm_2, s_2 (,rpm_3, s_3, ···, rpm_n, s_n)\<CR\>\<LF\>
Parameter		rpm_1-n: Rotation speed
		s_1-n: Status 0 = Normal, 1 = Abnormal
Getting example	Command	@GFS\<CR\>\<LF\>
	Response	@GFS,3540,0,3540,0,3540,0\<CR\>\<LF\>
	Description	Getting the fan status Rotation speed of all fans : 3540 Status : Normal
Remarks		The number of FANs (n) <table><tr><th>P/N</th><th>n</th></tr><tr><td>FDX-S08U</td><td>4</td></tr><tr><td>FDX-S16U</td><td>3</td></tr><tr><td>FDX-S32U</td><td>5</td></tr><tr><td>FDX-S64U</td><td>10</td></tr></table>

@GPS		**Power supply voltage status**
Getting	Command	@GPS\<CR\>\<LF\>
	Response	@GPS, status1 (,status2) (,status3) (,status4)\<CR\>\<LF\>
Parameter		status1-4: Status 0 = Normal, 1 = Abnormal <table><tr><th>Model</th><th>Power</th><th>With redundant power supply</th></tr><tr><td>FDX-S08U FDX-S16U FDX-S32U</td><td>status1</td><td>status1 status2</td></tr><tr><td>FDX-S64U</td><td>status1 status2</td><td>status1 status2 status3 status4</td></tr></table>
Getting example	Command Response	@GPS\<CR\>\<LF\> @GPS,0\<CR\>\<LF\>
	Description	Getting the power supply voltage Normal
Remarks		－

@GIV		Version	
Getting	Command	@GIV<CR><LF>	
	Response	@GIV, id, version, input, output<CR><LF>	
Parameter		id: Model number	
		version: Firmware version	
		input: The number of inputs 1 to n	
		output: The number of outputs 1 to n	
Getting example	Command	@GIV<CR><LF>	
	Response	@GIV,FDX-S16U,01.00.01,12,12<CR><LF>	
	Description	Getting the product information Firmware version : 01.00.01 The number of inputs : 12 The number of outputs : 12	
Remarks		─	

@GHB		HDBaseT information
Getting	Command	@GHB, ch, mode<CR><LF>
	Response	@GHB, ch, mode, status_1 (, status_2, status_3, ···)<CR><LF>

Parameter		ch: I/O channels
		
		    1 to n = OUT1 to OUTn
		    101 to 100+n = IN1 to INn

<table>
<tr><td>mode: Target information</td><td></td></tr>
<tr><td>0 = All statuses,</td><td>1 = Video signal information,</td></tr>
<tr><td>2 = Link status,</td><td>3 = Connection between source and sink</td></tr>
<tr><td>4 = Device type,</td><td>devices,</td></tr>
<tr><td>6 =Operation mode,</td><td>5 = Version ID,</td></tr>
<tr><td>8 = Connected version ID,</td><td>7 = Connected device type,</td></tr>
<tr><td>10 = Category cable length,</td><td>9 = Operation mode of remote device,</td></tr>
<tr><td>12 = Video signal quality,</td><td>11 = Bit error rate,</td></tr>
<tr><td>14 = Video signal residual gap,</td><td>13 = Maximum video signal quality,</td></tr>
<tr><td></td><td>15 = Maximum video signal residual gap</td></tr>
</table>

status_1: Video signal information

Value	Description
1920x1080p 59.94Hz YCbCr 4:4:4 24 BIT COLOR	Video resolution, vertical sync frequency, color space, and color depth
NO SIGNAL	No signal is input.
UNCONNECTED	Not HDBaseT connector

status_2: Link status

Value	Description
LINK ON	Connected to transmitter or receiver
LINK OFF	Not connected
UNCONNECTED	Not HDBaseT connector

status_3: Connection between source and sink devices

Value	Description
ON	Connected to source device or sink device
OFF	Not connected
UNCONNECTED	Not HDBaseT connector

status_4: Device type

Value	Description
VS100RX	VS100RX
VS100TX	VS100TX
UNKNOWN	Unknown
UNCONNECTED	Not HDBaseT connector

@GHB	HDBaseT information (Cont'd)
Parameter	status_5: Version ID

Value	Description
13 07 21 10	13.07.21.10
UNKNOWN	Unknown
UNCONNECTED	Not HDBaseT connector

status_6: Operation mode

Value	Description
HDBT MODE	HDBaseT mode
LONG REACH MODE	Long reach mode
LPPF1 MODE	LOW POWER mode 1
LPPF2 MODE	LOW POWER mode 2
UNKNOWN	Unknown
UNCONNECTED	Not HDBaseT connector

status_7: Connected device type

Value	Description
VS100RX	VS100RX
VS100TX	VS100TX
UNKNOWN	Unknown
UNCONNECTED	Remote device is not connected or the connector is not HDBaseT connector

status_8: Connected version ID

Value	Description
13 07 21 10	13.07.21.10
UNKNOWN	Unknown
UNCONNECTED	Remote device is not connected or the connector is not HDBaseT connector

status_9: Operation mode of remote device

Value	Description
HDBT MODE	HDBaseT mode
LONG REACH MODE	Long reach mode
LPPF1 MODE	LOW POWER mode 1
LPPF2 MODE	LOW POWER mode 2
UNKNOWN	Unknown
UNCONNECTED	Remote device is not connected or the connector is not HDBaseT connector

@GHB	HDBaseT information (Cont'd)
Parameter	status_10: Category cable length

status_10: Category cable length

Value	Description
85m	Category cable length
<20m	66 ft. (20 m) or shorter
100m<	328 ft. (100 m) or longer
UNKNOWN	Unknown
UNCONNECTED	Remote device is not connected or the connector is not HDBaseT connector

status_11: Bit error rate

Value	Description
10e-11	Signal bit error rate
UNKNOWN	Unknown
NO SIGNAL	No video signal
UNCONNECTED	Remote device is not connected or the connector is not HDBaseT connector

status_12: Video signal quality

Value	Description
A:-22 B:-20 C:-21 D:-22	Signal quality
UNKNOWN	Unknown
UNCONNECTED	Remote device is not connected or the connector is not HDBaseT connector

status_13: Maximum video signal quality

Value	Description
A:-22 B:-20 C:-21 D:-22	Maximum signal quality
-- -- -- --	N/A
UNCONNECTED	Remote device is not connected or the connector is not HDBaseT connector

status_14: Video signal residual gap

Value	Description
A:0.34 B:0.35 C:0.32 D:0.33	Signal residual gap
UNKNOWN	Unknown
UNCONNECTED	Remote device is not connected or the connector is not HDBaseT connector

@GHB	HDBaseT status (Cont'd)
Parameter	status_15: Maximum video signal residual gap

Value	Description
A:0.34 B:0.35 C:0.32 D:0.33	Maximum signal residual gap
-- -- -- --	N/A
UNCONNECTED	Remote device is not connected or the connector is not HDBaseT connector

Getting example	Command Response	@GHB,1,0<CR><LF> @GHB,1,0,1920x1080p 59.94Hz YCbCr 4:4:4 24 BIT COLOR,LINK ON,ON, VS100TX,13 07 21 00,HDBT MODE,VS100RX,13 07 21 00, HDBT MODE,85m,10e-11,A:-22 B:-20 C:-21 D:-22, A:-22 B:-20 C:-21 D:-22, A:0.34 B:0.35 C:0.32 D:0.33,A:0.34 B:0.35 C:0.32 D:0.33<CR><LF>
	Description	Getting all HDBaseT information of Output 1

Parameter	Item	Description
status_1	Video signal information	1920x1080p 59.94Hz YCbCr 4:4:4 24 BIT COLOR
status_2	Link status	Connected
status_3	Connected sink device	Connected
status_4	OUT1 device type	VS100TX
status_5	OUT1 version ID	13.07.21.00
status_6	OUT1 operation mode	HDBaseT mode
status_7	Connected device type	VS100RX
status_8	Connected version ID	13.07.21.00
status_9	Operation mode of remote device	HDBaseT mode
status_10	Category cable length	279 ft. (85 m)
status_11	Bit error rate	10e-11
status_12	Video signal quality	A : -22dB B : -20dB C : -21dB D : -22dB
status_13	Maximum video signal quality	A : -22dB B : -20dB C : -21dB D : -22dB
status_14	Video signal residual gap	A : 0.34 B : 0.35 C : 0.32 D : 0.33
status_15	Maximum video signal residual gap	A : 0.34 B : 0.35 C : 0.32 D : 0.33

Remarks	─

3.4.19 Status notification

@GDA / @SDA		Unsolicited notification IP address/UDP port number of destination
Getting	Command	@GDA, reserve<CR><LF>
	Response	@GDA, reserve, unit_1, unit_2, unit_3, unit_4, port<CR><LF>
Setting	Command	@SDA, reserve, unit_1, unit_2, unit_3, unit_4, port<CR><LF>
	Response	@SDA, reserve, unit_1, unit_2, unit_3, unit_4, port<CR><LF>
Parameter		reserve 1 (Fixed)
		unit_1 to unit_4 = Upper bit of the IP address to Lower bit of the IP address 0 to 255 = 8 bit (in decimal) Default: 192.168.1.200
		port：UDP port number 1 to 65535 Default: 1147
Getting example	Command	@GDA<CR><LF>
	Response	@GDA,1,192,168,1,200,1147<CR><LF>
	Description	Getting the IP address/UDP port number of the destination IP address: 192.168.1.200 UDP port number: 1147
Setting example	Command	@SDA,1,192,168,1,201,1148<CR><LF>
	Response	@SDA,1,192,168,1,201,1148<CR><LF>
	Description	Setting the IP address and UDP port of the destination to 192.168.1.201 and 、 1148, respectively. Completed
Remarks		If "**@GUH / @SUH Unsolicited notification interval using UDP**" is set to a value other than "OFF", this command cannot be set.

@GUH / @SUH		Unsolicited notification interval using UDP
Getting	Command	@GUH<CR><LF>
	Response	@GUH, time, save<CR><LF>
Setting	Command	@SUH, time(, save)<CR><LF>
	Response	@SUH, time(, save)<CR><LF>
Parameter		time : Notification interval 　0 = OFF [Default],　1 to 50 = 100 ms. to 5000 ms.

time	ON/OFF	Interval		time	ON/OFF	Interval
0	OFF	—		40	ON	4000 ms
1	ON	100 ms		41	ON	4100 ms
2	ON	200 ms		42	ON	4200 ms
3	ON	300 ms		43	ON	4300 ms
4	ON	400 ms		44	ON	4400 ms
5	ON	500 ms	~	45	ON	4500 ms
6	ON	600 ms		46	ON	4600 ms
7	ON	700 ms		47	ON	4700 ms
8	ON	800 ms		48	ON	4800 ms
9	ON	900 ms		49	ON	4900 ms
10	ON	1000 ms		50	ON	5000 ms

		save 　0 = Not save (Will be OFF next start-up) [Default] 　1 = Saves 　If you skip this parameter ("save"), the setting is not saved.
Getting example	Command	@GUH<CR><LF>
	Response	@GUH,5,1<CR><LF>
	Description	Getting the unsolicited notification interval 500 ms. and this setting is saved.
Setting example	Command	@SPH,50,1<CR><LF>
	Response	@SPH,50,1<CR><LF>
	Description	Setting the unsolicited notification time to 5000 ms. (5 seconds) and saving the value. Completed
Remarks		—

@GPH / @SPH		Unsolicited notification interval using TCP/RS-232C
Getting	Command	@GPH<CR><LF>
	Response	@GPH, time<CR><LF>
Setting	Command	@SPH, time<CR><LF>
	Response	@SPH, time<CR><LF>
Parameter		time: Notification interval 0 = OFF [Default], 1 to 50 = 100 ms. to 5000 ms. (see table below)
Getting example	Command Response	@GPH<CR><LF> @GPH,5<CR><LF>
	Description	Getting the unsolicited notification interval 500 ms.
Setting example	Command Response	@SPH,50<CR><LF> @SPH,50<CR><LF>
	Description	Setting the unsolicited notification time to 5000 ms. (5 seconds) Completed
Remarks		It is set to "0" (OFF) after powering off the FDX-S.

time	ON/OFF	Interval		time	ON/OFF	Interval
0	OFF	—		40	ON	4000 ms.
1	ON	100 ms.		41	ON	4100 ms.
2	ON	200 ms.		42	ON	4200 ms.
3	ON	300 ms.		43	ON	4300 ms.
4	ON	400 ms.		44	ON	4400 ms.
5	ON	500 ms.	to	45	ON	4500 ms.
6	ON	600 ms.		46	ON	4600 ms.
7	ON	700 ms.		47	ON	4700 ms.
8	ON	800 ms.		48	ON	4800 ms.
9	ON	900 ms.		49	ON	4900 ms.
10	ON	1000 ms.		50	ON	5000 ms.

@PSH		Unsolicited status notification
Getting	Response	@PSH, in,out, system<CR><LF>
Parameter		in: Checking if input status changes

in: Checking if input status changes
    0 = Not change, 1 to FFFFFFFF FFFFFFFF = Changes

bit	7	6	5	4	3	2	1	0
in	IN8	IN7	IN6	IN5	IN4	IN3	IN2	IN1

bit	15	14	13	12	11	10	9	8
in	IN16	IN15	IN14	IN13	IN12	IN11	IN10	IN9

bit	23	22	21	20	19	18	17	16
In	IN24	IN23	IN22	IN21	IN20	IN19	IN18	IN17

bit	31	30	29	28	27	26	25	24
in	IN32	IN31	IN30	IN29	IN28	IN27	IN26	IN25

bit	39	38	37	36	35	34	33	32
in	IN40	IN39	IN38	IN37	IN36	IN35	IN34	IN33

bit	47	46	45	44	43	42	41	40
in	IN48	IN47	IN46	IN45	IN44	IN43	IN42	IN41

bit	55	54	53	52	51	50	49	48
In	IN56	IN55	IN54	IN53	IN52	IN51	IN50	IN49

bit	63	62	61	60	59	58	57	56
in	IN64	IN63	IN62	IN61	IN60	IN59	IN58	IN57

    "1" appears for detected channel, the value is displayed in hex.
        Changes in IN1 ⇒ 1
        Changes in IN16 and IN2 ⇒ 8002
        Changes in IN17 to IN24 ⇒ FF0000

out: Checking if output status changes
    0 = Not change, 1 to FFFFFFFF FFFFFFFF = Changes

bit	7	6	5	4	3	2	1	0
out	OUT8	OUT7	OUT6	OUT5	OUT4	OUT3	OUT2	OUT1

Bit	15	14	13	12	11	10	9	8
out	OUT16	OUT15	OUT14	OUT13	OUT12	OUT11	OUT10	OUT9

bit	23	22	21	20	19	18	17	16
out	OUT24	OUT23	OUT22	OUT21	OUT20	OUT19	OUT18	OUT17

bit	31	30	29	28	27	26	25	24
out	OUT32	OUT31	OUT30	OUT29	OUT28	OUT27	OUT26	OUT25

bit	39	38	37	36	35	34	33	32
out	OUT40	OUT39	OUT38	OUT37	OUT36	OUT35	OUT34	OUT33

@PSH		Unsolicited status notification (Cont'd)
Parameter		 	bit	47	46	45	44	43	42	41	40
out	OUT48	OUT47	OUT46	OUT45	OUT44	OUT43	OUT42	OUT41 | | bit	55	54	53	52	51	50	49	48
out	OUT56	OUT55	OUT54	OUT53	OUT52	OUT51	OUT50	OUT49 | | bit	63	62	61	60	59	58	57	56

out	OUT64	OUT63	OUT62	OUT61	OUT60	OUT59	OUT58	OUT57	
									
									"1" appears for detected channel, the value is displayed in hex.
									    Changes in OUT1 ⇒ 1
									    Changes in OUT16 and OUT2 ⇒ 8002
									    Changes in OUT17 to OUT24 ⇒ FF0000

		system: Checking if system status changes 0 = Not change, 1 = Changes
Getting example	Response	@PSH,1,0,0<CR><LF>
	Description	Getting status change information - Input status : Changes in IN1 - Output status : No changes - System status : No changes
Remarks		Only if "**@GPH / @SPH Unsolicited notification** interval" is set, the FDX-S sends unsolicited command.

@AIN		**Input signal status (For each channel)**
Getting	Command	@AIN, in<CR><LF>
	Response	@AIN, status_1, status_2, status_3, status_4, status_5, status_6, status_7, status_8, status_9, status_10, status_11, status_12, status_13, status_14, status_15, status_16, status_17, status_18, status_19<CR><LF>
Parameter		in: Input channel 1 to n = IN1 to INn

status_1: Input channel

Value	Description
1	1 to n = IN1 to INn

status_2: Model number

Value	Description
FDX-S16U	Model number

status_3: Version

Value	Description
01.00.00	Version

status_4: The number of valid data

Value	Description
15	"15" (fixed)

status_5: Input board

Value	Description
0	No board is installed.
1	Board is installed.

If no board is installed, no information of status_6 and later.

status_6: Horizontal pixels of input video

Value	Description
0	No signal is input.
1920	1920 pixels

status_7: Vertical pixels of input video

Value	Description
0	No signal is input.
1080	1080 lines

@AIN	Input signal status (For each channel) (Cont'd)
Parameter	status_8: Vertical sync frequency of input video

Value	Description
0	No signal is input.
59.94	59.94 Hz

status_9: Progressive or interlace scan

Value	Description
1	0: No signal is input. 1: Progressive 2: Interlace

status_10: HDMI/DVI mode of input video

Value	Description
2	0: No signal is input. 1: DVI signal input 2: HDMI signal input 3: SDI signal input

status_11: Color space of input video

Value	Description
1	0: No signal is input. 1: RGB input 2: YCbCr 4:2:2 input 3: YCbCr 4:4:4 input 4: YCbCr 4:2:0 input 255: Unknown

status_12: Color range of input video

Value	Description
2	0: No signal is input. 1: Limited range input 2: Full range input

status_13: Color depth of input video

Value	Description
1	0: No signal is input. 1: 24 bit/pixel (8 bit/component) 2: 30 bit/pixel (10 bit/component) 3: 36 bit/pixel (12 bit/component)

@AIN	Input signal status (For each channel) (Cont'd)

@AIN	Input signal status (For each channel) (Cont'd)
Parameter	status_14: +5 V input status

status_14: +5 V input status

Value	Description
1	0: No +5 V signal is input. 1: +5 V signal is input.

status_15: Presence of input video HDCP encryption (Encryption from source device)

Value	Description
2	0: No signal is input. 1: Without HDCP 2: HDCP 1.4 3: HDCP 2.2 Type 0 4: HDCP 2.2 Type 1

status_16: Audio input type

Value	Description
1	0: No signal is input. 1: LPCM 2: Compressed audio

status_17: Audio input sampling frequency

Value	Description	
5	0: No signal is input.	
	1: 22.05 kHz	2: 24.0 kHz
	3: 32 kHz	4: 44.1 kHz
	5: 48 kHz	6: 88.2 kHz
	7: 96 kHz	8: 176 kHz
	9: 192 kHz	10: 768.0 kHz
	255: Unknown	

status_18: Audio input bit length

Value	Description	
9	0: No signal is input.	
	1: 16 bit	2: 17 bit
	3: 18 bit	4: 19 bit
	5: 20 bit	6: 21 bit
	7: 22 bit	8: 23 bit
	9: 24 bit	
	255: Unknown	

@AIN	Input signal status (For each channel) (Cont'd)
Parameter	status_19: Audio input HBR mode

Value	Description

1	0: No signal is input.
	1: Mode other than HBR
	   (PCM mode, other compressed
	   audio)
	2: HBR mode

Getting example	Command Response	@AIN,1<CR><LF> @AIN,1,FDX-S16U,01.00.00,15,1,1920,1080,59.94,1,2,1,2,1,1,2,1,5,9,1 <CR><LF>
	Description	Getting all statuses of IN1 input signal
		- Input channel : IN1
		- Model number : FDX-S16U
		- Version : 01.00.00
		- The number of valid data : 15
		- Input board : Installed
		- Horizontal pixels of input video : 1920 pixels
		- Vertical pixels of input video : 1080 lines
		- Input video frequency : 59.94 Hz
		- Progressive or interlace scan : Progressive
		- HDMI/DVI mode of input video : HDMI signal input
		- Color space of input video : RGB input
		- Color range of input video : Full range input
		- Color depth of input video : 24 bit/pixel (8 bit/component)
		- +5V input status : +5 V signal is input.
		- Presence of input video HDCP encryption : HDCP 1.4
		- Audio input type : LPCM
		- Audio input sampling frequency : 48 kHz
		- Audio input bit length : 24 bit
		- Audio input HBR mode : Mode other than HBR
Remarks	―	

@AOT		Output signal status (For each channel)
Getting	Command	@AOT,out<CR><LF>
	Response	@AOT, status_1, status_2, status_3, status_4, status_5, status_6, status_7, status_8, status_9, status_10, status_11, status_12, status_13, status_14, status_15, status_16, status_17, status_18, status_19, status_20, status_21, status_22, status_23, status_24, status_25<CR><LF>
Parameter		out: Output channel 1 to n = OUT1 to OUTn

status_1: Output channel

Value	Description
1	1 to n = OUT1 to OUTn

status_2: Model number

Value	Description
FDX-S16U	Model number

status_3: Version

Value	Description
01.00.00	Version

status_4: The number of valid data

Value	Description
21	"21" (fixed)

status_5: Output board

Value	Description
0	No board is installed.
1	Board is installed.

If no board is installed, no information of status_6 and later.

status_6: Selected input

Value	Description
1	0 = OFF 1 to n = IN1 to INn

@AOT	Output signal status (For each channel) (Cont'd)
Parameter	status_7: Horizontal pixels of output video

status_7: Horizontal pixels of output video

Value	Description
0	No signal is output.
1920	1920 pixels

status_8: Vertical pixels of output video

Value	Description
0	No signal is output.
1080	1080 lines

status_9: Vertical sync frequency output video

Value	Description
0	No signal is output.
59.94	59.94 Hz

status_10: Progressive or interlace scan

Value	Description
1	0: No signal is output. 1: Progressive 2: Interlace

status_11: HDMI/DVI mode of output video

Value	Description
2	0: No signal is output. 1: DVI signal output 2: HDMI signal output 3: SDI signal output

status_12: Color space of output video

Value	Description
1	0: No signal is output. 1: RGB output 2: YCbCr 4:2:2 output 3: YCbCr 4:4:4 output 4: YCbCr 4:2:0 output

@AOT	Output signal status (For each channel) (Cont'd)
Parameter	status_13: Color range of output video

status_13: Color range of output video

Value	Description
2	0: No signal is output. 1: Limited range output 2: Full range output

status_14: Color depth of output video

Value	Description
1	0: No signal is output. 1: 24 bit/pixel (8 bit/component) 2: 30 bit/pixel (10 bit/component) 3: 36 bit/pixel (12 bit/component)

status_15: Hot plug detection

Value	Description
1	0: Hot plug is detected. 1: No hot plug is detected.

status_16: HDCP encryption

Value	Description
4	0: No HDCP encryption 1: HDCP is being encrypted. 2: HDCP is being encrypted. 3: HDCP is being encrypted. 4: HDCP encryption ends normally. 5: HDCP encryption ends abnormally.

status_17: HDCP output

Value	Description
1	0: No HDCP output 1: HDCP 1.4 output 2: HDCP 2.2 Type 0 output 3: HDCP 2.2 Type 1 output

@AOT	Output signal status (For each channel) (Cont'd)
Parameter	status_18: Audio output type

status_18: Audio output type

Value	Description
1	0: No signal is output. 1: LPCM 2: Compressed audio

status_19: Reading EDID

Value	Description
2	0: Not connected (EDID is not received) 1: Failed 2: Completed

status_20: HDMI/DVI mode (sink)

Value	Description
2	0: Not connected (EDID is not received) 1: DVI mode 2: HDMI mode (LPCM supported) 3: HDMI mode (Compressed audio supported)

status_21: Color space (sink)

bit	7	6	5	4	3	2	1	0
Color	-	-	-	-	YCbCr 4:2:0	YCbCr 4:4:4	YCbCr 4:2:2	RGB

"1" appears for supported color space, the value is displayed in hex.
"0": Not connected. (EDID is not received)

status_22: Color depth (sink)

Value	Description
1	0: Not connected (EDID is not received) 1: 24 bit/pixel (8 bit/component) 2: 30 bit/pixel (10 bit/component) 3: 36 bit/pixel (12 bit/component)

@AOT	Output signal status (For each channel) (Cont'd)
Parameter	status_23: HDCP (sink)

Value	Description
2	0: Not connected (EDID is not received) 1: HDCP is not supported. 2: HDCP 1.4 supported 3: HDCP 2.2 supported

status_24: SCDC (sink)

Value	Description
2	0: Not connected (EDID is not received) 1: SCDC is not supported. 2: SCDC supported

status_25: HDR (sink)

Value	Description
2	0: Not connected (EDID is not received) 1: HDR is not supported. 2: HDR supported

@AOT		Output signal status (For each channel) (Cont'd)
Getting example	Command Response	@AOT,1<CR><LF> @AOT,1,FDX-S16U,01.00.00,21,1,1,1920,1080,59.94,1,2,1,2,1,1,4,1,1,2,2,7,1,2,2,2<CR><LF>
	Description	Getting all statuses of OUT1 output signal - Output channel : OUT1 - Model number : FDX-S16U - Version : 01.00.00 - The number of valid data : 21 - Output board : Installed - Selected input : IN1 - Horizontal pixels of output video : 1920 pixels - Vertical pixels of output video : 1080 lines - Output video frequency : 59.94 Hz - Progressive or interlace scan : Progressive - HDMI/DVI mode of output video : HDMI signal output - Color space of output video : RGB output - Color range of output video : Full range output - Color depth of output video : 24 bit/pixel (8 bit/component) - Hot plug detection : Hot plug is detected. - HDCP encryption : Encryption ends normally. - HDCP output : HDCP 1.4 output - Audio output type : LPCM - Reading EDID : Completed - HDMI/DVI mode (sink) : HDMI mode (LPCM supported) - Color space (sink) : RGB, YCbCr 4:2:2, and YCbCr 4:4:4 supported - Color depth (sink) : 24 bit/pixel (8 bit/component) - HDCP (sink) : HDCP 1.4 supported - SCDC (sink) : SCDC supported - HDR (sink) : HDR supported
Remarks		―

@GAA		Alarm status
Getting	Command	@GAA<CR><LF>
	Response	@GAA, status_1, status_2, status_3, status_4, status_5_1, staus_5_2, ・・・, status_5_16, status_6_1, status_6_2, ・・・ , status_6_16, status_7_1, status_7_2, ・・・, status_7_10<CR><LF>
Parameter		status_1: Model number <table><tr><th>Value</th><th>Description</th></tr><tr><td>FDX-S16U</td><td>Model number</td></tr></table> status_2: Version <table><tr><th>Value</th><th>Description</th></tr><tr><td>01.00.00</td><td>Version</td></tr></table> status_3: The number of valid data <table><tr><th>Value</th><th>Description</th></tr><tr><td>12</td><td>FDX-S08U : "9" (fixed) FDX-S16U : "12" (fixed) FDX-S32U : "22" (fixed) FDX-S64U : "43" (fixed)</td></tr></table> status_4: Power supply voltage status and audio board status <table><tr><th>Value</th><th>Description</th></tr><tr><td>0</td><td>0: Normal 1: Problem in power voltage 2: Problem in audio board (OPTION A for FDX-S64U) 4: Problem in audio board (OPTION B for FDX-S64U) 3: Problem in power voltage and audio board (OPTION A) 6: Problem in both audio boards (OPTION A and OPTION B) 7: Problem in power voltage and both audio boards (OPTION A, OPTION B)</td></tr></table>

@GAA	Alarm status (Cont'd)
Parameter	status_5_1-16: Input board status FDX-S08U : Two boards of status_5_1 to status_5_2 FDX-S16U : Four boards of status_5_1 to status_5_4 FDX-S32U : Eight boards of status_5_1 to status_5_8 FDX-S64U : 16 boards of status_5_1 to status_5_16 Table A status_6_1-16: Output board status FDX-S08U : Two boards of status_6_1 to status_6_2 FDX-S16U : Four boards of status_6_1 to status_6_4 FDX-S32U : Eight board of status_6_1 to status_6_8 FDX-S64U : 16 boards of status_6_1 to status_6_16 Table B status_7_1-10: Fan status FDX-S08U : Four boards of status_7_1 to status_7_4 FDX-S16U : Three fans of status_7_1 to status_7_3 FDX-S32U : Five fans of status_7_1 to status_7_5 FDX-S64U : 10 boards of status_7_1 to status_7_10 Table C

status_5_1-16: Input board status

Value	Description
0	0: Normal 2: Temperature problem 4: Problem other than temperature -1: No board is installed.

status_6_1-16: Output board status

Value	Description
0	0: Normal 2: Temperature problem 4: Problem other than temperature -1: No board is installed.

status_7_1-10: Fan status

Value	Description
0	0: Normal 1: Abnormal

@GAA		Alarm status (Cont'd)
Getting example	Command Response	@GAA<CR><LF> @GAA,FDX-S16U,01.00.00,12,0,0,0,-1,-1,0,0,-1,-1,0,0,0<CR><LF>

	Description	Getting all alarm statuses
		- Model number : FDX-S16U
		- Version : 01.00.00
		- The number of valid data : 12
		- Power supply voltage and audio board status: Normal
		- Input board status:
		     Input boards 1 to 2 : Normal
		     Input boards 3 to 4 : No board is installed.
		- Output board status:
		     Output boards 1 to 2 : Normal
		     Output boards 3 to 4 : No board is installed.
		- Fan status:
		     Fans 1 to 3 : Normal

Getting example	Command Response	@GAA<CR><LF> @GAA,FDX-S32U,01.00.00,22,0,0,0,0,0,-1,-1,-1,-1,0,0,0,0,-1,-1,-1,-1,0,0,0, 0,0<CR><LF>

	Description	Getting all alarm statuses
		- Model number : FDX-S32U
		- Version : 01.00.00
		- The number of valid data : 22
		- Power supply voltage and audio board status: Normal
		- Input board status:
		     Input boards 1 to 4 : Normal
		     Input boards 5 to 8 : No board is installed.
		- Output board status:
		     Output boards 1 to 4 : Normal
		     Output boards 5 to 8 : No board is installed.
		- Fan status:
		     Fans 1 to 5 : Normal

Remarks		The numbers of I/O boards, fans, and power units differ depending on models.

3.4.20 Transmission mode

HDBaseT and SDVoE only

@G++ / @S++		RS-232C transmission sending channel
Getting	Command	@G++<CR><LF>
	Response	@G++, ch_1, ・・・, ch_8 (, ch_9, ・・・, ch_n)<CR><LF>
Setting	Command	@S++, ch_1 (, ch_2, ・・・)<CR><LF>
	Response	@S++, ch_1 (, ch_2, ・・・)<CR><LF>
Parameter		ch_1 to ch_n: RS-232C transmission sending channel 　　1 to n = OUT1 to OUTn, 101 to 100+n = IN1 to INn
Getting example	Command	@G++<CR><LF>
	Response	@G++,1,2,3,4<CR><LF>
	Description	Getting the RS-232C transmission sending channel OUT1 to OUT4: RS-232C transmission sending channel
Setting example	Command	@S++,1,12<CR><LF>
	Response	@S++,1,12<CR><LF>
	Description	Setting OUT1 and OUT12 to RS-232C transmission sending channel Completed
Remarks		－

HDBaseT and SDVoE only

@G+R / @S+R		RS-232C transmission receiving channel
Getting	Command	@G+R<CR><LF>
	Response	@G+R, channel<CR><LF>
Setting	Command	@S+R, channel<CR><LF>
	Response	@S+R, channel<CR><LF>
Parameter		channel: RS-232C transmission receiving channel 　　1 to n = OUT1 to OUTn, 101 to 100+n = IN1 to INn
Getting example	Command	@G+R<CR><LF>
	Response	@G+R,4<CR><LF>
	Description	Getting the RS-232C transmission receiving channel OUT4: RS-232C transmission receiving channel
Setting example	Command	@S+R,1<CR><LF>
	Response	@S+R,1<CR><LF>
	Description	Setting OUT1 to RS-232C transmission receiving channel Completed
Remarks		－

HDBaseT and SDVoE only

@G+S / @S+S		RS-232C transmission mode
Getting	Command	@G+S<CR><LF>
	Response	@G+S, mode<CR><LF>
Setting	Command	@S+S, mode<CR><LF>
	Response	@S+S, mode<CR><LF>
Parameter		mode: Setting RS-232C transmission mode 0 = Normal mode, 1 = RS-232C mode After setting to RS-232C transmission mode, RS-232C is used for the communication with FDX-S until a normal mode command is received.
Getting example	Command	@G+S<CR><LF>
	Response	@G+S,1<CR><LF>
	Description	Getting to the RS-232C transmission mode RS-232C transmission mode
Setting example	Command	@S+S,0<CR><LF>
	Response	@S+S,0<CR><LF>
	Description	Setting the RS-232C transmission mode to normal mode Completed
Remarks		－

HDBaseT and SDVoE only

@G-- / @S--		LAN transmission sending channel
Getting	Command	@G--<CR><LF>
	Response	@G--, ch_1, ・・・, ch_8 (, ch_9, ・・・, ch_n)<CR><LF>
Setting	Command	@S--, ch_1 (, ch_2, ・・・)<CR><LF>
	Response	@S--, ch_1 (, ch_2, ・・・)<CR><LF>
Parameter		ch_1 to ch_n: LAN transmission sending channel 1 to n = OUT1 to OUTn, 101 to 100+n = IN1 to INn
Getting example	Command	@G--<CR><LF>
	Response	@G--,1,2,3,4<CR><LF>
	Description	Getting the LAN transmission sending channel OUT1 to OUT4: LAN transmission sending channel
Setting example	Command	@S--,1,12<CR><LF>
	Response	@S--,1,12<CR><LF>
	Description	Setting OUT1 and OUT12 to LAN transmission sending channel Completed
Remarks		－

HDBaseT and SDVoE only

@G-R / @S-R		LAN transmission receiving channel
Getting	Command	@G-R<CR><LF>
	Response	@G-R, ch_1, ･･･, ch_8 (, ch_9, ･･･, ch_n)<CR><LF>
Setting	Command	@S-R, ch_1 (, ch_2, ･･･)<CR><LF>
	Response	@S-R, ch_1 (, ch_2, ･･･)<CR><LF>
Parameter		ch_1 to ch_n: LAN transmission receiving channel 1 to n = OUT1 to OUTn, 101 to 100+n = IN1 to INn
Getting example	Command	@G-R<CR><LF>
	Response	@G-R,4<CR><LF>
	Description	Getting the LAN transmission receiving channel OUT4: LAN transmission receiving channel
Setting example	Command	@S-R,1<CR><LF>
	Response	@S-R,1<CR><LF>
	Description	Setting OUT1 to LAN transmission receiving channel Completed
Remarks		－

HDBaseT and SDVoE only

@G-S / @S-S		LAN transmission mode
Getting	Command	@G-S<CR><LF>
	Response	@G-S, mode<CR><LF>
Setting	Command	@S-S, mode<CR><LF>
	Response	@S-S, mode<CR><LF>
Parameter		mode: Setting LAN transmission mode 0 = Normal mode, 1 = LAN mode After setting to LAN transmission mode, LAN is used for the communication with FDX-S until a normal mode command is received.
Getting example	Command	@G-S<CR><LF>
	Response	@G-S,0<CR><LF>
	Description	Getting to the LAN transmission mode LAN transmission mode
Setting example	Command	@S-S,0<CR><LF>
	Response	@S-S,0<CR><LF>
	Description	Setting the LAN transmission mode to normal mode Completed
Remarks		－

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