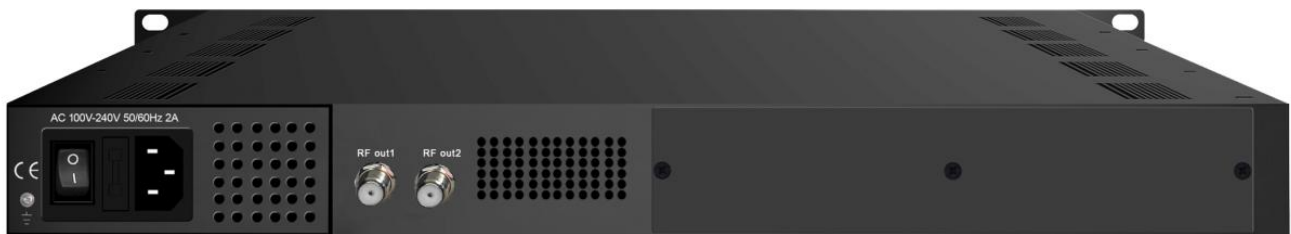




**HP3964C**

**IP MUX Scrambling QAM Modulator**



## Product Overview

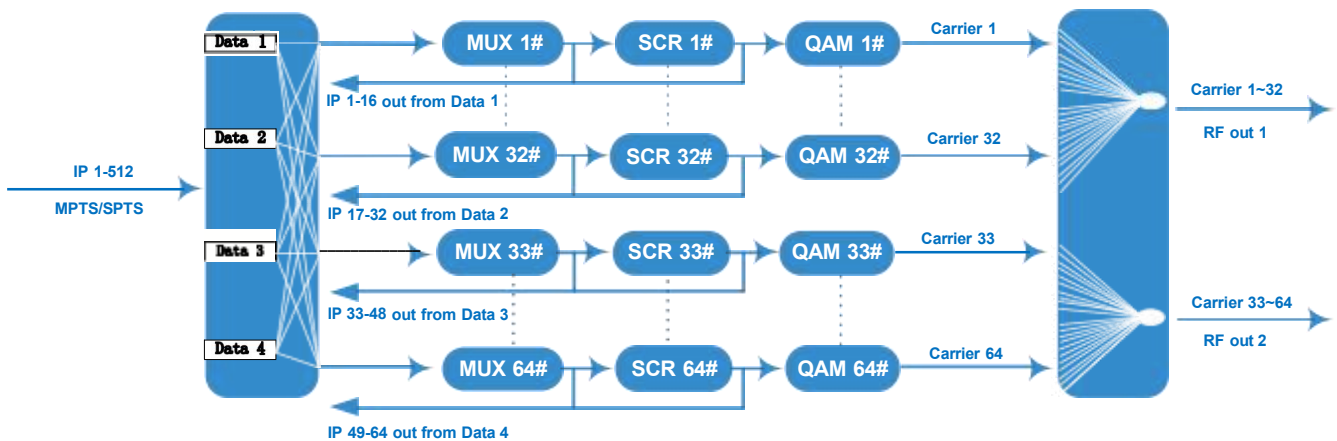
HP3964C 64 in 1 IP QAM modulator is a Multiplexing-scrambling-modulating all-in-one device developed by CATCAST. It has 64 multiplexing channels, 64 scrambling channels and 64 QAM (DVB-C) modulating channels, and supports maximum 512 IP inputs through 4 data ports and 64 non-adjacent carriers (50MHz~960MHz) output through 2 RF output interfaces. The device is characterized with dual RF output ports which broaden the bandwidth for QAM carriers.

## Key Features

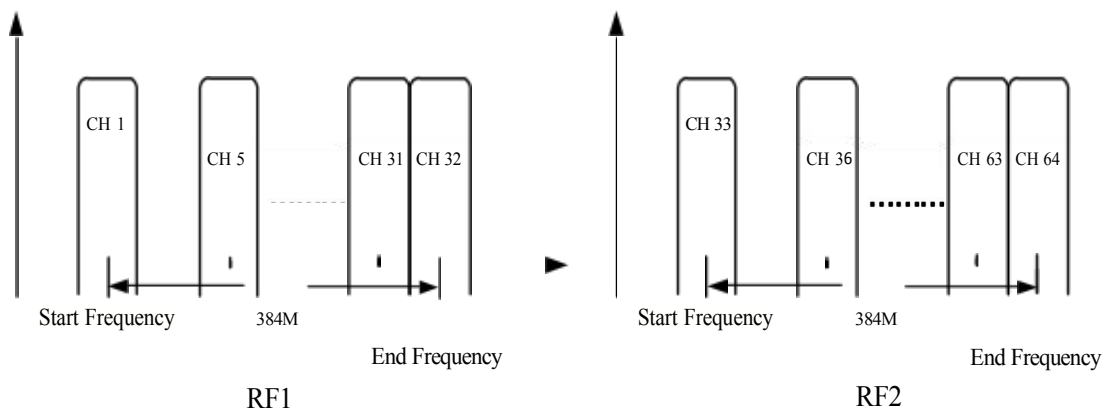
- **4 GE inputs, Data1, Data2, Data3 and Data 4**
- **Supports up to 512 IP inputs through 4 data ports over UDP/RTP**
- **Max 840Mbps and 512 IP inputs for each GE input**

- Supports accurate PCR adjusting, CA PID filtering, PID remapping and PSI/SI editing
- Supports up to 256 PID remapping per channel
- Support DVB general scrambling system (ETR289), simulcrypt standards ETSI 101 197 and ETSI 103 197
- Support 64 multiplexed or scrambled IP outputs over UDP/RTP/RTSP
- 64 non-adjacent QAM carriers output from 2 RF interfaces, compliant to DVB-C (EN 300 429) and ITU-T J.83 A/B/C
- Supports RS (204,188) encoding
- Support Web-based Network management

### Inner Principle Chart



### Carrier Setting Illustration



## Specifications

<b>Input</b>	Input	Max 512 IP inputs from 4*100/1000M Ethernet Port	
	Transport Protocol	TS over UDP/RTP, unicast and multicast, IGMP V2/V3	
	Transmission Rate	Max 840Mbps for each GE input	
<b>Mux</b>	Input Channel	512	
	Output Channel	64	
	Max PIDs	256 per channel	
	Functions	PID remapping(auto/manually optional)	
		PCR accurate adjusting	
PSI/SI table automatically generating			
<b>Scrambling Parameters</b>	Max simulcrypt CA	6	
	Scramble Standard	ETR289, ETSI 101 197, ETSI 103 197	
	Connection	Local/remote connection	
<b>Modulation Parameters</b>	Modulation Standard	EN300 429/ITU-T J.83A/B/C	
	Constellation	J.83A	Constellation :16/32/64/128/256QAM
			Bandwidth :8M
		J.83B/ C	Constellation :64/256QAM
			Bandwidth :6M
	QAM Channel	64 non-adjacent carriers, 384Mbps bandwidth for each RF interface	
	Symbol Rate	5.0~7.0Msps, 1ksps stepping. 5057Ksps (J.83B, 64QAM) ; 5361Ksps (J.83B, 256QAM)	
	Constellation	16, 32, 64 , 128, 256QAM	
FEC	RS (204, 188)		
<b>RF Output</b>	Interface	2 F type output ports for 64 carriers, 75Ω	
	RF Range	50~960MHz, 1kHz stepping	
	Output Level	-20dBm~+10dBm(87~117dbμV), 0.1dB stepping	
	MER	≥ 40dB	
<b>TS output</b>	64 IP output over UDP/RTP/RTSP, unicast/multicast, 4*100/1000M Ethernet Ports (each port for 16 IP outputs)		
<b>System</b>	Web-based Network management		
<b>General</b>	Demission	420mm×440mm×44.5mm (WxLxH)	
	Temperature	0~45℃(operation), -20~80℃(storage)	
	Power Supply	AC 100V±10%, 50/60Hz or AC 220V±10%, 50/60Hz	