

HP8653U 4K Encoder Modulator



Up to 2160P 60Hz RGB/YCbCr 4:4:4
H.265 HEVC/H.264 AVC
HDCP 2.2 and HDCP 1.4
HDMI 2.0

Product Overview

HP8653U is a high performance 4K Encoder modulator designed by Catcast. It integrates encoding (H.265/HEVC and H.264/AVC), multiplexing and modulating functions in one standard 1U case. It support one HDMI (2.0) channel UHD signal input for encoding, and also 2 ASI & 128 IP input for remux. To enhance the transport capacity, it combines 4 DVB-C/T carriers output with one RF port. It is also equipped with 4 ASI ports to mirror out one carrier and IP port to output TS in 4* MPTS.

Key Features

- Support 2 HDMI 2.0 (Mux) input and 1 HDMI 2.0 (Loop out) output
- Support HDCP 2.2 and HDCP 1.4

- Support 2 ASI & 128 IP input (MPTS/SPTS) over UDP and RTP protocol
- Support up to 2160P 60Hz RGB/YCbCr 4:4:4 input
- Support H.265/HEVC and H.264/AVC video encoding
- Support VBR/CBR video bitrate mode
- Support MPEG1 Layer 2, LC –AAC audio encoding and DD AC3 passthrough
- Support PID remapping / accurate PCR adjusting / PSI/SI editing and inserting
- Support IP (1000M/100M) Output 4 MPTS over UDP and RTP
- Support 1 TS output through 4 ASI output ports
- 4*DVB-C/T RF output
- Support USB video play(under developing)
- Support IP null packet filter
- Real-time output bit-rate monitoring
- Update device through web based NMS port
- Support LCD / keyboard operating, and network management (web)

Specifications

Input	1×HDMI input (2.0) with 2 HDMI port, HDCP 2.2/1.4		
	2 ASI input, BNC interface		
	128 IP input over UDP and RTP protocol		
Video Input	Resolution		Chroma
	3840×2160_60P, 3840×2160_50P, 3840×2160_30P, 3840×2160_25P, 1920×1080_60P, 1920×1080_50P		RGB, YCbCr 4:4:4, YCbCr 4:2:2, YCbCr 4:2:0 (2160P_50/60Hz only)
Video Encoding	Encoding	H.265/HEVC, H.264/AVC	
	Chroma	4:2:2, 4:2:0	
	Bit-rate	2Mbps~36Mbps	
	Rate Control	CBR/VBR	
Audio Encoding	Encoding	MPEG-1 Layer 2, LC-AAC; DD AC3 passthrough	
	Sampling rate	48KHz	
	Bit-rate	32Kbps~384Kbps each channel	
Multiplexing	2 ASI input multiplexed with local 1 channel of TS		
	PID remapping (automatically or manually)		
	Accurate PCR adjusting		
	Generate PSI/SI table automatically		
Modulator Section	Standard	J.83A, J.83B	
	MER	≥43dB	

	DVB-C	RF frequency	50~960MHz, 1KHz step	
		RF output level	-25.0~ -1 dbm (77~97 db μ V), 0.1db step	
		Symbol rate	5.0 - 7.0 Msps	
			J.83A	J.83B
		Constellation	16/32/64/128/ 256 QAM	64/ 256 QAM
		Bandwidth	8M	6M
		RF out	4*RF DVB-C out	
	DVB-T	Standard	EN300744	
		FFT mode	2K	
		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	\geq 42dB	
RF frequency		50~960MHz, 1KHz step		
RF output level		-28~ -3dbm (77~97 db μ V), 0.1db step		
RF out	4*RF DVB-T out			
Stream output	1*ASI output through 4 BNC interfaces			
	4 MPTS over UDP, 1000M/100M Base-T Ethernet interface (unicast/multicast)			
System function	LCD/keyboard operating, web NMS supporting			
	Ethernet software & hardware upgrade			
Miscellaneous	Dimension (W \times L \times H)	482mm \times 455mm \times 44mm		
	Approx weight	4kg		
	Temperature	0~45 $^{\circ}$ C(work), -20~80 $^{\circ}$ C (Storage)		
	Power	AC 100V-220V \pm 10%, 50/60Hz		
	Consumption	25W		

Principle Chart

