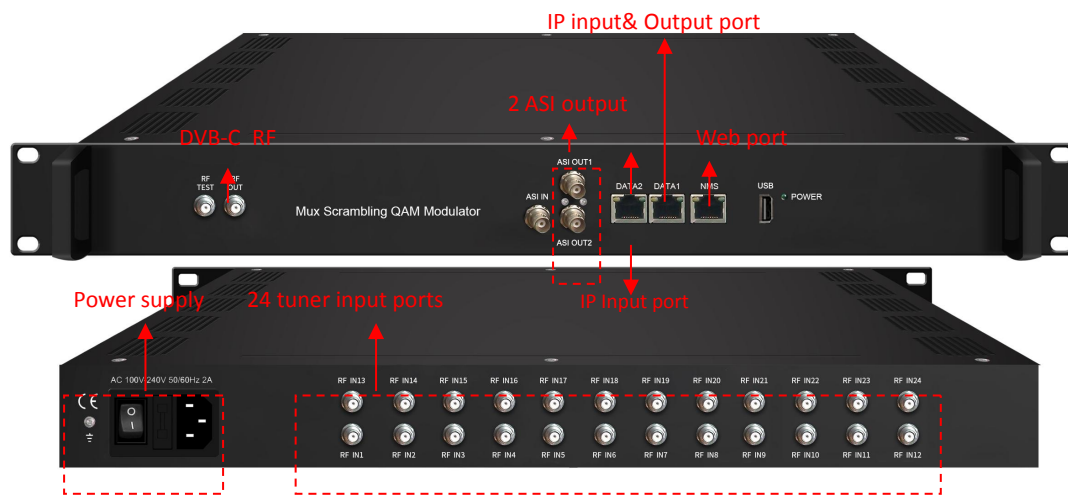




**HP2416C**

**24 in 1 mux scrambling QAM modulator**



## Outline

HP2416C is a high performance and cost-effective QAM modulator designed by Catcast. It supports 24 DVB-S/-S2/-S2X (DVB-T/-T2, DVB-C, ATSC, ISDB-T Optional) FTA tuner input, maximum 128 IP input through GE1 and TS input for re-mux through ASI ports. After multiplexing, scrambling and QAM modulating, it gives 16 non-adjacent carriers output and 16 IP (MPTS) output through GE2.

HP2416C is also characterized with high integrated level, high performance and low cost. It supports dual power supply (optional). This is very adaptable to newly generation CATV broadcasting system.

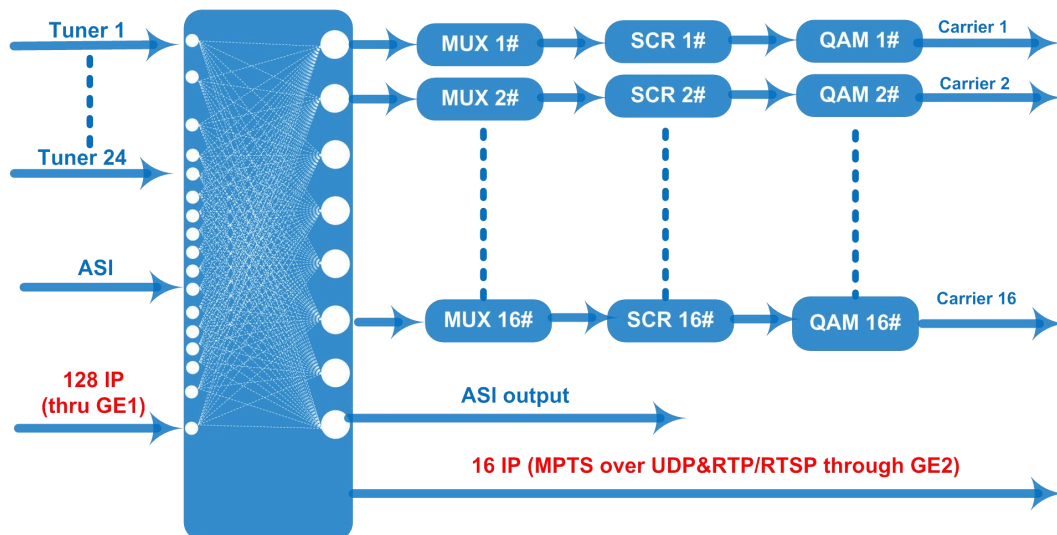
## Key Features

- **24 DVB-S/-S2/-S2X (DVB-T/-T2, DVB-C, ATSC, ISDB-T Optional) FTA Tuner + 1 ASI**

input+512 IP input thru GE1 over UDP and RTP protocol

- 16\*DVB-C RF output
- 1 IP (MPTS) output over UDP and RTP/RTSP, as mirror of one carrier
- Support 16 groups multiplexing+16 groups scrambling +16 groups QAM modulating
- Excellent RF output performance index, MER≥40db
- Support accurate PCR adjusting
- Support PSI/SI editing and inserting
- Support Web management, Updates via web
- Support TS recording and playing via the USB disk (FTA 32)
- Redundancy Power Supply (optional)

## Working Principle



## Specifications

<b>Input</b>	24 DVB-S/-S2/-S2X (DVB-T/-T2, DVB-C, ATSC, ISDB-T Optional) FTA tuner				
	128 IP input through GE1 over UDP and RTP protocol				
	1 ASI input, BNC interface				
<b>Tuner Section</b>	Multi-mode tuners switchable (New)	DVB-C	Standard	J.83A(DVB-C), J.83B, J.83C	
			Frequency In	60~890MHz	
			Constellation	16/32/64/128/256 QAM	
	Version 1	DVB-S/S2	DVB-T/T2	Frequency In	60~890MHz
			ISDB-T	Bandwidth	6/7/8 M bandwidth
				Frequency In	60~890MHz
	Version 1	DVB-S/S2	DVB-S/S2	Frequency In	950~2150MHz
Symbol rate				QPSK 1~45Mbauds	

			8PSK 1~45Mbauds
			Code rate 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
			Constellation QPSK, 8PSK
Version 2 (New)	DVB-S	Frequency In	950~2150MHz
		Symbol rate	0.5~45Msps
		Signal Strength	- 65~-25dBm
		FEC	1/2, 2/3, 3/4, 5/6, 7/8
		Constellation	QPSK
		Max input bitrate	≤129 Mbps
	DVB-S2	Frequency In	950~2150MHz
		Symbol rate	QPSK/8PSK /16APSK: 0.5~45 Msps 32APSK: 0.5~40Msps;
		FEC	QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 32APSK: 3/4, 4/5, 5/6, 8/9, 9/10
		Constellation	QPSK, 8PSK, 16APSK, 32APSK
		Max input bitrate	≤129 Mbps
		DVB-S2X	Frequency In
	Symbol rate		QPSK/8PSK /16APSK: 0.5~45 Msps 8APSK/32APSK: 0.5~40Msps
	FEC		QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 13/45, 9/20, 11/20 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 8APSK: 5/9-L, 26/45-L 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 1/2-L, 8/15-L, 5/9-L, 26/45, 3/5, 3/5-L, 28/45, 23/36, 2/3-L, 25/36, 13/18, 7/9, 77/90 32APSK: 3/4, 4/5, 5/6, 8/9, 9/10, 2/3-L, 32/45, 11/15, 7/9
	Constellation		QPSK, 8PSK, 8APSK, 16APSK, 32APSK
	Max input bitrate		≤129 Mbps
	ATSC		Frequency In
		Bandwidth	6M
Constellation		8VSB	
Multiplexing	Maximum PID Remapping	360 output per channel	
	Function	PID remapping (automatically or manually)	
		Accurate PCR adjusting	
Scrambling Parameters	Max simulcrypt CA	4	
	Scramble Standard	ETR289, ETSI 101 197, ETSI 103 197	

	Connection	Local/remote connection	
<b>Modulation</b>	QAM Channel	16 non-adjacent carriers output	
	Standard	EN300 429/ITU-T J.83A/B	
	MER	≥40db	
	RF frequency	50~960MHz, 1KHz step	
	RF output level	-20~+10dbm(87~107 dbμV),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
<b>Stream out</b>	16 RF output (F type interface)		
	16 IP (MPTS) output over UDP and RTP/RTSP (thru GE2), 2 ASI output(one as mirror)		
<b>System</b>	Network management (WEB)		
	Chinese and English language		
	Ethernet software upgrade		
<b>General</b>	Dimension(W*D*H)	482mm×300mm×44.5mm	
	Temperature	0~45℃(Operation) ; -20~80℃(Storage)	
	Power	AC 100V±1050/60Hz; AC 220V±10%, 50/60HZ	