

SMP316

Multi-channel IPQAM



Introduction

SMP316 is a distribution Edge QAM which helps pay-TV operators receive up to 320 SPTS/MPTS streams over IP, re-multiplex and scramble them with CAS and output in 8/16/32 non-adjacent QAM frequencies.

SMP316 supports non-adjacent modulation, helping customers easily insert their content without reconfiguring the existing QAM frequencies. SMP316 can further upgrade to support 32 QAM frequencies and 256 SPTS/MPTS as well as scrambling to meet future demands.

Key Features

- ▶ Up to 320 STPS/MPTS over IP input (FEC and IGMP v2/3)
- ▶ Supports DVB and ATSC standards (ITU-T J.83 A/C, DOCSIS, DRFI)
- ▶ Up to 16 non-adjacent QAM output (expandable to 32 non-adjacent QAM without scrambling)
- ▶ Excellent modulation feature with MER ≥ 43 dB
- ▶ Supports DVB-simulcrypt CAS de-scrambling
- ▶ Re-multiplexing (EPG/EIT re-multiplexing is optional) and grooming
- ▶ Supports audio and auxiliary data pass-through (AC3, CC, Teletext, etc.)
- ▶ Easy management via Web-UI or SNMP
- ▶ Low power consumption and high reliability with MTBF (Mean Time Between Failure) $\geq 100,000$ hours

Enhanced
IP Transmission

Non-adjacent
Modulation

Powerful
Multiplexing

CAS
Scrambling

WEB UI
SNMP

MTBF
 $\geq 100,000$ Hours

SMP316

Multi-channel IPQAM

Specifications

Chassis	
Processing Capacity	800TS (1000 programs)
Data Processing	4 Gbps
Slot Number	3 slots
Interface	2 x ASI inputs (BNC, Female, 75Ω ports)
	2 x ASI outputs (BNC, Female, 75Ω ports)
	1 x GbE TS/IP, TS/IP (RJ45)
	1 x management (RJ45)
Multiplexing	
Routing	Any input to any output
Table Supported	SI/PSI/PSIP
PID Processing	Remapping, filtering
EIT Processing	Pass-through
External Data	EPG and SI insertion
IP	
Interface	On-chassis: 1 x RJ45 (100/1000)
	On-module: 2 x RJ45 (100/1000, 1+1 backup capable)
	2 x SFP (1000, 1+1 backup capable)
Protocol	TS over UDP/RTP, unicast/multicast
MPEG TS	MPTS and SPTS
Channels	On-chassis: 64 streams input and 32 streams output
	On-module: Max. 256 streams input
Capability	Max. 72Mbps per IP stream (module)
Bit-rate per Module	750Mbps
De-jittering	PCR
Management	IGMP V2, V3
FEC	ProMPEG

QAM Modulation	
RF Output	1 x F-type for RF output
QAM Density	Max. 16 non-adjacent QAM channels (per module)
Output Range	48~999MHz (Annex A/C)
Bandwidth	6/7/8MHz
QAM Constellations	ITU-T J.83 Annex A/C
	Annex A/C: 16, 32, 64, 128, 256 QAM
Symbol Rate	3.0~6.952Ms/s
MER	≥43dB
Output Level	30~55dBmV (depending on the enabled channels)
Management	
Hardware Interface	100 x RJ45 (100Mbps)
User Interface	LED indicators
	LCD screen
	Front panel control
	Web UI
	SNMP (monitoring only)
Physical & Environment	
Input Voltage	90~260VAC
Power Consumption	Max. 60W
Chassis Dimension	480mm x 44mm x 440mm (WxHxD), 1RU
Operating Temperature	0°C ~50°C
Storage Temperature	-10°C ~70°C
Operating Humidity	<95%
MTBF	≥100,000 hours

Order Information

Model	Description
SMP316-01	Non-adjacent IPQAM modulator (256IP, 16QAM, Annex A/C)
SMP316-02	Non-adjacent IPQAM modulator (256IP, 32QAM, Annex A/C)
SMP316-11	Non-adjacent IPQAM modulator (256IP, 16QAM, Annex A/C), with scrambling