

## Sumavision 10K511 IPQAM 3.3 Scalable Universal Edge-QAM



### Product Introduction

10K511 IPQAM3.3 is the third generation of the Sumavision ultra density Edge-QAM after IPQAM3.0 and IPQAM3.1. Up to 256 in 1RU chassis. The device is designed as a highly integrated digital video gateway which multiplexes and scrambling on-demand content streamed over an IP network,

The QF322, 64-Unadjacent-channel QAM Modulating card, is the new generation modulator from Sumavision with high integration technology. There are 32 un-adjacent channels of each RF output, and 2 RF ports on one module and each of them can be scrambled individually. 16 x SPF+ ports supports 10G data transferring, and output through any RF port on each modulating card.

### Features

- Full band range from 45Mhz to 1000MHz
- 4 slots, 4 modules, 8 RF ports
- High integration, can achieve 256 frequencies RF outputs in 1RU
- Support scrambling function
- ITU-T J.83 Annex A/B/C, DVB-C compliance
- 10GbE data throughout, 9600M per port
- ARP, ICMP, IGMP-V1/2/3
- 256 channels per RF port
- WEB/SNMP control and upgrade
- Low power consumption



## Specification

<b>Input</b>	
10GbE port	16 GbE ports, 9600Mbps per port
Support ARP, ICMP, IGMP v1/v2/v3 network protocol	
Interface specification:	
IEEE 802.3 z (optical interface) or IEEE 802.3 ab (electric interface)	
Resistance network jitter	0~1000ms
<b>Output QAM (RF interface)</b>	
Frequency Adjacent	45-1000MHz(un-Adjacent) 1kHz Step
RF Connector	75 Ω F-type connector
Modulation format	ITU-T J.83 Annex A, B, C
Modulation	64, 128, 256
Symbol Rate	3.5~7MS/s 1kBaud step
Output return loss	13~14dB
Output Level accuracy	1dB
Output Power step size	0.1dB
Output frequency accuracy	+/- 1kHz
Output frequency step size	1kHz
Level (dBmV)	35-62dBmV
MER (EQ off)	≥43dB
MER (EQ on)	≥46dB
ACPR	≥ 60dB
Spurious Output Rejection Ratio	≥ 60dB
Phase Noise	-85 dBc/Hz @1K -105 dBc/Hz @10K -113 dBc/Hz @100K
PCR Jitter	±200ns
<b>Multiplexing and Scrambling</b>	
1 x ASI Output	
1 x RJ45 100M/1000M for scrambling	
1 x RJ45 DTI (Reserved)	
Support over 3000 Services	
IP over TS multiplexing	
Re-multiplexing/routing of any input stream to any output	
PCR de-jittering and re-stamping of input streams	
PSI extraction, automatic generation and insertion as required	
Support 6 CA Simul-cryption	
IP over TS scrambling, PSI / SI processing, modulation and up-conversion DVB Simulcrypt Program and Elementary Stream-level Encryption	
<b>Control</b>	
Front Panel	LCD and keys
Ethernet	1xRJ45 Web, SNMP, Sumavision eManager
Upgrade	Via Ethernet port
<b>Physical</b>	
Dimensions	44.4mm(H) x 482.6mm(W) x 434.5mm(D)
Power	100V - 240V AC
Power Consumption	≤500W