



PD1000

High-Definition Dense Encoder Modulation System

Description

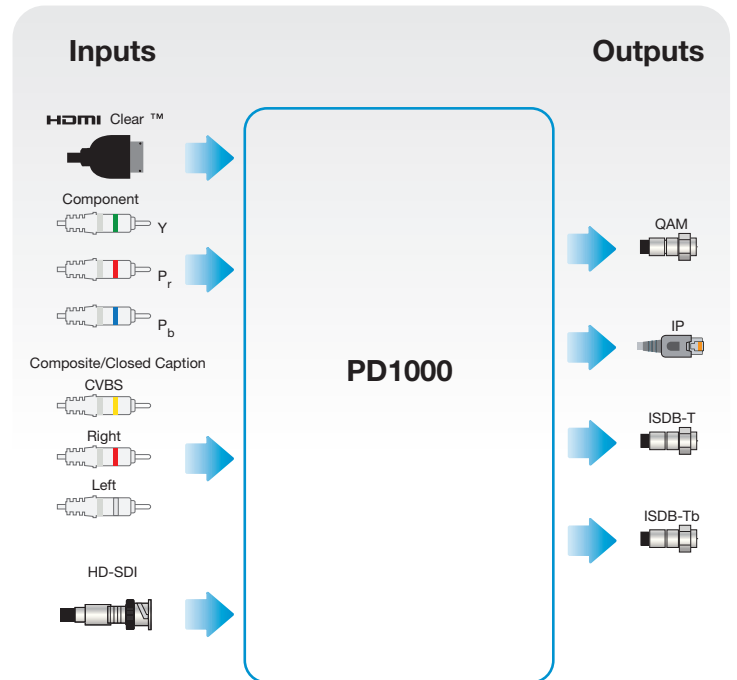
The professional-grade PD1000 HD encoder modulation system allows users to encode HD, SD, and HD-SDI signals in MPEG-2 or H.264 formats, all in a single rack space. The unit supports real-time encoding, while offering the flexibility of two, four, six, or eight HDMI (in the clear), HD-SDI, component, and composite (closed captioning) inputs. The HD encoder offers simultaneous RF (QAM, ISDB-T or ISDB-Tb) and IP outputs.

The PD1000 enables remote control and monitoring via an intuitive Web interface, provides virtual channel mapping, and supports Dolby® Digital audio encoding. The HD encoder is ideal for commercial residential properties, academic and medical facilities, local area network applications for both CATV and broadcast, as well as the hospitality industry.

Features

- Platform-based encoder with up to four field-upgradeable dual-channel encoder modules
- Upgradeable software for new future-proof features
- Supports 480i to 1080p real-time encoding and up to eight HD video sources in MPEG-2 or H.264 formats, all in 1 RU
- MPEG audio encoding plus optional Dolby® Digital Stereo Creator Technology (one audio pair per video)
- No change of resolution between input and output
- Inputs per EM-2HD dual encoder module: component, HDMI (clear), and composite/closed caption
- Inputs per EM-HD-SDI dual encoder module: HD-SDI (BNC)
- Integrated support for Emergency Alert System (EAS)
- Automatic detection of input type and format
- Outputs four consecutive QAM RF channels or two consecutive ISDB-T or ISDB-Tb RF channels with up to four ISDB-Tb RF channels per chassis
- IP output: Unicast/multicast, RTP/UDP/IP, RTSP, and SPTS
- Simultaneous RF (QAM, ISDB-T or ISDB-Tb) / IP output
- PSIP tables allow users to configure virtual channel maps for each channel
- High output power with 53 dBmV max., combined
- Secure management and configuration via an easy-to-use Web browser
- External DC backup power supply

Applications



Images



Fully Loaded
8 Channel H.264/MPEG2
HD/SD Encoder



EM-2HD
MPEG-2 or H.264 Dual
HD Encoder Module



OM4
QAM Output
Module



EM-HD-SDI
HD-SDI Input
Module



OMI/OMI-Tb
ISDB-T and ISDB-Tb
Output Modules

Specification

Audio/Video Inputs (Per EM-2HD Encoder Module)

HDMI	Dual type A v1.4 (clear)
Component	Dual YPrPb (YPrPB), (RCA)
Audio	Dual stereo (RCA)
Composite/Closed Caption	Dual CVBS (RCA)

Audio/Video Inputs (Per EM-HD-SDI Encoder Module)

SDI	Dual 3G/HD/SD (BNC)
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Video Formats

In/Out Line Rates	1080p ⁽¹⁾ /1080i/720p/480p/576i/480i
Frame Rates	25/29.97/30/50/59.94/60

Video/Audio Compression

Video Codecs	HD and SD MPEG-2/H.264
Audio Codecs	Layer II, Dolby® Digital Stereo Creator (one pair per video)

QAM/RF Output

Frequency Range	50 MHz to 1002 MHz
RF Channel Count	4
Modulation Modes	QAM 64/256
QAM Type	Annex A/B
MER	> 40 dB
RF Level (Pre-Combined)	> 60 dBmV
RF Level Adjustment Range (Combined)	38 dBmV to 53 dBmV
Spurious	> 60 dBc
I/Q Amplitude Imbalance	< 1 %
I/Q Phase Error	< 1°
Frequency Accuracy	± 100 Hz
Phase Noise	100 dBc @ 10-kHz offset
Amplitude Flatness	± 0.25 dB (over 24-MHz bandwidth)
Output Connector	F-female, 75 Ω

NOTES:

- MPEG-2 supports 25/29.97/30
- The PD1000 platform requires one OM4/OMI/OMI-Tb output module and one to four encoder modules. One additional OMI/OMI-Tb is also supported in the chassis

ISDB-T and ISDB-Tb/RF Output

Frequency Range	470 MHz to 764 MHz
Bandwidth	6 MHz
RF Channel Count	2
RF Level Adjustment Range	38 dBmV to 53 dBmV
Spurious	> 60 dBc
Frequency Accuracy	+/- 100 Hz
Amplitude Flatness	+/- 0.25 dB (over 12 MHz bandwidth)
Output Connector	F-female, 75 Ω

IP Output (Optional)

Connection	RJ45, GbE, full duplex, auto-neg
Addressing	Unicast, multicast
Transport Protocol	RTP/UDP/IP, RTSP
Transport Format	SPTS

Management

Connection	RJ-45, GbE, full duplex, auto-neg
Protocols	HTTP
User Interface	Web browser
Browser Support	IE9 or later, Firefox, and Chrome

EAS Inputs

Video	CVBS (RCA)
Audio	Stereo (RCA)
Trigger	Terminals

Internal AC Power Supply

Line Voltage	93 VAC to 254 VAC, 47 Hz to 63 Hz
Power Consumption	Up to 130 W

External DC Power Backup

Voltage	+ 12 VDC ± 5 % VAC
Current	< 10 A

General

Operating Temperature	0 °C to 50 °C
Dimensions	19" (L) x 16" (D) x 1.75" (H)

Certifications




 Dolby® Digital Stereo Creator

Ordering Information

PD1000	Universal Digital Platform Chassis ⁽²⁾
EM-2HD	MPEG-2 or H.264 Dual HD Encoder Module for PD1000 (Cables Included)
EM-2HD/D	MPEG-2 or H.264 Dual HD Encoder Module for PD1000 w/ Dolby® Audio Encoding (Cables Included)
EM-HD-SDI	HD-SDI Dual Encoder Module for PD1000-Includes Dolby®
OM4	QAM Output Module for PD1000

OM4-IP	IP Output Option for OM4
OMI	ISDB-T Output Module for PD1000 (Japan)
OMI-Tb	ISDB-Tb Output Module for PD1000 (Latin America)
OMI-IP	IP Output Option for OMI and OMI-Tb
EAS-HAR	EAS Adapter Cable, 3.5 mm to Composite
X-PS	External Redundant Power Supply