

SUNNISKY QAM1000 (II) Professional 2-Channel DVB-C (Digital Cable) QAM agile Modulator

SUNNISKY QAM1000(II) is a professional 2 RF Channels Broadcast-Grade digital QAM agile modulator, which is designed to receive 4 DVB-TS stream signals (for example, 2-main input, 2-backup input) from other digital headend devices, for example, DVB multiplexer, MPEG-2 video / audio encoder, or digital TS receivers, then multiplex 2 ASI-TS (from 4 input ASI-TS) streams with a series of process like RS FEC code, convolution, trellis, interleaving, and QAM constellations of 16 / 32 / 64 / 128 / 256 QAM or 64B QAM / 256B QAM (**When placing order, need to confirm**) modulation levels making it possible to move up to 54 Megabit of SPTS / MPTS streams across the cable network on the selected channel, etc., it offers modulated IF QAM signal which is SAW filtered into upconverter, then outputs and enlarges 2 independent RF channels (within 30MHz interval) DVB-C RF signals to the desired CATV system channels with agile frequency in the range of 50MHz to 860MHz with adjustable level (for example, output 2 adjacent Channels: 115MHz and 123MHz RF central frequency), finally this RF signal is transmitted into Cable HFC or MMDS network.

Thanks to digital high IF (intermediate frequency) modulation technology, it could gain better performances in MER, S/N, phase shifting and noise, amplitude error, etc. Its features of bandpass flatness and phase noise are closely controlled in order to obtain a high MER output signal, which ensures that it will not introduce a source of errors into the distribution process. It can complete PSI/SI table parsing and modification and PID filtering, as well as PID re-mapping. Also it has the package stuffing function for low code rate stream input. Besides DS3 interface (as optional), these good performances of QAM1000(II) fulfill the requirement of different markets.

With its perfect performance and high stability and reliability, SUNNISKY QAM1000(II) is very suitable for various CADTV headend systems, and also it is the most economical and the most efficient choice for upgrading the existing analog CATV system and MMDS system (for example, in residential quarters or In-Hotel etc.) to one digital system.



Feature

- Fully complies with DVB-C ETSI / EN 300 429
- Support ITU-TJ.83 Annex A or B standard (**When placing order, need to confirm**)
- Constellation range of 16 QAM/32 QAM/64 QAM/128 QAM/256 QAM or 64B QAM / 256B QAM (**When placing order, need to confirm**) selectable
- Adjustable symbol rate from 1.0 to 7.0MS/s
- 188 or 204 packet length is available
- Stuffing function for low code rate stream
- 4 ASI-TS independent input ports, and 2 independent RF channels (within 30MHz interval) output (for example:1 main, 1 backup, 2 of 4 input ASI-TS could be output)
- Powerful processing core for multiplexing and modulating
- PCR re-stamping
- High MER (Modulation Error Rate) ensures a low bit error rate
- Parsing and editing on PSI/SI list table, and support PSI/SI extraction, generation and insertion
- Filter many discontinuous section of PID
- PID re-mapping and filtering
- 4 DS3 (optional) input ports
- SAW filtered IF out / in loop
- Double PLL synthesized channel control
- Fixed 36.125MHz (36.15 and 44MHz selectable) IF output
- Low out-of-band noise and high VSB attenuation
- Adjustable 50MHz~860MHz agile RF output with 0.1MHz for minimum step
- High RF output level from 110 to 118dBuV with hybrid module IC
- Shutdown RF output by software control

- Automatically restored after power failure
- LCD display and user friendly operation
- By 10/100BaseT Ethernet, it can realize real-time SNMP remote control, auto-alarm, upgrade on-line and parameter backup to PC
- Low power consumption

Specification

QAM	
Full compliance	With DVB-C ETSI / EN300 429, ITU-TJ.83 Annex A and C
Input TS (MPEG2 SPTS or MPTS) interface	4 ASI: 188 or 204 byte packet length auto-detection; DS3 (Optional)
Input TS available Bit Rate	≤160Mbps
Energy diffusion	YES
FEC Decoder	Reed Solomon (204, 188)
Error Vector Magnitude (EVM)	≤2%
Bit Error Ratio (BER)	≤9 X 10 ⁻⁹ (256QAM)
De-Interleaving	I (12,17)
Rolling off factor	0.25 or 0.35
QAM constellations	16, 32, 64, 128, 256QAM (ITU-TJ.83 Annex A and C)
Output symbol rate	1.0~7.0MS/s
I/Q Amplitude deviation	0.2%
I/Q Phase deviation	≤0.2°
Phase jitter	≤0.5° RMS
Warning way	LED on the front panel, and network management system by 10/100BaseT Ethernet
IF Input / Output	
IF input / output impedance	75 Ω
IF frequency	Fixed 36.125MHz (36.15 and 44MHz selectable)
IF level	95dBuV
RF Output	
RF output frequency	Agile 50MHz~860MHz, adjustable in 100KHz steps
RF output level	110~118dBuV (Adjustable)
RF output impedance	75 Ω
RF harmonics and spurious	60dBc
Out – of band noise	60dBc
Phase noise	≤-90dBc/Hz
Modulation Error Ratio (MER)	≥37dB @256QAM; 40dB @64QAM (Typical)
Carrier to Noise Ratio (CNR)	55.1dB
Signal to Noise Ratio (SNR)	37dB
RF output return loss	≥14dB
General	
Operating temperature	0° C~45° C
Power requirement	AC 90~264V, 50Hz±2Hz, 45W
Weight	6Kg
Dimension	483mm×350mm×44mm

Note: All specifications are subject to change without notice.



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