

**HIGH-DEFINITION DENSE ENCODER  
MODULATION SYSTEM**



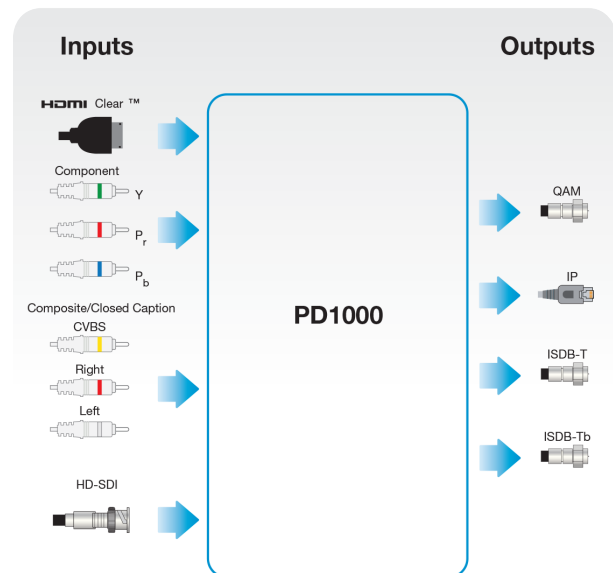
PD1000  
(front view)

The professional-grade PD1000 HD encoder modulation system allows users to encode HD, SD & 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 & composite (closed captioning) inputs. The HD encoder offers simultaneous RF (QAM, ISDB-T or ISDB-Tb) & IP outputs.

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

**Features**

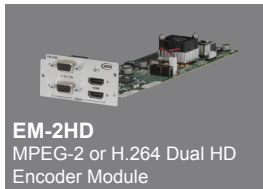
- Platform-based encoder with up to four field-upgradeable dual-channel encoder modules
- Upgradeable software for new future-proof features
- Supports 480i to 1080p real-time encoding & up to eight HD video sources in MPEG-2 or H.264 formats, all in 1RU
- MPEG audio encoding plus optional Dolby Digital Stereo Creator Technology (one audio pair per video)
- No change of resolution between input & 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 & 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



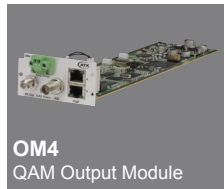
- IP output: Unicast/multicast, RTP/UDP/IP, RTSP & SPTS
- Simultaneous RF (QAM, ISDB-T or ISDB-Tb) / IP output
- PSIP tables allow users to configure virtual channel maps for each channel
- High output power with 53 dBmV max., combined
- Secure management & configuration via an easy-to-use web browser
- External DC backup power supply



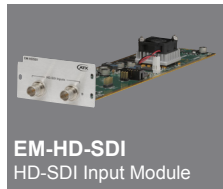
**Fully Loaded**  
8-Channel H.264/MPEG-2  
HD/SD Encoder



**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 & ISDB-Tb  
Output Modules

## Specifications

### PD1000

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)
VIDEO FORMATS	
IN/OUT LINE RATES	1080p <sup>(1)</sup> /1080i/720p/480p/576i/480i
FRAME RATES	25/29.97/30/50/59.94/60
VIDEO/AUDIO COMPRESSION	
VIDEO CODECS	HD & SD MPEG-2/H.264
AUDIO CODECS	Layer II, Dolby Digital Stereo Creator (One Pair per Video)
QAM/RF OUTPUT	
FREQUENCY RANGE	50-1002 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
ISDB-T & ISDB-Tb/RF OUTPUT	
FREQUENCY RANGE	470-764 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 & 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 130W
EXTERNAL DC POWER BACKUP	
VOLTAGE	+12 VDC ± 5% VAC
CURRENT	< 10A
GENERAL	
OPERATING TEMPERATURE	0°C to +50°C (+32°F to +122°F)
DIMENSIONS	1.75"H x 19.0"W x 16.0"D (4.45H x 48.26W x 40.6D cm)
CERTIFICATIONS	
 Dolby® Digital Stereo Creator	

NOTE:

(1) MPEG-2 supports 25/29.97/30.

## Ordering Information

Part Number	Description
<b>PD1000</b>	Universal Digital Platform Chassis <sup>(1)</sup>
<b>EM-2HD</b>	MPEG-2 or H.264 Dual HD Encoder Module for PD1000 (Cables Included)
<b>EM-2HD-SA</b>	MPEG-2 or H.264 Dual HD Encoder Module for PD1000 (Stand Alone)
<b>EM-2HD/D</b>	MPEG-2 or H.264 Dual HD Encoder Module for PD1000 with Dolby Audio Encoding (Cables Included)
<b>EM-2HD/D-SA</b>	MPEG-2 or H.264 Dual HD Encoder Module for PD1000 with Dolby Audio Encoding (Stand Alone)
<b>EM-HD-SDI</b>	HD-SDI Dual Encoder Module for PD1000, Includes Dolby
<b>EM-HD-SDI-SA</b>	HD-SDI Dual Encoder Module for PD1000, Includes Dolby (Stand Alone)
<b>OM4</b>	QAM Output Module for PD1000
<b>OM4-SA</b>	QAM Output Module for PD1000 ( Stand Alone)
<b>OM4-IP</b>	IP Output Option for OM4
<b>OMI</b>	ISDB-T Output Module for PD1000 (Japan)
<b>OMI-SA</b>	ISDB-T Output Module for PD1000 (Japan, Stand Alone)
<b>OMI-Tb</b>	ISDB-Tb Output Module for PD1000 (Latin America)
<b>OMI-IP</b>	IP Output Option for OMI & OMI-Tb
<b>EAS-HAR</b>	EAS Adapter Cable, 3.5 mm to Composite
<b>X-PS</b>	External Redundant Power Supply

NOTE:

(1) The PD1000 platform requires one OM4/OMI/OMI-Tb output module & one to four encoder modules. One additional OMI/OMI-Tb is also supported in the chassis.

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