

# IPEX5000 Series Specification Sheet



# Product Overview

## ***IPEX5001 Encoder***

The Digitalinx IP IPEX5001 encodes / transmits HDMI video and audio over a 1 gigabit network infrastructure using JPEG2000 encoding with a variable data rate at an average of 250 Mbps with peak values up to 850Mbps. The IPEX5001 supports video signals up to 4K at 60 Hz 4:2:0 / 8 bit deep color, 4K at 24Hz 4:2:0 / 10 bit deep color for HDR10 support, HDCP 2.2 and multichannel audio support. An analog audio input port embeds analog audio with the video content, such as a DVI video source. An analog audio output port de-embeds stereo 2 channel audio from the HDMI content, while still passing stereo 2 channel audio to the HDMI output. The encoder supports control of 3rd party devices via RS232 and IR. The USB host port connection is for connecting USB host devices such as a computer that is USB 2.0 Full Speed compliant up to 12Mbps that can communicate with client side devices connected to a decoder.

The IPEX5001 supports PoE power and can be powered remotely via PoE network switch eliminating the need for a nearby power outlet.

## ***IPEX5001-WP-W Encoder***

The Digitalinx IP IPEX5001-WP-W encodes / transmits HDMI or VGA video and audio over a 1 gigabit network infrastructure using JPEG2000 encoding with a variable data rate at an average of 250 Mbps with peak values up to 850Mbps. The IPEX5001-WP-W supports video signals up to 4K at 60 Hz 4:2:0 / 8 bit deep color, 4K at 24Hz 4:2:0 / 10 bit deep color for HDR10 support, HDCP 2.2 and multichannel audio support. An analog audio input port embeds analog audio with the video content, such as a DVI video source. The HDMI and VGA inputs on the IPEX5001-WP-W are auto switching and follow the last in / first out method and must be physically connected / disconnected to engage the auto switch. The encoder supports control of 3rd party devices via RS232 and IR. The USB host port connection is for connecting USB host devices such as a computer that is USB 2.0 Full Speed compliant up to 12Mbps that can communicate with client side devices connected to a decoder.

The IPEX5001-WP-W supports PoE power and can be powered remotely via PoE network switch eliminating the need for a nearby power outlet.

## ***IPEX5001-D Encoder***

The Digitalinx IP IPEX5001-D transmits HDMI video and audio over a 1 gigabit network infrastructure using JPEG2000 encoding with a variable data rate at an average of 250 Mbps with peak values up to 850Mbps. The IPEX5001-D is Dante enabled meaning that the encoder can on ramp two channel stereo audio either from the embedded HDMI audio stream or the analog audio 3.5mm input onto a Dante audio network. The multicast video and Dante audio IP streams are integrated into one Ethernet cable simplifying networked audio and video solution into one. An analog audio output port de-embeds stereo 2 channel audio from the HDMI two channel stereo embedded stream, while still passing stereo 2 channel audio to the HDMI output. The IPEX5001-D supports video signals up to 4K at 60 Hz 4:2:0 / 8 bit deep color, 4K at 24Hz 4:2:0 / 10 bit deep color for HDR10 support and HDCP 2.2 support. The encoder supports control of 3rd party devices via RS232 and IR. The USB host port connection is for connecting USB host devices such as a computer that is USB 2.0 Full Speed compliant up to 12Mbps that can communicate with client side devices connected to a decoder.

The IPEX5001-D supports PoE power and can be powered remotely via PoE network switch eliminating the need for a nearby power outlet.

## ***IPEX5002 Decoder***

The Digitalinx IP IPEX5002 receives HDMI video and audio over a 1 gigabit network infrastructure using JPEG2000 encoding from the IPEX5001, IPEX5001-D and IPEX5001-WP-W encoder. The IPEX5002 outputs video signals natively from source or can be scaled to 1080p or 4K at 24/30Hz 4:4:4 with HDR10, HDCP 2.2 and multichannel audio support. An analog audio output port de-embeds stereo 2 channel audio from the HDMI content while still passing stereo 2 channel audio to the HDMI output. Depending on the needs of the installation, multiple IPEX5002 devices can be configured to make a video wall configuration. The decoder supports control of 3rd party devices via RS232 and IR. The USB client port connections are for connecting USB devices such as a keyboard or mouse that is USB 2.0 Full Speed compliant up to 12Mbps that can communicate with a host side device connected to an encoder.

The IPEX5002 supports PoE power and can be powered remotely via PoE network switch eliminating the need for a nearby power outlet.

## Package Contents per Device

### ***IPEX5001***

1. Installation Guide
2. Power Supply with US, UK, EU, and AU adapters
3. 3-pin Removable Screw Terminal
4. Mounting Ears (2 ea)
5. IR Emitter
6. IR Receiver

### ***IPEX5001-WP-W***

1. Installation Guide
2. (1) Phoenix 2 pin male connector (3.5mm)
3. (1) 2 gang wall plate decora plastic cover with screws
4. (4) Mounting screws

### ***IPEX5001-D***

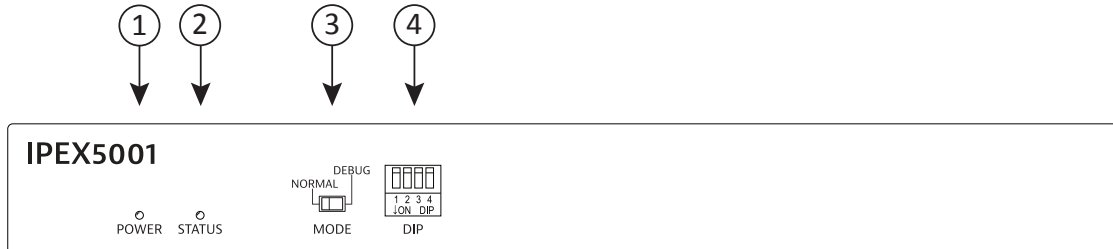
1. Installation Guide
2. Power Supply with US, UK, EU, and AU adapters
3. 3-pin Removable Screw Terminal
4. Mounting Ears (2 ea)
5. IR Emitter
6. IR Receiver

### ***IPEX5002***

1. Installation Guide
2. Power Supply with US, UK, EU, and AU adapters
3. 3-pin Removable Screw Terminal
4. Mounting Ears (2 ea)
5. IR Emitter
6. IR Receiver

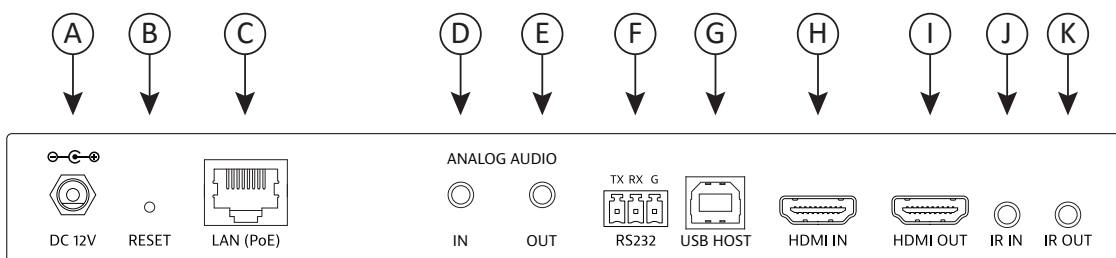
# Front and Rear Panels

## IPEX5001 Front Panel

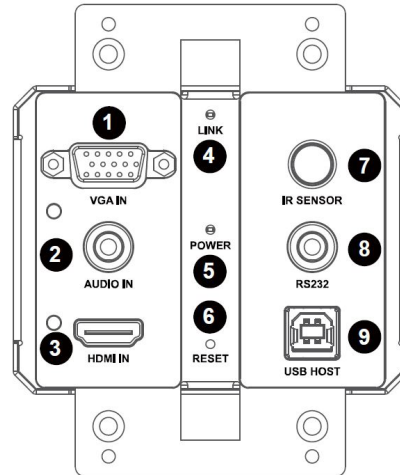


1. Power indicator
2. Status indicator
3. RS232 Function Switch
4. DIP Switch for ID Modes

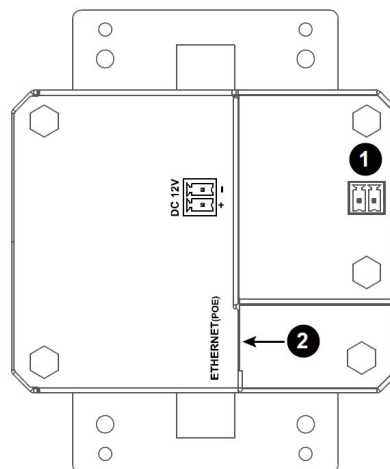
## IPEX5001 Rear Panel



- A. 12V DC power input
- B. RESET button
- C. LAN connection with PoE support
- D. Analog audio input
- E. Analog audio output
- F. RS232 connection
- G. USB Host connection
- H. HDMI input
- I. HDMI output
- J. IR input
- K. IR output

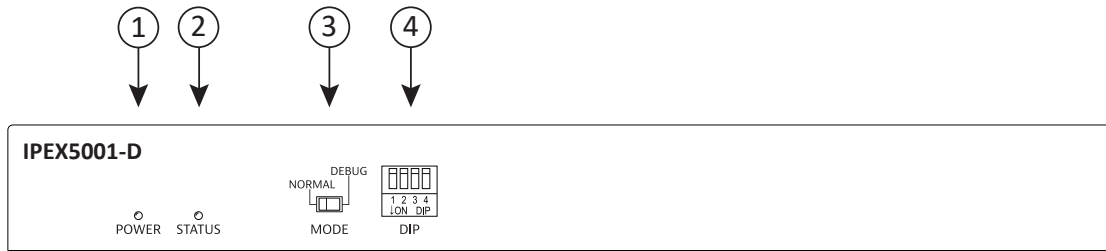
**IPEX5001-WP-W Front Panel**

1. VGA input port
2. Audio input port (embedded with VGA source)
3. HDMI input port
4. Link LED
  - When *SOLID*: encoder is connected to both an active source and decoder
  - When *Blinking*: encoder is disconnected from an active source or decoder
  - When *OFF*: encoder is powered off or network is down
5. Power LED
  - When *SOLID*: device is powered on
  - When *OFF*: encoder is powered off or network is down
6. Factory reset
7. IR receiver / sensor
8. RS232 control port
9. USB host port

**IPEX5001-WP-W Rear Panel**

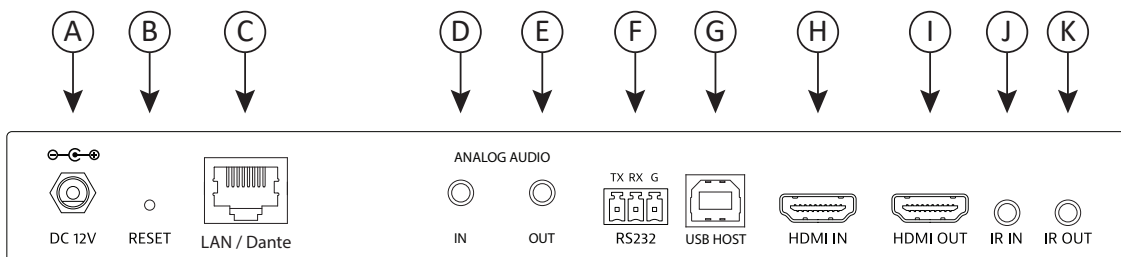
1. DC12 DC power input
2. LAN connection with PoE support

### IPEX5001-D Front Panel

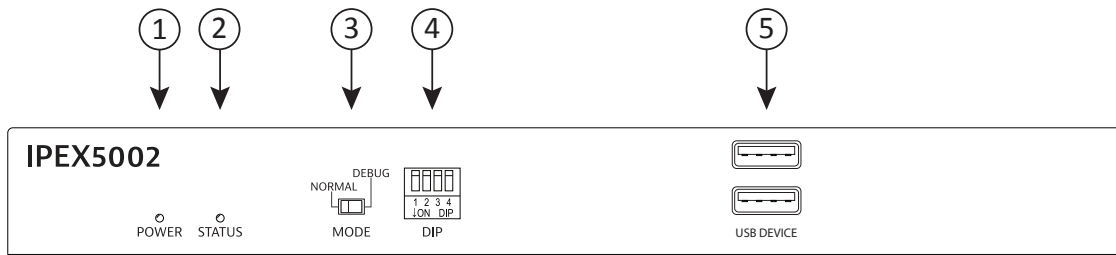


1. Power indicator
2. Status indicator
3. RS232 Function Switch
4. DIP Switch for ID Modes

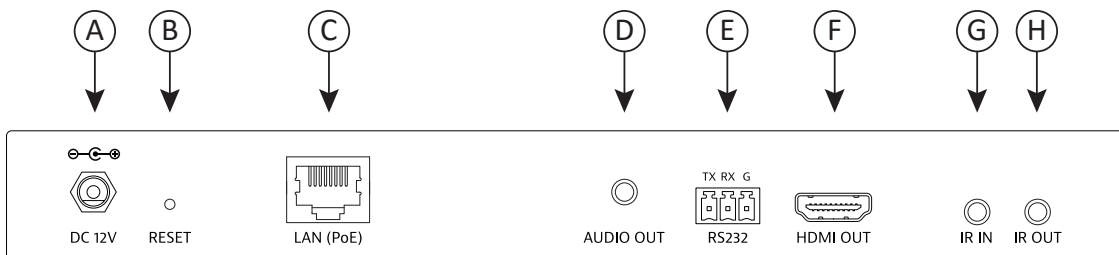
### IPEX5001-D Rear Panel



- A. 12V DC power input
- B. RESET button
- C. LAN / Dante connection with PoE support
- D. Analog audio input
- E. Analog audio output
- F. RS232 connection
- G. USB Host connection
- H. HDMI input
- I. HDMI output
- J. IR input
- K. IR output

**IPEX5002 Front Panel**

1. Power indicator
2. Status indicator
3. RS232 Function Switch
4. DIP Switch for ID Modes
5. USB ports for keyboard or mouse

**IPEX5002 Rear Panel**

- A. 12V DC power input
- B. RESET button
- C. LAN connection with PoE support
- D. Analog audio output
- E. RS232 connection
- F. HDMI output
- G. IR input
- H. IR output

# IPEX5001 Technical Specifications

<b>Input/Output Connections</b>	
HDMI Input	One (1) HDMI Type A Receptacle
HDMI Output	One (1) HDMI Type A Receptacle
LAN	One (1) 8P8C port (Shielded RJ45)
Power	One (1) 5.5 mm OD, 2.6 mm ID Threaded Barrel
RS232 Port	One (1) 3-pin Removable Terminal Block Connector
USB Device	One (1) USB Type B Port
Audio Input	One (1) 3.5 mm TRS Receptacle
Audio Output	One (1) 3.5 mm TRS Receptacle
IR Input	One (1) 3.5 mm TRS Receptacle
IR Output	One (1) 3.5 mm TRS Receptacle
Reset	One (1) Momentary Push Button
Mode	One (1) Two Position Slider Switch
DIP	One (1) Four Position DIP Switch
<b>Supported Audio, Video and Control</b>	
Video Resolutions	SMPTE: 480p, 576p, 720p, 1080i, 1080p, 2160p/30 (4:4:4), 2160p/60 (4:2:0) VESA: Resolutions up to 1920x1200 Color Depth: 24, 30, 36 bit
Video Compliance	HDMI 1.4 and HDCP 1.4/2.2
Embedded Audio	Up to PCM 8 channel, Dolby Digital True HD, DTS-HD Master Audio, Dolby Atmos and DTS-X
ARC (Audio Return Channel)	No
HEC (HDMI Ethernet Channel)	No
CEC (Consumer Electronics Control)	No
Supported Baud Rates	2400, 4800, 9600, 19200, 38400, 57600, 115200
USB Compliance	USB 2.0 Full Speed up to 12Mbps
<b>Streaming Signal Characteristics</b>	
Maximum Distance (point to point)	100 m (328 ft)
Cable Requirements	Category 5e or greater with TIA/EIA-568B crimp pattern
Encoding Data Rate	2160p: Average; 250 Mbps 1080p: Average; 150 Mbps
Encoding Method	VBR
End to End Latency	17-33 ms (1-2 fps)
<b>Chassis and Environmental</b>	
Construction	Black Steel
Dimensions (H x W x D)	25 mm x 220 mm x 130.2 mm (0.98in x 8.66 in x 5.13 in)
Operating Temperature	0° to +40° C (+32° to +104° F)
Operating Humidity	20% to 90%, Non-condensing
Storage Temperature	-10° to +60° C (+14° to +140° F)
Storage Humidity	20% to 90%, Non-condensing
<b>Power and Regulatory</b>	
Power Input	12V DC 1A or 48V DC PoE (Power over Ethernet)
Power over Ethernet (PoE) Compatibility	802.3af Alternative A
Power Consumption	6 watts
ESD Protection	8kV air, 4kV contact
Regulatory	FCC, CE, RoHS
<b>Other</b>	
Warranty	5 years
Diagnostic Indicators	Power and Status
Included Accessories	Installation Guide, Power Supply with US, UK, EU and AU adapters, 3-pin Removable Screw Terminal, Mounting Ears (2 ea), IR emitter, IR receiver
IP Controller	IPEXAR-5000
Compatible Decoder	IPEX5002

Distances and picture quality may be affected by cable grade, cable quality, source and destination equipment, RF and electrical interference, and cable patches.



# IPEX5001-WP-W Technical Specifications

<b>Input/Output Connections</b>	
Video Input	One (1) HDMI (Type A Receptacle), One (1) VGA (DB-15)
LAN	One (1) 8P8C port (Shielded RJ45)
Power	One (1) 2 pin phoenix connector
RS232 Port	One (1) 3.5mm
USB Device	One (1) USB Type B Port
Audio Input (VGA)	One (1) 3.5 mm TRS Receptacle
Reset	One (1) Momentary Push Button
<b>Supported Audio, Video and Control</b>	
Video Resolutions	SMPTE: 480p, 576p, 720p, 1080i, 1080p, 2160p/30 (4:4:4), 2160p/60 (4:2:0) VESA: Resolutions up to 1920x1200 Color Depth: 24, 30, 36 bit
Video Compliance	HDMI 1.4 and HDCP 1.4/2.2
Embedded Audio	Up to PCM 8 channel, Dolby Digital True HD, DTS-HD Master Audio, Dolby Atmos and DTS-X
ARC (Audio Return Channel)	No
HEC (HDMI Ethernet Channel)	No
CEC (Consumer Electronics Control)	No
Supported Baud Rates	2400, 4800, 9600, 19200, 38400, 57600, 115200
USB Compliance	USB 2.0 Full Speed up to 12Mbps
<b>Streaming Signal Characteristics</b>	
Maximum Distance (point to point)	100 m (328 ft)
Cable Requirements	Category 5e or greater with TIA/EIA-568B crimp pattern
Encoding Data Rate	2160p: Average; 250 Mbps 1080p: Average; 150 Mbps
Encoding Method	VBR
End to End Latency	17-33 ms (1-2 fps)
<b>Chassis and Environmental</b>	
Dimensions (H x W x D)	105.6 mm x 89 mm x 43.5 mm (4.1in x 3.5 in x 1.7 in)
Operating Temperature	0° to +40° C (+32° to +104° F)
Operating Humidity	20% to 90%, Non-condensing
Storage Temperature	-10° to +60° C (+14° to +140° F)
Storage Humidity	20% to 90%, Non-condensing
<b>Power and Regulatory</b>	
Power Input	12V DC 1A or 48V DC PoE (Power over Ethernet)
Power over Ethernet (PoE) Compatibility	802.3af Alternative A
Power Consumption	6 watts
ESD Protection	8kV air, 4kV contact
Regulatory	FCC, CE, RoHS
<b>Other</b>	
Warranty	5 years
Diagnostic Indicators	Power and Status
Included Accessories	Installation Guide, (1) 2 pin phoenix connector, (1) 2 gang decora wall plate cover with screws, (4) mounting screws
IP Controller	IPEXAR-5000
Compatible Decoder	IPEX5002

Distances and picture quality may be affected by cable grade, cable quality, source and destination equipment, RF and electrical interference, and cable patches.

# IPEX5001-D Technical Specifications

<b>Input/Output Connections</b>	
HDMI Input	One (1) HDMI Type A Receptacle
HDMI Output	One (1) HDMI Type A Receptacle
LAN	One (1) 8P8C port (Shielded RJ45)
Power	One (1) 5.5 mm OD, 2.6 mm ID Threaded Barrel
RS232 Port	One (1) 3-pin Removable Terminal Block Connector
USB Device	One (1) USB Type B Port
Audio Input	One (1) 3.5 mm TRS Receptacle
Audio Output	One (1) 3.5 mm TRS Receptacle
IR Input	One (1) 3.5 mm TRS Receptacle
IR Output	One (1) 3.5 mm TRS Receptacle
Reset	One (1) Momentary Push Button
Mode	One (1) Two Position Slider Switch
DIP	One (1) Four Position DIP Switch
<b>Supported Audio, Video and Control</b>	
Video Resolutions	SMPTE: 480p, 576p, 720p, 1080i, 1080p, 2160p/30 (4:4:4), 2160p/60 (4:2:0) VESA: Resolutions up to 1920x1200 Color Depth: 24, 30, 36 bit
Video Compliance	HDMI 1.4 and HDCP 1.4/2.2
Embedded Audio	Up to PCM 8 channel, Dolby Digital True HD, DTS-HD Master Audio, Dolby Atmos and DTS-X
ARC (Audio Return Channel)	No
HEC (HDMI Ethernet Channel)	No
CEC (Consumer Electronics Control)	No
Supported Baud Rates	2400, 4800, 9600, 19200, 38400, 57600, 115200
USB Compliance	USB 2.0 Full Speed up to 12Mbps
<b>Streaming Signal Characteristics</b>	
Maximum Distance (point to point)	100 m (328 ft)
Cable Requirements	Category 5e or greater with TIA/EIA-568B crimp pattern
Encoding Data Rate	2160p: Average; 250 Mbps 1080p: Average; 150 Mbps
Encoding Method	VBR
End to End Latency	17-33 ms (1-2 fps)
<b>Chassis and Environmental</b>	
Construction	Black Steel
Dimensions (H x W x D)	25 mm x 220 mm x 130.2 mm (0.98in x 8.66 in x 5.13 in)
Operating Temperature	0° to +40° C (+32° to +104° F)
Operating Humidity	20% to 90%, Non-condensing
Storage Temperature	-10° to +60° C (+14° to +140° F)
Storage Humidity	20% to 90%, Non-condensing
<b>Power and Regulatory</b>	
Power Input	12V DC 1A or 48V DC PoE (Power over Ethernet)
Power over Ethernet (PoE) Compatibility	802.3af Alternative A
Power Consumption	6 watts
ESD Protection	8kV air, 4kV contact
Regulatory	FCC, CE, RoHS
<b>Other</b>	
Warranty	5 years
Diagnostic Indicators	Power and Status
Included Accessories	Installation Guide, Power Supply with US, UK, EU and AU adapters, 3-pin Removable Screw Terminal, Mounting Ears (2 ea), IR emitter, IR receiver
IP Controller	IPEXAR-5000
Compatible Decoder	IPEX5002

Distances and picture quality may be affected by cable grade, cable quality, source and destination equipment, RF and electrical interference, and cable patches.

# IPEX5002 Technical Specifications

<b>Input/Output Connections</b>	
HDMI Input	One (1) HDMI Type A Receptacle
HDMI Output	One (1) HDMI Type A Receptacle
LAN	One (1) 8P8C port (Shielded RJ45)
Power	One (1) 5.5 mm OD, 2.6 mm ID Threaded Barrel
RS232 Port	One (1) 3-pin Removable Terminal Block Connector
USB Device	Two (2) USB Type A Port
Audio Output	One (1) 3.5 mm TRS Receptacle
IR Input	One (1) 3.5 mm TRS Receptacle
IR Output	One (1) 3.5 mm TRS Receptacle
Reset	One (1) Momentary Push Button
Mode	One (1) Two Position Slider Switch
DIP	One (1) Four Position DIP Switch
<b>Supported Audio, Video and Control</b>	
Video Resolutions	SMPTE: 480p, 576p, 720p, 1080i, 1080p, 2160p/30 (4:4:4) VESA: Resolutions up to 1920x1200 Color Depth: 24, 30, 36 bit
Video Compliance	HDMI 1.4/2.0 and HDCP 1.4/2.2
Embedded Audio	Up to PCM 8 channel, Dolby Digital True HD, DTS-HD Master Audio and Dolby Atmos and DTS-X
ARC (Audio Return Channel)	No
HEC (HDMI Ethernet Channel)	No
CEC (Consumer Electronics Control)	Yes
Supported Baud Rates	2400, 4800, 9600, 19200, 38400, 57600, 115200
USB Compliance	USB 2.0 Full Speed up to 12Mbps
<b>Streaming Signal Characteristics</b>	
Maximum Distance (point to point)	100 m (328 ft)
Cable Requirements	Category 5e or greater with TIA/EIA-568B crimp pattern
Encoded Data Rate	2160p: Average; 250 Mbps 1080p: Average; 150 Mbps
Encoded Method	VBR
End to End Latency	17-33 ms (1-2 fps)
Maximum Video Wall Size	16x16
<b>Chassis and Environmental</b>	
Construction	Black Steel
Dimensions (H x W x D)	25 mm x 220 mm x 130.2 mm (0.98in x 8.66 in x 5.13 in)
Operating Temperature	0° to +40° C (+32° to +104° F)
Operating Humidity	20% to 90%, Non-condensing
Storage Temperature	-10° to +60° C (+14° to +140° F)
Storage Humidity	20% to 90%, Non-condensing
<b>Power and Regulatory</b>	
Power Input	12V DC 1A or 48V DC PoE (Power over Ethernet)
Power over Ethernet (PoE) Compatibility	802.3af Alternative B
Power Consumption	6 watts
ESD Protection	8kV air, 4kV contact
Regulatory	FCC, CE, RoHS
<b>Other</b>	
Warranty	5 years
Diagnostic Indicators	Power and Status
Included Accessories	Installation Guide, Power Supply, 3-pin Removable Screw Terminal, Mounting Ears (2 ea), IR emitter, IR receiver
IP Controller	IPEXAR-5000
Compatible Encoder	IPEX5001, IPEX5001-D, IPEX5001-WP-W

Distances and picture quality may be affected by cable grade, cable quality, source and destination equipment, RF and electrical interference, and cable patches.

Thank you for your purchase.

For Technical Support please call our toll free number at  
800-530-8998 or email us at [supportlibav@libav.com](mailto:supportlibav@libav.com)

[www.libav.com](http://www.libav.com)



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