# IPEX2100 Series Specification Sheet

Rev 220318

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# Product Overview

### *IPEX2101 Encoder*

The DigitalinxIP IPEX2101 encodes / transmits HDMI video and audio over a 1Gb network infrastructure using h.264 AVC encoding with a configurable data rate up to 30 Mbps. The IPEX2101 supports video signals up to 1080p@60 Hz. An analog audio output port de-embeds 2 channel stereo audio from the embedded HDMI content ingested into encoder. The encoder supports control of 3rd party devices via RS232.

The IPEX2101 supports PoE and can be powered remotely by compatible power source equipment, such as a PoE Ethernet switch, eliminating the need for a nearby power outlet.

### *IPEX2102 Decoder*

The Digitalinx IP IPEX2102 decodes HDMI video and audio from an IPEX2101 stream over a 1Gb network infrastructure using h.264 AVC encoding. The IPEX2102 outputs video up to 1080p@60 Hz and can scale the video content either by user defined preference or automatically based on the native resolution of the connected display while seamlessly switching between sources. Depending on the needs of the installation, multiple IPEX2102 devices can be configured to make a video wall configuration. An analog audio output port de-embeds 2 channel stereo audio from the embedded HDMI content, while still passing the audio to the HDMI output. The decoder supports control of 3rd party devices via RS232.

The IPEX2102 supports PoE and can be powered remotely by compatible power source equipment, such as a PoE Ethernet switch, eliminating the need for a nearby power outlet.

# Package Contents per Device

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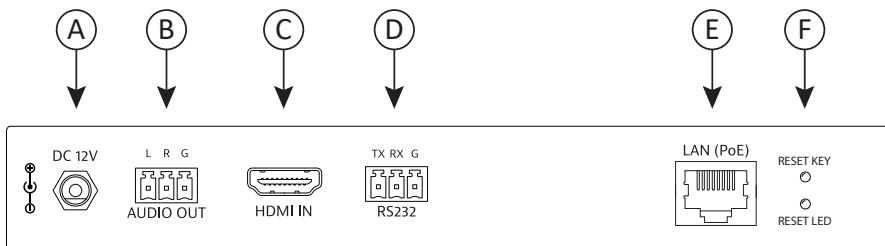4. Mounting Ears (2 ea)

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# Front and Rear Panels

## *IPEX2101 Front Panel*

```
IPEX2101
    ○        ○
  POWER   STATUS
```
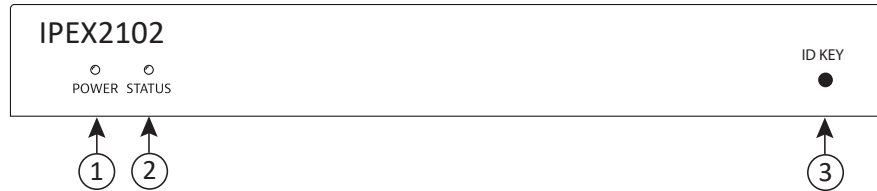①  ②

1.  Power indicator
    • When ON; encoder is powered on
    • When OFF; encoder is powered off
2.  Status indicator
    • When ON; encoder detects valid input signal
    • When BLINKING; encoder detects no input signal
    • When OFF; encoder is powered OFF or in the boot up process
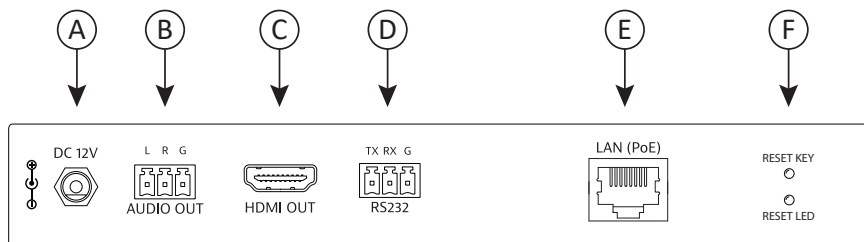
## *IPEX2101 Rear Panel*

Ⓐ    Ⓑ    Ⓒ    Ⓓ    Ⓔ    Ⓕ

```
                L  R  G              TX RX  G              LAN (PoE)
 DC 12V                                                              RESET KEY
                                                                         ○
                                                                         ○
             AUDIO OUT   HDMI IN      RS232                          RESET LED
```

A.  12V DC power input
B.  Analog audio output
C.  HDMI input
D.  RS232 Connection
E.  LAN connection with PoE support
F.  Factory default reset

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## *IPEX2102 Front Panel*



1.  Power indicator
    • When ON; encoder is powered on
    • When OFF; encoder is powered off
2.  Status indicator
    • When ON; encoder detects valid input signal
    • When BLINKING; encoder detects no input signal
    • When OFF; encoder is powered OFF or in the boot up process
3.  Identification button - Shows hostname / alias on TV display

## *IPEX2102 Rear Panel*



A.  12V DC power input
B.  Analog audio output
C.  HDMI output
D.  RS232 connection
E.  LAN connection with PoE support
F.  Factory default reset

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# IPEX2101 Technical Specifications

| Input/Output Connections | |
|---|---|
| HDMI Input | 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 |
| Audio Output | One (1) 3-pin Removable Terminal Block Connector |
| **Supported Audio, Video and Control** | |
| Input Video Resolution Support | 640 x 480@60Hz, 480p@60Hz, 576i@50Hz, 576P@50Hz, 800 x 600@60Hz, 1024 x 768@60Hz, 720p@50Hz, 720p@60Hz, 1280 x 800@60Hz, 1280 x 1024@60Hz, 1360 x 768@60Hz, 1366 x 768@60Hz, 1400 x 1050@60Hz, 1440 x 900@60Hz, 1680 x 1050@60Hz, 1920 x 540@60Hz, 1080i@50Hz, 1080i@60Hz, 1080p@50Hz, 1080p@60Hz |
| Video Compliance | HDMI 1.3 and HDCP 1.4 |
| Embedded Audio | PCM 2 Channel Stereo |
| De-embedded Audio | 2 Channel Stereo |
| 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 |
| **Streaming Signal Characteristics** | |
| Maximum Distance (point to point) | 100 m (328 ft) |
| Cable Requirements | Solid Core Category 5e or greater with TIA/EIA-568B crimp pattern |
| Encoding Data Rate | Up to 30 Mbps, Support CBR and VBR |
| Encoding Method | H.264/MPEG-4 AVC |
| End to End Latency | Low Latency Mode: 80 ms<br>High Quality Mode: 250 ms |
| **Chassis and Environmental** | |
| Construction | Black Steel |
| Dimensions (H x W x D) | 25 mm x 100 mm x 175 mm (0.98in x 3.9 in x 6.9 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 |
| **Power and Regulatory** | |
| 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 |
| **Other** | |
| Warranty | 5 years |
| Diagnostic Indicators | Power and Status |
| Included Accessories | Installation Guide, Power Supply with US, UK, EU, and UK adapters, 3-pin Removable Screw Terminal (2 ea), Mounting Ears (2 ea) |
| Required System Controller | IPEXAR-2100 |
| Compatible Decoders | IPEX2002, IPEX2102 |

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

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# IPEX2102 Technical Specifications

| Input/Output Connections | |
|---|---|
| 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 |
| Audio Output | One (1) 3-pin Removable Terminal Block Connector |
| **Supported Audio, Video and Control** | |
| Input Resolution Support | From 480p@60Hz to 1920x1080@60Hz |
| Output Video Resolution Support | 640 x 480@60Hz, 480p@60Hz, 576P@50Hz, 800 x 600@60Hz, 1024 x 768@60Hz, 720p@50Hz, 720p@60Hz, 1280 x 800@60Hz, 1280 x 1024@60Hz, 1366 x 768@60Hz, 1400 x 1050@60Hz, 1440 x 900@60Hz, 1680 x 1050@60Hz, 1920 x 540@60Hz, 1080p@24Hz, 1080p@25Hz, 1080p@30Hz, 1080p@50Hz, 1080p@60Hz |
| Video Compliance | HDMI 1.3 and HDCP 1.4 |
| Embedded Audio | PCM 2 Channel Stereo |
| De-embedded Audio | 2 Channel Stereo |
| 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 |
| **Streaming Signal Characteristics** | |
| Maximum Distance (point to point) | 100 m (328 ft) |
| Cable Requirements | Category 5e or greater with TIA/EIA-568B crimp pattern |
| Decode Support | H.264/MPEG-4 AVC (IPEX2101, IPEX2001 only) |
| End to End Latency | Low Latency Mode: 80 ms <br> High Quality Mode: 250 ms |
| Maximum Video Wall Size | 16 x 16 |
| Bandwidth | up to 40Mbps |
| **Chassis and Environmental** | |
| Construction | Black Steel |
| Dimensions (H x W x D) | 25 mm x 100 mm x 175 mm (0.98in x 3.9 in x 6.9 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 |
| **Power and Regulatory** | |
| 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 |
| **Other** | |
| Warranty | 5 years |
| Diagnostic Indicators | Power and Status |
| Included Accessories | Installation Guide, Power Supply with US, UK, EU, and UK adapters, 3-pin Removable Screw Terminal (2 ea), Mounting Ears (2 ea) |
| Required System Controller | IPEXAR-2100 |
| Compatible Encoder | IPEX2001, IPEX2101 |

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

www.libav.com