

Platinum™ IP3 15RU

Small-Footprint Enterprise-Class Router

The award-winning Platinum IP3 28RU router is now available in a compact 15RU frame. The new router features the same integrated routing and processing capabilities of the larger model, including the addition of hybrid IP connectivity, in a smaller 15RU form factor, delivering cost-, space- and power-efficiency improvements.



Like the rest of the acclaimed Platinum line, the small-footprint, enterprise-class Platinum IP3 15RU router integrates mixed-format video and audio routing, multiviewer functionality, mux/demux, frame sync and advanced I/O options such as MAD1 and fiber — all within a single, space-saving frame. And now with the addition of a module that provides a best-in-class, multichannel uncompressed over IP (UCIP) solution, the Platinum IP3 becomes the central gateway in a hybrid IP/SDI routing environment. The PX-UCIP module is an on-ramp/off-ramp solution that is installed directly into the Platinum IP3 frame.

Offering mixed-signal routing up to 288 x 512 video in a single 15RU frame, the new router can be seamlessly expanded – with no disruption to on-air operations – up to 576 x 512 in two interconnected 15RU frames.

Platinum IP3 delivers real-world benefits:

- Seamless on-air expansion to matrices beyond 2Kx2K
- Integrated IP gateways, audio mux/demux, frame synchronizers, multiviewers, and more
- New control paradigm enables hybrid infrastructures — SD, HD, IP
- Dynamic setup and reconfiguration of system while on air

The Platinum IP3 15RU is future-proofed to support Ultra High Definition (UHD) signals, is well suited for mobile and broadcast production environments, and is designed for reliable, resilient, high-quality routing of all signal types.

Features

- Supports all the innovative technologies of the proven, industry-leading Platinum platform
- Mixed-signal routing (SD, HD, 3 Gb/s, audio and data paths)
 - Up to 288 x 512 video in a single 15RU frame
 - Up to 576 x 512 video in two interconnected 15RU frames
- Seamless on-air expansion with zero downtime
- Full redundancy for power, control and signals
- Redundant crosspoints protect all signal paths including integrated multiviewers



- Mux/Demux audio processing support
 - Mux/Demux 16 channels of audio per video stream
 - Full mono breakaway audio routing support
 - Seamless integration between demultiplexed and discrete audio
 - Multiplex 16 channels of audio into each video output
- Optional eight-channel frame sync input card for wild feed ingest and audio shuffling, as well as demultiplexing of up to 16 channels of embedded audio in each video stream
- Router matrix expansion functionality enables cost-effective expansion of outputs
- MADi support simplifies audio interconnects between production audio consoles and the router to better support high-density audio
- Modular I/O in groups of eight or nine provide support for either coaxial or fiber connectivity
- Front-loading, hot-swappable modules for 24/7 operation
- Enhanced, easy-to-use Magellan™ control system enables dynamic, on-air reconfiguration
 - Wide range of hardware control panels
 - Powerful control integration for easy setup and configuration
 - Software and web-based applications with user-configurable GUIs
 - Protocol support for Magellan CCS™, SNMP and third-party vendors
 - Secure access rights with restrictions by level, source and destination
 - Easy-to-use HTML 5 software-based control panel
- Video routing support
 - Almost any digital video signal from 3Mb/s to over 3Gb/s including:
 - SD-SDI & HD-SDI to 1080p (3 Gb/s)
 - ASI, SMPTE 310, SMPTE 305, etc.
 - 4K and graphic routing beyond 3Gb/s supported via multiple paths
 - SMPTE compliant analog video supported via conversion to/from SD-SDI on I/O
- Discrete audio routing support
 - Digital audio signals including balanced and unbalanced AES
 - Analog stereo/mono audio via conversion to/from AES on I/O modules
 - Support for up to 16 embedded audio signals per video input
 - “Quiet switch” with transitions to/from any non-compressed embedded or discrete audio signal
 - Support for Dolby and other compressed formats (without “Quiet Switch”)
- Platinum™ SX Pro integrated multiviewer
 - High density support for up to 16 PIP sources per slot with single cross-point
 - 16 in 1-slot, 32 in 2 slots, 64 in 4 slots
 - Monitoring of embedded, AES, analog or MADi audio
 - Onscreen control
 - Closed Caption decode and display
 - Onscreen clocks and timers
 - Tallies and UMDs

Details

Groundbreaking Platinum IP3 Innovation

Over the years, Imagine Communications has achieved an impressive resume of “firsts” with the Platinum router line. Platinum IP3 incorporates all the industry-leading capabilities of this proven line, and once again raises the bar in router design.

Industry’s Most Scalable Router

Platinum IP3 is the first signal router that can scale to multi-frame configurations for large to very large broadcast operations using a common architecture. It delivers high-quality, multiformat signal routing up to 288 x 512 video in a single 15RU frame, and up to 576 x 512 video in two interconnected 15RU frames. (The Platinum IP3 28RU scales up to 576x1024 in a single frame, and to more than 2Kx2K in multi-frame configurations without external distribution amplifiers or combiners.) Scale seamlessly up to the larger matrices, eliminating the need to take your

station off the air.

First Router to Protect Video, Audio and Multiviewer Signals

Platinum IP3 is the only router in the industry that protects audio, video and multiviewer signals. By adding redundant crosspoints to the Platinum line's uniquely integrated architecture, the next-generation platform reduces cost and complexity, while maximizing on-air security.

Enhanced Control and Monitoring

Platinum IP3 offers a highly intuitive, centralized controller that simplifies communications management between the router and other connected components. A rich, web-based user interface and template-driven configuration simplify access to information, speed setup of both the database and system, and enable updates to publish to the entire system in seconds — without going off air.

Industry-Proven Platinum Innovation

First True Embedded Audio Processing Router

All Platinum routers provide parallel signal paths and dedicated, redundant crosspoints for both audio and video within a single frame. All audio within the frame is presented to the TDM M•A•X crosspoint, routed independently and discretely, and can be multiplexed within the router into any digital video output. Utilizing the TDM M•A•X crosspoint, Platinum can also perform phase reversal, swap, sum and “quiet” breakaway switching of the audio between any discrete or embedded input, and provide gain/level adjustments on a per-channel basis.

First Integrated Frame Sync

All Platinum routers offer an integrated frame sync input card that allows up to eight wild video signals to be synchronized to house reference without the use of external frames or wiring. This optional card can also perform demultiplexing of up to 16 channels of embedded audio in each video stream, which can then be routed independently and discretely. ASI, SD, HD and 3 Gb/s signals are supported, as are coax and fiber connectivity. Backward-compatible with all Platinum frames, this flexible card combines with the mux/demux functionality to enable optimal synchronization of audio and video.

MADI Support

All Platinum routers offer an input and output card set that supports the Multichannel Audio Digital Interface (MADI) protocol for carrying multiple channels of digital audio on a single cable or fiber. Each input module accepts up to four MADI inputs and then generates a 128-channel TDM stream from the decoded audio. The output module encodes up to 128 TDM audio channels into up to four MADI outputs. Fiber and coax connectivity are supported.

First Integrated Multiviewer

Platinum SX Pro is an output module that operates in any current Platinum router chassis (5, 9, 15 or 28RU). Occupying from one to four slots, the module can reside alone in a Platinum frame and function exclusively as a multiviewer, or can be combined with routing cards for ultimate flexibility. Platinum SX Pro is capable of monitoring from 16 to 512 sources and driving up to 192 independent displays. It uses MicroFine scaling technology to maintain the finest detail even on the smallest of PiPs and features ultra low-latency processing to deliver the lowest possible frame delay.

Specifications

POWER CONSUMPTION

MODULE	24V POWER RAIL	5V POWER RAIL	TOTAL POWER
PX-RES	15W	0W	15W
PX-ALARM-ATDM	2W	0.35W	2.35W
PX-ALARM-DATA (No Expansion)	0.35W	0.35W	0.7W
PX-ALARM-DATA (Expansion)	6W	0.4W	6.4W
PX-288x512-3G	110W	0.1W	110.1W
PX-ATDM64-X28	55W	0.8W	55.8W
PX-FRONT-FAN	55.2W	0.82W	56.02W
PX-REAR-FAN-ADPTR	0	0.15W	0.15W
PX-REAR-FAN	67W	0	67W
PX-HSR9C-IBG	10.7W	0.43W	11.13W
PX-HSR9O-IBG	14W	0.43W	14.43W
PX-HSR9C1D-IBG	13W	0.43W	13.43W
PX-HSR9O1D-IBG	16.3W	0.43W	16.73W
PX-HSR16C-OBG	11.7W	0.43W	12.13W
PX-HSR16O-OBG	21.9W	0.43W	22.33W
PX-HSR8O2DS-OBG	18W	0.43W	18.43W
PX-HSR8C2DS-OBG	14.1W	0.43W	14.53W
PT-FSDMX-IBG	50W	0.15W	50.15W
PT-FSDMXO-IBG	52W	0.15W	52.15W
PT-FSDX8C1D-IBG	52W	0.15W	52.15W

INPUT MODULE

Input Connector	75 Ohm BNC per IEC 169-8 75 Ohm HD-BNC LC optical DensiShield
Impedance	75 Ohms (BNC, HD-BNC) 100 Ohms differential (DensiShield)
Signal type	SMPTE 424M, SMPTE 292M, SMPTE 259M, SMPTE 344M, DVB-ASI Most other < 1Vpp digital signals, 3Mb/s to 3.0Gb/s
Maximum input level	880mV (BNC, HD-BNC) Optical 0dBm typical (based on GO2927/2917)
Return loss (BNC, HD-BNC)	> 15dB, up to 1.485GHz > 10dB, 1.485GHz to 2.97GHz
Equalization (BNC, HD-BNC)	Automatic 400m Belden 1694A for 270Mb/s data rate 200m Belden 1694A for 1.485Gb/s data rate 150m Belden 1694A for 2.97Gb/s data rate
Optical input sensitivity	-20dBm (based on OP+SFP+RR/OP+SFP+R)

OUTPUT MODULE	
Output Connector	75 Ohm BNC per IEC 169-8 75 Ohm HD-BNC LC optical DensiShield
Impedance	75 Ohms (BNC, HD-BNC) 100 Ohms differential (DensiShield)
Signal type	SMPTE 424M, SMPTE 292M, SMPTE 259M, SMPTE 344M, DVB-ASI Most other < 1Vpp digital signals, 3Mb/s to 3.0Gb/s
Return loss (BNC, HD-BNC)	> 15dB, up to 1.485GHz > 10dB, 1.485GHz to 2.97GHz
Amplitude	800mV +/- 10%
Overshoot	<10%
DC Offset	0V +/- 0.5V
Rise Time	270Mb/s: 400-800pS 1.485Gb/s: < 135pS 2.97Gb/s: < 135pS
Fall Time	270Mb/s: 400-800pS 1.485Gb/s: < 135pS 2.97Gb/s: < 135pS
Jitter	270Mb/s, 1.485Gb/s: <0.2UI reclocked 2.97Gb/s: <0.3UI reclocked
Optical Output Power	-2 dBm (based on OP+SFP+TT+13+13)
Optical Output Extinction Ratio	7 dB (based on OP+SFP+TT+13+13)
Input Connector	75 Ohm BNC per IEC 169-8 75 Ohm HD-BNC LC optical DensiShield
Impedance	75 Ohms (BNC, HD-BNC) 100 Ohms differential (DensiShield)
Signal type	SMPTE 424M, SMPTE 292M, SMPTE 259M, SMPTE 344M, DVB-ASI Most other < 1Vpp digital signals, 3Mb/s to 3.0Gb/s
Maximum input level	880mV (BNC, HD-BNC) Optical 0dBm typical (based on GO2927/2917)
Return loss (BNC, HD-BNC)	> 15dB, up to 1.485GHz > 10dB, 1.485GHz to 2.97GHz
Equalization (BNC, HD-BNC)	Automatic 400m Belden 1694A for 270Mb/s data rate 200m Belden 1694A for 1.485Gb/s data rate 150m Belden 1694A for 2.97Gb/s data rate
Optical input sensitivity	-20dBm (based on OP+SFP+RR/OP+SFP+R)

Ordering Information

PLATINUM IP3 UCIP	
PX-UCIP4E1D-IBG	Platinum IP3 8 I/O Uncompressed over IP card
PX-HSR1D2D-OBG	Platinum IP3 SD/HD/3G 8 or 16 Signal DensiShield Feeder Module of PX-UCIP4E1D-IBG

PLATINUM IP3 FRAME, POWER & CONTROL	
PX-FR-15	Platinum IP3 15RU Frame (Includes (2) PX-PS, (1) PX-RES)
PX-PS	Platinum IP3 1500-watt power supply
PX-FR-EXPS	Platinum IP3 external power supply frame
PX-EXPS7-CAB	Platinum IP3 Set of 4 90" (7.5 ft) expansion DC power cables
PX-RES	Platinum IP3 resource controller module

PLATINUM IP3 CROSSPOINTS

PX-288X512-3G	Platinum IP3 288X512 3G Crosspoint Card
PX-ATDM64-X28	Platinum IP3 64 Slot Support TDM Audio Crosspoint Card (Supports All Slots in Frame)

PLATINUM IP3 OUTPUTS

PX-HSR16C-OBG	Platinum IP3 SD/HD/3G output module w/ 16 HD BNC back panel
PX-HSR8C2D-OBG	Platinum IP3 SD/HD/3G output module w/ 8 HD BNC + 2 DensiShield™ back panel
PX-HSR16O-OBG	Platinum IP3 SD/HD/3G output module w/ 16 Fiber/8 SFPs back panel
PX-HSR8O2D-OBG	Platinum IP3 SD/HD/3G output module w/ 8 Fiber/4 SFPs + 2 DensiShield™ back panel

PLATINUM IP3 OUTPUT REAR CONNECTORS

PX-HSR16C-OBP	Platinum IP3 SD/HD/3G 16 HD BNC output back panel
PX-HSR8C2D-OBP	Platinum IP3 SD/HD/3G 8 HD BNC + 2 DensiShield™ output back panel

PLATINUM IP3 INPUTS

PX-HSR9C-IBG	Platinum IP3 SD/HD/3G input module w/ 9 HD BNC back panel
PX-HSR9C1D-IBG	Platinum IP3 SD/HD/3G input module w/ 9 HD BNC + DensiShield™ matrix expansion + 1 HD-BNC DA back panel
PX-HSR9O-IBG	Platinum IP3 SD/HD/3G input module w/ 9 Fiber/5 SFPs back panel
PX-HSR9O1D-IBG	Platinum IP3 SD/HD/3G input module w/ 9 Fiber/5 SFPs + DensiShield™ matrix expansion + 1 HD-BNC DA back panel
PX-HSR1D-IBG	Platinum SD/HD/3G 9 input matrix expansion DensiShield™ only input module

PLATINUM IP3 INPUT REAR CONNECTORS

PX-HSR9C-IBP	Platinum IP3 SD/HD/3G w/ 9 HD BNC input back panel
PX-HSR9C1D-IBP	Platinum IP3 SD/HD/3G w/ 9 HD BNC + DensiShield™ matrix expansion + 1 HD-BNC output back panel

PLATINUM IP3 EXPANSION DENSISHIELD™ CABLE

PX-EXDS6-CAB	Platinum IP3 SD/HD/3G 6 meter multi-frame DensiShield™ expansion cable
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INPUT MODULES

PT-DEC-IB	8-analog to SDI decoder input with back plane
PT-AECT-IB	16-unbalanced AES input module with back plane
PT-AEBT-IB	16-balanced AES input module with back plane
PT-ADCT-IB	16-stereo to balanced AES input with back plane
PT-FSDMX-IBG	Internal demultiplexer base board-frame sync-capable, coaxial connectivity for signals up to 3 Gb/s
PT-FSDMXO-IBG	Internal demultiplexer base board-frame sync-capable; optical connectivity for signals up to 3 Gb/s
PT-FSIB-OPT	License to enable frame sync capability on PT-FSDMX-IBG or PT-FSDMXO-IBG for signals up to 3Gb/s
PT-HSR1D-IBG	Platinum SD/HD/3G matrix expansion input module; requires one 6 m or 10 m DensiShield cable
PT-MADI4C-IBG	Platinum MAD1 audio input module w/ 4 active BNC
PT-MADI4O-IBG	Platinum MAD1 audio input module w/ 4 fiber/2 SFP cages
PX-UCIP4E1D-IBG	Platinum IP3 8 I/O Uncompressed over IP card

OUTPUT MODULES

PT-ENC-OB	8-SDI to analog encoder output with back plane
PT-AECT-OB	16-unbalanced AES output module with back plane
PT-AEBT-OB	16-balanced AES output module with back plane
PT-DACT-OB	16-balanced AES to stereo output with back plane
PT-MADI4C-OBG	Platinum MAD1 audio output module w/ 4 active BNC
PT-MADI4O-OBG	Platinum MAD1 audio output module w/ 4 fiber/2 SFP cages
PX-HSR1D2D-OBG	Platinum IP3 SD/HD/3G 8 or 16 Signal DensiShield Feeder Module for PX-UCIP4E1D-IBG

MUX OUTPUT OPTIONS

PX-HSRMX8C2D-OBG	Platinum IP3 SD/HD/3G Mux Output Module w/ 8 HD BNC + 2 DensiShield back panel
PX-HSRMX8O2D-OBG	Platinum IP3 SD/HD/3G Mux Output Module w/ 8 Fiber/4 SFP's + 2 DensiShield back panel
PX-HSR8CMX8C-OBG	Platinum IP3 SD/HD/3G Mux Output Module w/ 16 HD BNC back panel
PX-HSR8OMX8O-OBG	Platinum IP3 SD/HD/3G Mux Output Module w/ 16 Fiber/8 SFP's
PT-FSOB-OPT	3G frame sync and clean and quiet license