

# CatCast



## HP824IM

## HD Encoder Modulator



### Product Overview

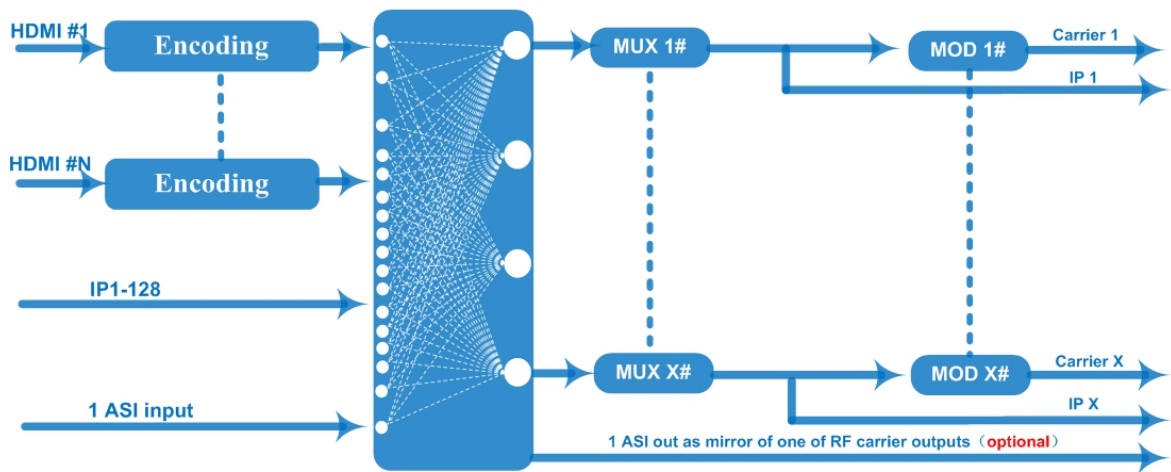
HP824IM is a professional high integration device which includes encoding, multiplexing, and modulation. It supports 8/16/24 HDMI inputs, 1 ASI input, 1 USB player input and 128 IP inputs via the GE port. It also supports DVB-C RF out with 12 non-adjacent carriers or DVB-T/ATSC RF out with 8 non-adjacent carriers, or ISDB-T RF out with 6/16 non-adjacent carriers, and supports 12/8/6/16 MPTS as mirror of 12/8/6/16 carriers through the GE port and 1 ASI out as mirror of one of the carriers. This full function device makes it ideal for small CATV head end system, and it's a smart choice for hotel TV system, entertainment system in sports bar, hospital, apartment...

### Key features

- **8/16/24 HDMI inputs, MPEG-4 AVC/H.264 Video encoding**
- **1 ASI input for re-mux**
- **1 USB Player (Insert the USB Flash drive with "xxx.ts" videos in HP824IM and play back the content in an easy way; file system FAT 32. )**
- **128 IP input over UDP and RTP via GE port**
- **Each carrier out channel process maximum 32 IP from the GE port(UDP&RTP protocol)**
- **MPEG1 Layer II, LC-AAC and HE-AAC Audio encoding, AC3 Pass Through and audio gain adjustment**
- **Support 12 groups multiplexing/Scrambling/DVB-C modulating**
- **Support 8 groups multiplexing/DVB-T/ATSC modulating---Optional**

- Support 6 (or 16) groups multiplexing/ISDB-T modulating---Optional
  - Support 1 ASI out as mirror of one of RF output carriers---Optional
  - Support 12 MPTS IP output over UDP, RTP/RTSP –DVB-C RF out
  - Support 8 MPTS IP output over UDP, RTP/RTSP-- DVB-T/ATSC RF out
  - Support 6 (or 16) MPTS IP output over UDP, RTP/RTSP-- ISDB-T RF out
- out**
- Support LOGO, Caption and QR code insertion(Language Supported: 中文, English, , , , русский, , for more languages please consult us...)
  - Support PID remapping/ accurate PCR adjusting/PSI/SI editing and inserting
  - Control via web management, and easy updates via web

### Principle Chart



### Technical Specifications

<b>Input</b>	8/16/24 HDMI inputs for option			
	1 ASI in for re-mux			
<b>Video</b>	Resolution	Input	1920×1080_60P, 1920×1080_60i, 1920×1080_50P, 1920×1080_50i, 1280×720_60P, 1280×720_50P, 720×576_50i, 720×480_60i,	
		Output	1920×1080_30P, 1920×1080_25P, 1280×720_30P, 1280×720_25P, 720×576_25P, 720×480_30P,	
	Encoding	MPEG-4 AVC/H.264		
	Bit-rate	1Mbps~13Mbps each channel		
		128 IP input over UDP and RTP, GE port, RJ45—DVB-C RF out		
		128 IP input over UDP and RTP, GE port, RJ45—DVB-T/ATSC RF out		
	128 IP input over UDP and RTP, GE port, RJ45—ISDBT RF out			

	Rate Control	CBR/VBR		
	GOP Structure	IP...P ( P Frame adjustment, without B Frame )		
<b>Audio</b>	Encoding	MPEG-1 Layer 2, LC-AAC, HE-AAC and AC3 Pass through		
	Sampling rate	48KHz		
	Resolution	24-bit		
	Audio Gain	0-255 Adjustable		
	MPEG-1 Layer 2 Bit-rate	48/56/64/80/96/112/128/160/192/224/256/320/384 kbps		
	LC-AAC Bit-rate	48/56/64/80/96/112/128/160/192/224/256/320/384 kbps		
	HE-AAC Bit-rate	48/56/64/80/96/112/128 kbps		
<b>Multiplexing</b>	Maximum PID Remapping	255 input per channel		
	Function	PID remapping ( automatically or manually)		
		Accurate PCR adjusting		
		Generate PSI/ SI table automatically		
<b>Modulation</b>	DVB-C	QAM Channel	12 non-adjacent carriers output (maximum bandwidth 192MHz)	
		Standard	EN300 429/ITU-T J.83A/B	
		MER	≥40db	
		RF frequency	50~960MHz, 1KHz step	
		RF output level	-20~+3dbm, 0.1db step	
		Symbol Rate	5.0Msps~7.0Msps, 1ksps stepping	
			J.83A	J.83B
		Constellation	16/32/64/128/256QAM	64/256 QAM
		Bandwidth	8M	6M
	DVB-T	Standard	EN300744	
		FFT mode	2K,4K, 8K	
		Bandwidth	6M, 7M, 8M	
		Constellation	QPSK, 16QAM, 64QAM	
		Guard Interval	1/4, 1/8, 1/16, 1/32	
		FEC	1/2, 2/3, 3/4, 5/6, 7/8	
		MER	≥42 dB	
		RF frequency	50~960MHz, 1KHz step	
		RF out	8 non-adjacent carriers output (maximum bandwidth 192MHz)	
		RF output level	-20~ +3dBm, 0.1db step	
	ATSC	Standard	ATSC A/53	
		Bandwidth	6M	
		Constellation	8VSB	
		FEC	RS(208 188)+Trellis	

		MER	≥40dB
		ACL	-55 dBc
		RF frequency	50~960MHz, 1KHz step
		RF out	8 non-adjacent carriers output (maximum bandwidth 192MHz)
		RF output level	-20~+3dbm (for all carriers), 0.5db stepping
	ISDB-T	Standard	ARIB STD-B31
		Bandwidth	6M
		Constellation	QPSK, 16QAM, 64QAM
		Guard Interval	1/32, 1/16, 1/8, 1/4
		Transmission Mode	2K, 4K, 8K
		Code rate	1/2, 2/3, 3/4, 5/6, 7/8
		MER	≥40dB
		RF frequency	50~960MHz, 1KHz step
		RF out	6 (or 16) non-adjacent carriers output (maximum bandwidth 192MHz)
RF output level	-20dBm~+3dBm, 0.1dB stepping		
<b>Stream output</b>	1 ASI output as mirror of one of RF output carriers(Optional) 12 MPTS output over UDP and RTP/RTSP as mirror of 12 DVB-C carriers, 8 MPTS output over UDP and RTP/RTSP as mirror of 8 DVB-T/ATSC carriers(Optional) 6 MPTS output over UDP and RTP/RTSP as mirror of 6 ISDB-T carriers(Optional) 16 MPTS output over UDP and RTP/RTSP as mirror of 16 ISDB-T carriers(Optional) 1*1000M Base-T Ethernet interface, GE port		
<b>System function</b>	Network management (WEB)		
	Chinese and English language		
	Ethernet software upgrade		
<b>Miscellaneous</b>	Dimension (W×L×H)	482mm×328mm×44mm	
	Environment	0~45℃(work); -20~80℃ (Storage)	
	Power requirements	AC 110V± 10%, 50/60Hz, AC 220 ± 10%, 50/60Hz	

### Ordering Information

		IP input	IP output	RF carriers	Scrambling
DVB-C out		128	12	12	yes
DVB-T out		128	8	8	N/A
ATSC out		128	8	8	N/A
ISDB-T out	V1	128	6	6	N/A
	V2	128	16	16	N/A