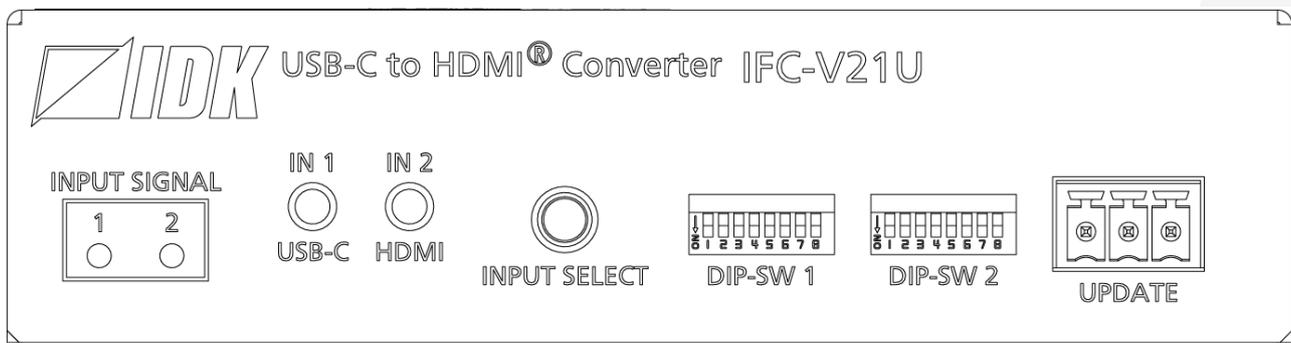


USB-C to HDMI Converter

IFC-V21U

User Guide

Ver.1.3.0



Thank you for choosing our product.

Please thoroughly familiarize yourself with this guide before installing this equipment. We recommend keeping this manual together with the equipment for future reference as needed.

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

About technical documentation

■ Please read the following guides before connecting this equipment to a power source.

<p>1. Safety Instructions Contains important safety instructions for the product to help ensure your own personal safety and protect the product and working environment from potential damage.</p>	<p>Provided with the product.</p>
<p>2. Setup Guide Contains setup information and precautions for installing the product and connecting cables.</p>	<p>Download from www.idkav.com</p>

■ Please refer to the following guides as needed.

<p>3. Operation Guide Describes how to configure and use the equipment.</p>	<p>Download from www.idkav.com</p>
<p>4. User Guide Contains detailed explanation of functions, setting values, and restrictions.</p>	<p>www.idkav.com</p>

Trademarks

- HDBaseT™ and the HDBaseT Alliance Logo are trademarks of the HDBaseT Alliance.
- The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc. in the United States and other countries.
- SDVoE™ and SDVoE logo are trademarks of SDVoE Alliance.
- All other company and product names mentioned in this document are either registered trademarks or trademarks of their respective owners. In this document, the “®” or “™” marks may not be specified.
- ©2023 IDK Corporation, all rights reserved.

FCC STATEMENT

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

(Class A)

Supplier's Declaration of Conformity
47 CFR § 2.1077 Compliance Information

Unique Identifier

Type of Equipment: USB C to HDMI Converter

Model Name: IFC-V21U

Responsible Party – U.S. Contact Information

Company Name: IDK America Inc.

Address: 72 Grays Bridge Road Suite 1-C, Brookfield, CT 06804

Telephone number: +1-203-204-2445

URL: www.idkav.com

FCC Compliance Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

(FCC SDoC)

CE MARKING

This equipment complies with the essential requirements of the relevant European health, safety and environmental protection legislation.

WEEE MARKING

Waste Electrical and Electronic Equipment (WEEE), Directive 2002/96/EC
 (This directive is only valid in the EU.)

This equipment complies with the WEEE Directive (2002/96/EC) marking requirement.

The left marking indicates that you must not discard this electrical/electronic equipment in domestic household waste.

Safety Instructions

Read all safety and operating instructions before using this product. Follow instructions and heed warnings/cautions.

Instructions and warnings/cautions for all products are provided. Some of them may not be applicable to your product.

	<h2>Warning</h2>	Indicates the presence of a hazard that may result in death or serious personal injury if the warning is ignored or the product is handled incorrectly.
	<h2>Caution</h2>	Indicates the presence of a hazard that may cause minor personal injury or property damage if the caution is ignored or the product is handled incorrectly.

Symbol	Description	Example
 Caution	This symbol is intended to alert the user. (Warning and caution)	 Hot surfaces Caution
 Prohibited	This symbol is intended to prohibit the user from specified actions.	 Do not disassemble
 Instruction	This symbol is intended to instruct the user.	 Unplug

Warning

For lifting heavy products:

 Instruction	<ul style="list-style-type: none"> • Lifting must be done by two or more personnel. <p>To avoid injury: When lifting the product, bend your knees, keep your back straight and get close to it with two or more persons.</p>
--	--

For installing and connecting products:

 Prohibited	<ul style="list-style-type: none"> • Do not place the product in unstable place. <p>Install the product in a horizontal and stable place, as this may fall or tip over and cause injury.</p> <ul style="list-style-type: none"> • Secure the product if installing in the locations with vibration. <p>Vibration may move or tip over the product unexpectedly, resulting in injury.</p>
---	--

Warning

 Instruction	<ul style="list-style-type: none"> ● Installation work must be performed by professionals. The product is intended to be installed by skilled technicians. For installation, please contact a system integrator or IDK. Improper installation may lead to the risk of fire, electric shock, injury, or property damage. ● Insert the power plug into an outlet that is unobstructed. Unobstructed access to the plug enables unplugging the product in case of any extraordinary failure, abnormal situation or for easy disconnection during extended periods of non-use. ● Insert the power plug into an appropriate outlet completely. If the plug is partially inserted, arcing may cause the connection to overheat, increasing the risk of electric shock or fire. Do not use a damaged plug or connect to a loose outlet. ● Unplug the product from an AC power source during installation or service. When connecting peripheral devices to this product, unplug all involved devices from outlets. Ground potential differences may cause fire or other difficulties. ● The product must be electrically earthed/grounded. To reduce the risk of electric shock, ensure the product is connected to a mains socket outlet with a protective earthing connection. ● For PoE/PoH, use category cables meeting IEEE802.3af/at. Otherwise, it may cause problems or a fire.
---	--

For operating products:

 Prohibited	<ul style="list-style-type: none"> ● Keep out any foreign objects. To avoid fire or electric shock, do not permit foreign objects, such as metal and paper, to enter the product from vent holes or other apertures. ● For power cable/plug and Category cable, <ul style="list-style-type: none"> • Do not scratch, heat, or modify, including splicing or lengthening them. • Do not pull, place heavy objects on them, or pinch them. • Do not bend, twist, tie or clamp them together forcefully. <p>Misuse of the power cable and plug may cause fire or electric shock. If power cables/plugs become damaged, contact your IDK representative.</p>
 Do not disassemble	<ul style="list-style-type: none"> ● Do not repair, modify or disassemble. Since the product includes circuitry that uses potentially lethal, high voltage levels, disassembly by unauthorized personnel may lead to the risk of fire or electric shock. For internal inspection or repair, contact your IDK representative.
 Do not touch	<ul style="list-style-type: none"> ● Do not touch the product and connected cables during electric storms. Contact may cause electric shock.
 Instruction	<ul style="list-style-type: none"> ● Clean the power plug regularly. If the plug is covered in dust, it may increase the risk of fire.

If the following problem occurs:

 Unplug	<ul style="list-style-type: none"> ● Unplug immediately if the product smokes, makes unusual noise, or produces a burning odor. ● Unplug immediately if the product is damaged by falling or having been dropped. ● Unplug immediately if water or other objects are directed inside. <p>If you continue to use the product under these conditions, it may increase the risk of electric shock or fire. For maintenance and repair, contact your IDK representative.</p>
--	--



Caution

For installing and connecting products:

 <p>Prohibited</p>	<ul style="list-style-type: none"> ● Do not place the product in a location where it will be subjected to high temperatures. If the product is subjected to direct sunlight or high temperatures while under operation, it may affect the product's performance and reliability and may increase the risk of fire. ● Do not store or operate the product in dusty, oil smoke filled, or humid place. Placing the product in such environment may increase the risk of fire or electric shock. ● Do not block the vent holes. If ventilation slots are blocked, it may cause the product to overheat, affecting performance and reliability and may increase the risk of fire. ● Do not place or stack heavy items on the product. Failure to observe this precaution may result in damage to the product itself as well as other property and may lead to the risk of personal injury. ● Do not exceed ratings of outlet and wiring devices. Exceeding the rating of an outlet may increase the risk of fire and electric shock.
 <p>No wet hands</p>	<ul style="list-style-type: none"> ● Do not handle power plug with wet hands. Failure to observe this precaution may increase the risk of electric shock.
 <p>Instruction</p>	<ul style="list-style-type: none"> ● Use and store the product within the specified temperature/humidity range. If the product is used outside the specified range of temperature and humidity continuously, it may increase the risk of fire or electric shock. ● Do not place the product at elevations of 1.24 mi. (2,000 m) or higher above sea level. Failure to do so may shorten the life of the internal parts and result in malfunctions. ● When mounting the product into the rack, provide sufficient cooling space. Mount the product in a rack meeting EIA standards, and maintain spaces above and below for air circulation. For your safety as required, attach an L-shaped bracket in addition to the panel mount bracket kit to improve mechanical stability. ● Never insert screws without the rubber feet into the threaded holes on the bottom of the product. Never insert screws alone into the threaded holes on the bottom of the product. Doing so may lead to damage when the screws contact electric circuitry or components inside the product. Reinstall the originally supplied rubber feet using the originally supplied screws only.

For operating products:

 Hot surfaces Caution	<p>For products with the hot surfaces caution label only:</p> <ul style="list-style-type: none"> ● Do not touch the product's hot surface. <p>If the product is installed without enough space, it may cause malfunction of other products. If you touch product's hot surface, it may cause burns.</p>
 Prohibited	<ul style="list-style-type: none"> ● Use only the supplied power cable and AC adapter. ● Do not use the supplied power cable and AC adapter with other products. <p>If non-compliant adapter or power cables are used, it may increase the risk of fire or electric shock.</p>
 Unplug	<ul style="list-style-type: none"> ● If the product won't be used for an extended period of time, unplug it. <p>Failure to observe this precaution may increase the risk of fire.</p> <ul style="list-style-type: none"> ● Unplug the product before cleaning. <p>To prevent electric shock.</p>
 Instruction	<ul style="list-style-type: none"> ● Do not prevent heat release. <p>If cooling fan stops, power off the product and contact IDK. Failure to do so may raise internal temperature and increase the risk of malfunction, fire, or electric shock.</p> <ul style="list-style-type: none"> ● Keep vents clear of dust. <p>If the vent holes near the cooling fan or near the fan are covered with dust, internal temperatures increase and may increase the risk of malfunction. Clean the vent holes and near the fan as needed. If dust accumulates inside of the product, it may increase the risk of fire or electric shock. Periodic internal cleaning, especially before humid rainy season, is recommended. For internal cleaning, contact your IDK representative.</p>

Contents

About this Guide	9
Conventions	9
About this Product	10
Setting	11
Setting items	11
Input	12
Hot plug output for when there is no active video input signal	12
HDCP input	14
Output	15
DDC 5 V signal output for when no video signal input	15
Input channel automatic switching	16
Automatic switching	16
Ignoring duration after automatic switching	16
EDID	17
EDID selection	17
Factory default list	18
License	19
Specification	20
Product specification	20
Supported video signals	21
Troubleshooting	22

About this Guide

This guide describes features, notes, and configurations of the IFC-V USB-C to HDMI Converter.

Conventions

- The following symbols are used in this guide.
 - []: Setting values displayed on the front panel
- Default value is shaded in each table.

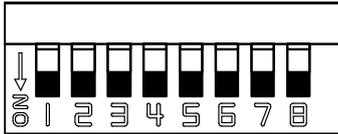
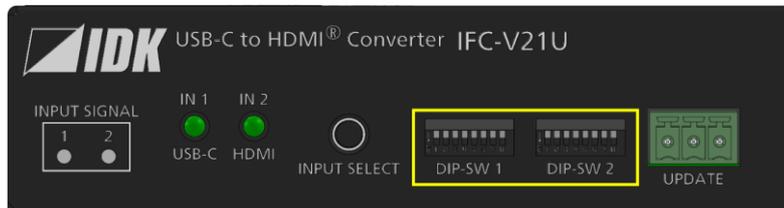
About this Product

The IFC-V21U converts DisplayPort Alternate Mode signals of USB-C to HDMI at resolutions up to 4K@60. The converter includes two inputs, one (1) USB-C and one (1) HDMI, and a single HDMI output. One of the inputs is output in HDMI format.

Using the IFC-V21U provides a simple way to convert USB-C to HDMI and can be paired with IDK's wide variety of HDMI products.

Setting

The IFC-V can be set using the DIP switch.



Setting items

DIP switch	No.	Item	Page	
1	1	Hot plug output for when there is no active video input signal	IN1 (USB-C)	
	2			
	3		IN2 (HDMI)	
	4			
	5	HDCP input	IN2 (HDMI)	14
	6			
	7	DDC 5 V signal output for when no video signal input	15	
	8	Not used.	—	
2	1	Automatic switching	16	
	2	Ignoring duration after automatic switching	16	
	3			
	4	Not used.	—	
	5	EDID selection	IN1 (USB-C)	17
	6			
	7		IN2 (HDMI)	
	8			

Input

Hot plug output for when there is no active video input signal

The IFC-V requests the source device to output video signal by sending hot plug when no active video signal is input. You can enable/disable this feature and set the request interval.

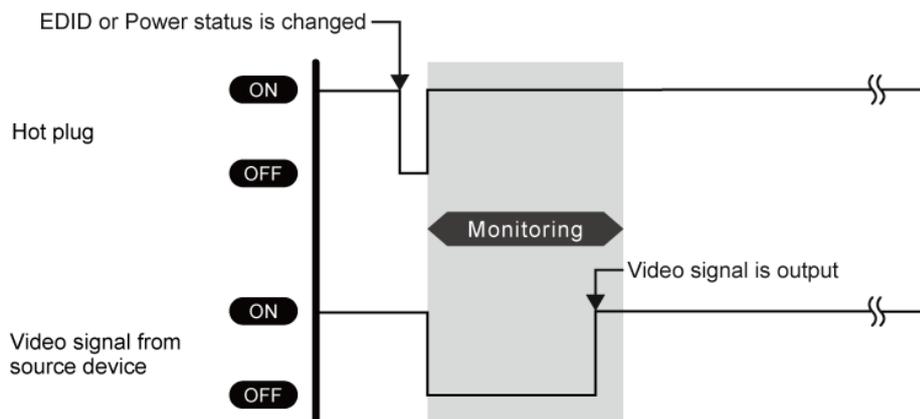
Item	Hot plug output for when there is no active video input signal				
For	IN1 (USB-C)		IN2 (HDMI)		
Value	DIP switch 1		DIP switch 1		
	No.1	No.2	No.3	No.4	
	OFF	OFF	OFF	OFF	10s
	ON	OFF	ON	OFF	15s
	OFF	ON	OFF	ON	5s
	ON	ON	ON	ON	OFF

[10s], [15s], [5s] : Requests the source device to output video signal after the specified monitoring time if there is no active input signal.

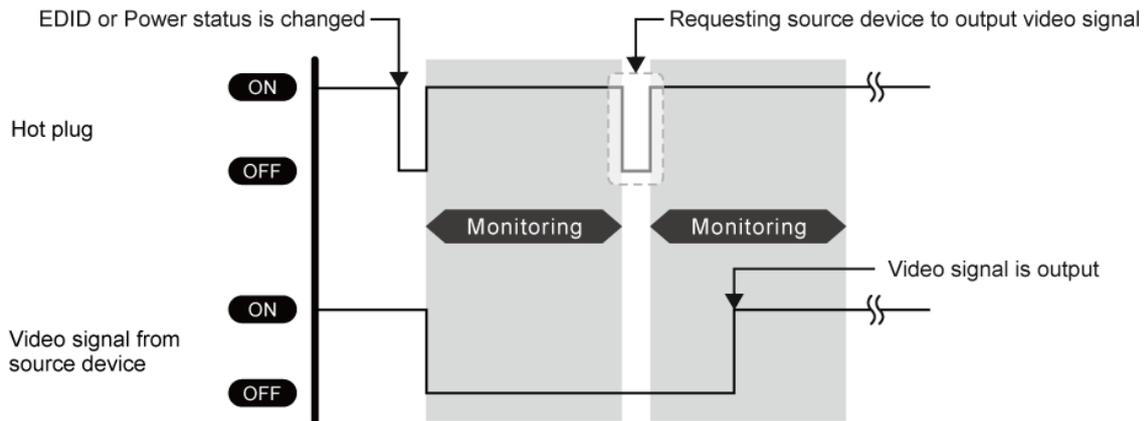
[OFF] : Does not request the source device to output video signal even if there is no active input signal.

If the IFC-V is powered on or EDID is changed with the connected source device is powered on, the source device may stop outputting video signal. In this case, use this feature to request the source device to output video signal.

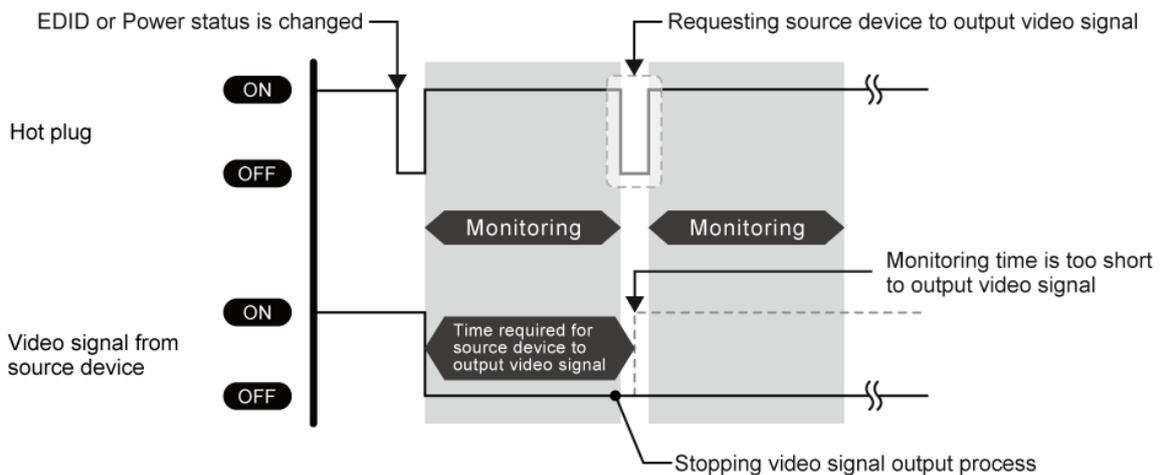
■ Example: Video signal is output within the specified monitoring time



■ **Example: The source device stops outputting video signals → Hot plug request is needed.**



■ **Example: The specified monitoring time is too short. → Set the longer monitoring time.**



If the interval is shorter than the time for source device output video signal, the source device repeats the video output process and does not output video signal. This problem can be solved by setting longer monitoring time.

Note

If the source device, such as a PC, disables the monitor power-saving or dual monitor features, set this setting to [OFF].

HDCP input

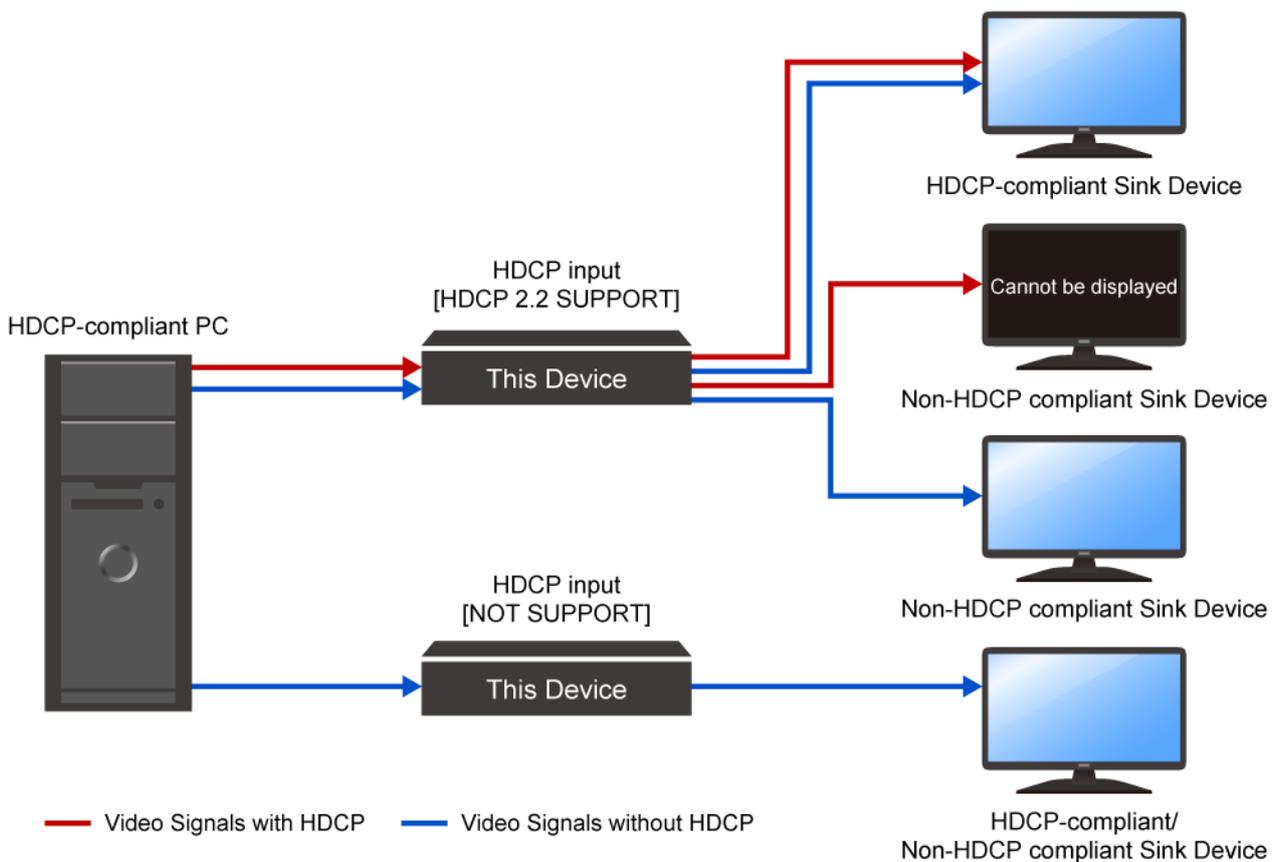
Item	HDCP input		
For	IN2 (HDMI)		
Value	DIP switch 1		HDCP 2.2 SUPPORT HDCP 1.4 SUPPORT NOT SUPPORT Not used.
	No.5	No.6	
	OFF	OFF	
	ON	OFF	
	OFF	ON	
	ON	ON	

[HDCP 2.2 SUPPORT] : Operates as an HDCP 2.2 supported device.

[HDCP 1.4 SUPPORT] : Operates as an HDCP 1.4 supported device.

[NOT SUPPORT] : Operates as a non-HDCP compliant device.

Some source devices negotiate with the connected device to determine if HDCP encryption is supported. After this negotiation, the source device determines whether HDCP signal encryption is enforced or not. This process takes place with some source device, even if the content being presented is not copyright protected. The IFC-V is HDCP compliant, if it is connected to a display device that does not support HDCP, unprotected AV content may not be successfully displayed. Under these circumstances and if the content is indeed not protected, the problem can be solved by setting this menu to [NOT SUPPORT].



Note

HDCP 2.2 Type 0 video can be displayed on sink devices supporting HDCP 1.4.

HDCP 2.2 Type 1 video can be displayed on sink devices supporting HDCP 2.2 but cannot be displayed on sink devices supporting HDCP 1.4.

Output

DDC 5 V signal output for when no video signal input

You can set the DDC 5 V signal output when an input channel without video signal is selected.

Item	DDC 5 V signal output for when no video signal input
For	Output channel
Value	DIP switch 1
	No.7
	OFF, ON

[OFF] : Outputs DDC 5 V signal at all time.

[ON] : Outputs DDC 5 V signal if video signal is input.

Stops outputting video signal and disconnects DDC 5 V signal if no video signal is input. In this case, a sink device may switch into standby mode.

When DDC 5 V signal is disconnected, a sink device may switch into standby mode.

Input channel automatic switching

When video input signal is detected/disconnected, the IFC-V automatically switches input channel to the input channel that has active video input signal.

Automatic switching

You can enable/disable the input channel automatically.

Item	Automatic switching
For	Input channel
Value	DIP switch 2
	No.1
	OFF, ON

[OFF] : Enables automatic switching if:

- Video input signal is detected from the no video input signal of the non-selected input channel.
- or
- Video input signal of the selected input channel disappears and video input signal is input to the non-selected input channel.

[ON] : Disables automatic switching.

Ignoring duration after automatic switching

You can set the time for disabling automatic switching temporarily after automatic input channel switching is performed.

Item	Ignoring duration after automatic switching			
For	Input channel			
Value	DIP switch 2			
	No.2	No.3		
	OFF	OFF		0s
	ON	OFF		1s
	OFF	ON		5s
ON	ON	10s		

If video input signal is detected or disconnected in a short interval, the automatic switching is performed repeatedly. To avoid undesired automatic switching, set the ignoring duration.

EDID

A source device that is connected to an input connector obtains information of supported video and audio signals from the EDID. You can change the information to be sent to a source device.

EDID selection

You can set the EDID that will be sent to source device.

Item	EDID selection				
For	IN1 (USB-C)		IN2 (HDMI)		
Value	DIP switch 2		DIP switch 2		
	No.5	No.6	No.7	No.8	
	OFF	OFF	OFF	OFF	EXTERNAL EDID
	ON	OFF	ON	OFF	BUILT-IN EDID (1080p)
	OFF	ON	OFF	ON	BUILT-IN EDID (2160p)
	ON	ON	ON	ON	Not used.

EXTERNAL EDID : Uses EDID of the sink device that is connected to the output connector.
For IN1 (USB-C), if the sink device supports a format other than 2-channel LPCM, audio signal information is changed to 2-channel LPCM.

BUILT-IN EDID (1080p) : Uses IFC-V's internal EDID (1080p 50/59.94/60Hz Deep Color 24bit YCbCr 4:4:4/RGB at maximum, audio 2-channel LPCM).

BUILT-IN EDID (2160p) : Uses IFC-V's internal EDID (2160p 50/59.94/60Hz Deep Color 24bit YCbCr 4:4:4/RGB at maximum, audio 2-channel LPCM).

The table below shows supported resolutions if BUILT-IN EDID (1080p) or BUILT-IN EDID (2160p) is selected.

Resolution Value	Resolution																								
	640x480	800x600	1024x768	1280x720	1280x768	1280x800	1280x960	1280x1024	1360x768	1366x768	1400x1050	1440x900	1600x900	1600x1200	1680x1050	1920x1080	1920x1200	2048x1152	2560x1440	2560x1600	3840x2160 (30Hz)	4096x2160 (30Hz)	3840x2160 (60Hz)	4096x2160 (60Hz)	
BUILT-IN EDID (1080p)	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N	
BUILT-IN EDID (2160p)	Y	Y	Y	N	N	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y	N

Y: Supported, N: Not supported

Timing of [1080p]/[2160p] meets the CTA-861 standard.

Factory default list

Setting item			Default
Input	Hot plug output for when there is no active video input signal	IN1 (USB-C)	10s
		IN2 (HDMI)	10s
	HDCP input	IN2 (HDMI)	HDCP 2.2 SUPPORT
Output	DDC 5 V signal output for when no video signal input		OFF
Input channel automatic switching	Automatic switching		OFF
	Ignoring duration after automatic switching		0s
EDID	EDID selection	IN1 (USB-C)	OFF
		IN2 (HDMI)	OFF

License

The following table shows the licensed third-party software packages used by the IFC-V. Transferring, copying, disassembling, decompiling, or reverse-engineering the included software other than open source software that is licensed by GPL, LGPL, or other licenses are prohibited.

OSS	License	URL
FreeRTOS	MIT	https://github.com/aws/amazon-freertos/blob/main/LICENSE

Specification

Product specification

		IFC-V21U
Video/Audio input	USB-C	1 input DisplayPort Alternate Mode on USB Type-C ¹ , DisplayPort 1.2 *HDCP is not supported. 640x480@60 to 2560x1600@60 Reduced Blanking 480p, 576p to 3840x2160@24/25/30/50/59.94/60 (4:4:4), 4096x2160@24/25/30/50/59.94/60 (4:4:4) Color depth: 24/30/36 bits *For all supported video signals, see the table below. LPCM: Up to 2 channels Sampling frequency: 32/44.1/48/88.2/96/192 kHz USB PD (Power Delivery) DC 5 V 3 A 15 W Connector: USB Type-C (24-pin) Maximum distance ² : 7 ft. (2 m)
	HDMI	1 input HDMI/DVI 1.0 TMDS single link, HDCP 1.4/2.2 TMDS clock: Up to 300 MHz, TMDS data rate: Up to 18 Gbps Deep color/x.v.Color/3D/HDR ³ 640x480@60 to 2560x1600@60 Reduced Blanking 480i, 576i to 3840x2160@24/25/30/50/59.94/60 (4:4:4), 3840x2160@50/59.94/60 (4:2:0), 4096x2160@24/25/30/50/59.94/60 (4:4:4), 4096x2160@50/59.94/60 (4:2:0) Color depth: 24/30/36 bits *For all supported video signals, see the table below. LPCM: Up to 8 channels Sampling frequency: 32/44.1/48/88.2/96/176.4/192 kHz CEC Connector: HDMI Type A (19-pin) Maximum distances ² : 98 ft. (30 m) (1080p@60), 39 ft. (12 m) (4K@60)
Video/Audio output	HDMI	1 output HDMI/DVI 1.0 TMDS single link, HDCP 1.4/2.2 TMDS clock: Up to 300 MHz, TMDS data rate: Up to 18 Gbps Deep color/x.v.Color/3D/HDR ³ 640x480@60 to 2560x1600@60 Reduced Blanking 480i, 576i to 3840x2160@24/25/30/50/59.94/60 (4:4:4), 3840x2160@50/59.94/60 (4:2:0), 4096x2160@24/25/30/50/59.94/60 (4:4:4), 4096x2160@50/59.94/60 (4:2:0) Color depth: 24/30/36 bits *For all supported video signals, see the table below. LPCM: Up to 8 channels Sampling frequency: 32/44.1/48/88.2/96/176.4/192 kHz CEC Connector: HDMI Type A (19-pin) Maximum distances ² : 98 ft. (30 m) (1080p@60), 39 ft. (12 m) (4K@60)
Functions	Control	CEC through (Connector: HDMI)
	Others	Automatic input switching, EDID emulation, Last memory, Anti-Snow, Connection Reset ⁴
General	Power	DC 12 V 1.7 A AC adapter: 100 - 240 VAC ±10%, 50 Hz/60 Hz ±3 Hz, DC 12 V 3 A 36.0 W
	Power consumption	21 W
	Dimensions	4.2 (W) × 1.1 (H) × 3.9 (D)" (106 (W) × 28 (H) × 100 (D) mm) (Excluding connectors and the like)
	Weight	0.9 lbs. (0.4 kg)
	Temperature	Operating: 32°F to 104°F (0°C to +40°C), Storage: -4°F to +176°F (-20°C to +80°C)
	Humidity	20% to 90% (Non Condensing)

¹ DisplayPort to USB-C cable or HDMI to USB-C cable are not supported.

Active cables that need to be powered from a sink device via VCONN are not supported.

² The maximum specified distances may not be achievable with some device combinations, cabling method, or other manufacturer's cable. For the same reasons, video signal disturbances or interruptions may occur, even if signals are within the specified distance (cable length) parameters.

The maximum cable length varies depending on the connected devices. The specifications have been qualified under following conditions:

- USB-C DisplayPort Alternate Mode (4K@60) : When USB3.2 Gen1 Type-C cable was used and signal of 3840x2160@60 24 bits was transmitted.
- HDMI (1080p@60) : When IDK's 24 AWG cable was used and signal of 1080p@60 24 bits was transmitted.
- HDMI (4K@60) : When IDK's 18 Gbps supported cable was used and signal of 3840x2160@60 24 bits was transmitted.

³ ARC/HEC are not supported.

⁴ For digital systems, some problems, such as an HDCP authentication error, can often be recovered by physically disconnecting and reconnecting the digital cables. However, the Connection Reset feature will correct these problems automatically without the need to physically plug and unplug the cables. It creates the same condition as if the cable were physically disconnected and reconnected. This feature only works for the IFC-V's output. Connecting other devices between the IFC-V's outputs and sink devices, may interfere with the operation of this feature.

Supported video signals

Signal	Resolution	Frame Rate [Hz]	Pixel Clock [MHz]	Color Depth [bits]	INPUT		OUTPUT
					USB-C ¹	HDMI	HDMI
640x480@60	640x480	59.94	25.18	24/30/36	○	○	○
800x600@60	800x600	60.32	40.00	24/30/36	○	○	○
1024x768@60	1024x768	60.00	65.00	24/30/36	○	○	○
1280x768@60	1280x768	59.87	79.50	24/30/36	○	○	○
1280x800@60	1280x800	59.81	83.50	24/30/36	○	○	○
1280x960@60	1280x960	60.00	108.00	24/30/36	○	○	○
1280x1024@60	1280x1024	60.02	108.00	24/30/36	○	○	○
1360x768@60	1360x768	60.02	85.50	24/30/36	○	○	○
1366x768@60	1366x768	59.79	85.50	24/30/36	○	○	○
1400x1050@60	1400x1050	59.98	121.75	24/30/36	○	○	○
1440x900@60	1440x900	59.89	106.50	24/30/36	○	○	○
1600x900@60	1600x900	59.95	118.25	24/30/36	○	○	○
1600x1200@60	1600x1200	60.00	162.00	24/30/36	○	○	○
1680x1050@60	1680x1050	59.95	146.25	24/30/36	○	○	○
1920x1080@60 RB	1920x1080	59.93	138.50	24/30/36	○	○	○
1920x1200@60 RB	1920x1200	59.95	154.00	24/30/36	○	○	○
2048x1152@60 RB	2048x1152	60.00	162.00	24/30/36	○	○	○
2560x1440@60 RB	2560x1440	59.95	241.50	24/30/36	○	○	○
2560x1600@60 RB	2560x1600	59.97	268.50	24/30/36	○	○	○
480i	720x480	59.94	27.00	24/30/36	— ²	○	○
480p	720x480	59.94	27.00	24/30/36	○	○	○
576i	720x576	50.00	27.00	24/30/36	— ²	○	○
576p	720x576	50.00	27.00	24/30/36	○	○	○
720p@50	1280x720	50.00	74.25	24/30/36	○	○	○
720p@59.94	1280x720	59.94	74.18	24/30/36	○	○	○
720p@60	1280x720	60.00	74.25	24/30/36	○	○	○
1080i@50	1920x1080	25.00	74.25	24/30/36	— ²	○	○
1080i@59.94	1920x1080	29.97	74.18	24/30/36	— ²	○	○
1080i@60	1920x1080	30.00	74.25	24/30/36	— ²	○	○
1080p@50	1920x1080	50.00	148.50	24/30/36	○	○	○
1080p@59.94	1920x1080	59.94	148.35	24/30/36	○	○	○
1080p@60	1920x1080	60.00	148.50	24/30/36	○	○	○
3840x2160@23.98	3840x2160	23.98	296.70	24/30/36	○	○	○
3840x2160@24	3840x2160	24.00	297.00	24/30/36	○	○	○
3840x2160@25	3840x2160	25.00	297.00	24/30/36	○	○	○
3840x2160@29.97	3840x2160	29.97	296.70	24/30/36	○	○	○
3840x2160@30	3840x2160	30.00	297.00	24/30/36	○	○	○
3840x2160@50	3840x2160	50.00	594.00	24/30/36 ³	○	○	○
3840x2160@59.94	3840x2160	59.94	593.41	24/30/36 ³	○	○	○
3840x2160@60	3840x2160	60.00	594.00	24/30/36 ³	○	○	○
4096x2160@23.98	4096x2160	23.98	296.70	24/30/36	○	○	○
4096x2160@24	4096x2160	24.00	297.00	24/30/36	○	○	○
4096x2160@25	4096x2160	25.00	297.00	24/30/36	○	○	○
4096x2160@29.97	4096x2160	29.97	296.70	24/30/36	○	○	○
4096x2160@30	4096x2160	30.00	297.00	24/30/36	○	○	○
4096x2160@50	4096x2160	50.00	594.00	24/30/36 ³	○	○	○
4096x2160@59.94	4096x2160	59.94	593.41	24/30/36 ³	○	○	○
4096x2160@60	4096x2160	60.00	594.00	24/30/36 ³	○	○	○

RB: Reduced Blanking

¹ YCbCr 4:2:0 is not supported.

² Interlaced signal is not supported.

³ For RGB/YCbCr 4:4:4, only 24 bit is supported.

For best results, please confirm that the source device(s) video output can be configured to match the listed formats above. For questions regarding other input video signals, please contact your IDK representative.

Troubleshooting

This chapter provides recommendations in case difficulties are encountered during IFC-V setup and operation.

In case the IFC-V does not work correctly, please check the following items first.

- Are the IFC-V and all devices connected to an active power source and are they powered on?
- Are signal cables connected correctly?
- Are there any loose or partially mated connections?
- Are the interconnecting cables specified correctly to support adequate bandwidth?
- Are specifications of connected devices matched to each other?
- Are configuration settings for the connected devices correct?
- Is there any nearby equipment that may cause electrical noise/RF interference?

Use the IFC-V built-in status display features to check for input signal presence and format. Also use the status display features to check for the presence of connected sink devices as well as for EDID and HDCP compatibility.

If difficulties persist, please refer to the peripheral device manuals as well, since connected equipment may be the cause of the trouble.

If the trouble persists, please contact us after checking the following items.

- Does the problem occur with all the signal connectors?
- Does the problem occur when you connect the source and display devices directly, bypassing the IFC-V?

USB-C to HDMI Converter

IFC-V21U

User Guide



www.idkav.com

Headquarters

IDK Corporation

7-9-1 Chuo, Yamato, Kanagawa, 242-0021, JAPAN

TEL: +81-46-200-0764 FAX: +81-46-200-0765

Email: idk_eng@idk.co.jp

USA

IDK America Inc.

72 Grays Bridge Road Suite 1-C, Brookfield,
CT 06804, United States

TEL: +1-203-204-2445

Email: sales@idkav.com

Europe

IDK Europe GmbH

Lise-Meitner-Str. 6, D-40878 Ratingen, Germany

TEL: +49-2102-578-301-0

Email: info@idkav.eu

Vietnam

IDK Corporation Vietnam

Hanoi Representative Office

TEL: +84-247-108-8866

Email: info_en@idk.co.jp

IDK Corporation Vietnam

Ho Chi Minh Representative Office

TEL: +84-28-7108-8954

Email: info_en@idk.co.jp