## SUNNISKY QAM100 QPSK DVB-S Demodulator+QAM DVB-C agile Modulator

SUNNISKY QAM100 is a two-in-one equipment which includes digital satellite signal receiving and QPSK demodulating and digital QAM agile modulating, then outputing RF signal in the range of 48MHz to 862MHz with adjustable level, also it has ASI IN and SPI IN interface to receive DVB TS(Transport Stream)signal from other digital headend devices, for example, DVB multiplexer, MPEG-2 video/audio encoder, or digital TS receivers/decoders. Digital TS stream signal from any input port (for example, QPSK, DS3-optional, ASI and SPI) can be looped-through to the DS3-Optional port output. The PSI/SI information of the TS signal from any input port (for example, QPSK, DS3, ASI and SPI) can be analyzed and edited via the Ethernet network management, and it could realize remote control and management function by aid of NMS (network management software system).

SUNNISKY QAM100 is very suitable and the most economical choice for receiving digital TV signal from SDH network with DS3 interface (optional), and various of CADTV hendend systems and MUDS system.



## **Feature**

- Fully complies with DVB-S/ETSI 300421 & DVB-C ETSI / EN 300429 standard
- Support ITU-T J.83 Annex A/B
- Satellite TV signal receiving and QPSK demodulating from 950~2050MHz frequency range
- Constellation range of 16QAM/32QAM/64QAM/128QAM/256QAM / 64B QAM / 256B QAM selectable
- Adjustable symbol rate from 2 to 7.2MS/s
- 188 or 204 packet length is available
- QPSK, ASI, SPI, DS3(Optional) four input ways
- 2Mbit/s~45Mbit/s QPSK input code rate
- Null package stuff
- PCR correction
- PID filter, PAT and PMT remapping
- NIT and SDT could be modified via network management
- Cascade function (simply multiplexing function) with its ASI IN and QPSK TS, or its ASI IN and SPI IN, or its ASI IN and DS3 IN interface
- ASI IN and ASI loop through port
- IF input and IF output port (Optional)
- DS3 output (Optional)
- Double PLL synthesized channel control
- Low out-of-band noise and high VSB attenuation
- High RF output level from 110 to 113dBuV with hybrid module IC
- Adjustable 48MHz~862MHz agile RF output
- Automatically restored after power failure
- By 10/100BaseT Ethernet, it can realize remote control, network management and parameters setup as SNMP protocol (Optional)
- LCD display and user friendly operation
- Low power consumption

## **Specification**

Satellite QPSK Demodulating		
Input frequency range	950~2150MHz	
Input level	-65~-25dBm	
Input impedance	75Ω	
Symbol Rate	2~45MBauds	

## IPIV Digital IV Digital Hotel Digital Education Wireless Broadband

Interleaving depth	FEC puncture rate	1/2, 2/3, 3/4, 5/6, 7/8 auto-detect
ASI IN/OUT   Interface   ASI port, BNC connector, 75 Ω   TS input available Bit Rate   ≤160Mbps   ≤270Mbps   270Mbps   270M	Interleaving depth	
ASI IN/OUT   Interface   ASI port, BNC connector, 75 Ω   TS input available Bit Rate   ≤160Mbps   ≤270Mbps   270Mbps   270M	9 1	13V or 18V
TS input available Bit Rate TS output available Bit Rate S270Mbps Packet Length 188 or 204 Signal Level 800mVp-p SPI IN Interface Sub-D 25 PIN, 90~132 Ω TS input available Bit Rate 1M~54Mb/s Packet Length 188 or 204 Signal Level 0.1~2.0Vp-p Signal		
TS output available Bit Rate	Interface	ASI port, BNC connector, $75\Omega$
Packet Length   188 or 204   800mVp-p   SPI IN	TS input available Bit Rate	≤160Mbps
Signal Level         800mVp-p           SPI IN           Interface         Sub-D 25 PIN, 90~132 Ω           TS input available Bit Rate         1M-54Mb/s           Packet Length         188 or 204           Signal Level         0.1~2.0Vp-p           DS3 IN/OUT (Optional)         Interface           Interface         75Ω, BNC           Bit rate         44.736Mbps           Format         DS3, Framed or Unframed (Per G804/G752)           QAM Modulating         Full compliance           Full compliance         DVB-C ETSI / EN300 429           QAM constellations         16, 32, 64, 128, 256, 64B, 256B QAM           Output symbol rate         2~7.2MS/s           I/Q Amplitude deviation         0.2%           I/Q Phase deviation         ≤0.2°           Phase jitter         ≤0.5°RMS           RF Output         SFRMS           RF Output frequency         Agile 48MHz-862MHz, adjustable           RF output frequency         Agile 48MHz-862MHz, adjustable           RF output frequency         AGile 48MHz-862MHz, adjustable           RF output impedance         75Ω           RF harmonics and spurious         55dBc           Phase noise         ≤-90dBc/Hz           Modulation Error Ra	TS output available Bit Rate	≤270Mbps
SPI IN         Interface         Sub-D 25 PIN, 90~132 Ω           TS input available Bit Rate         1M~54Mb/s           Packet Length         188 or 204           Signal Level         0.1~2.0Vp-p           DS3 IN/OUT (Optional)         75Ω, BNC           Bit rate         75Ω, BNC           Bit rate         44.736Mbps           Format         DS3, Framed or Unframed (Per G804/G752)           QAM Modulating         0.28           Full compliance         DVB-C ETSI / EN300 429           QAM constellations         16, 32, 64, 128, 256, 64B, 256B QAM           Output symbol rate         2~7.2MS/s           I/Q Amplitude deviation         0.2%           I/Q Phase deviation         ≤0.2°           Phase jitter         ≤0.5°RMS           RF Output         43ile 48MHz~862MHz, adjustable           RF Output level         100~113dBuV (Adjustable)           RF output limpedance         75Ω           RF output impedance         75Ω           RF output impedance         5dBc           Phase noise         ≤90dBc/Hz           Modulation Error Ratio (MER)         ≥35dB @256QAM (Typical)           RF output return loss         ≥14dB           General         0°C~60°C	Packet Length	188 or 204
Interface	Signal Level	800mVp-p
TS input available Bit Rate 1M~54Mb/s Packet Length 188 or 204 Signal Level 0.1~2.0Vp-p  DS3 IN/OUT (Optional) Interface 75Ω, BNC Bit rate 44.736Mbps Format DS3, Framed or Unframed (Per G804/G752)  QAM Modulating Full compliance DVB-C ETS1 / EN300 429 QAM constellations 16, 32, 64, 128, 256, 64B, 256B QAM Output symbol rate 2~7.2MS/s I/Q Amplitude deviation 0.2% I/Q Phase deviation ≤0.2° Phase jitter ≤0.5°RMS  RF Output RF output frequency Agile 48MHz~862MHz, adjustable RF output impedance 75Ω RF harmonics and spurious 55dBc Phase noise 9-90dBc/Hz Modulation Error Ratio (MER) ≥35dB @256QAM (Typical) RF output return loss ≥14dB General Operating temperature 0°C~60°C Power requirement AC 90~240V, 50Hz±2Hz, 30W Net beight 6.6Kg RF Oispuns 150mm×44mm	SPI IN	
Packet Length   188 or 204	Interface	Sub-D 25 PIN, 90~132 Ω
Signal Level   D.1~2.0Vp-p	TS input available Bit Rate	1M~54Mb/s
DS3 IN/OUT (Optional)           Interface         75Ω, BNC           Bit rate         44.736Mbps           Format         DS3, Framed or Unframed (Per G804/G752)           QAM Modulating         Pub. C ETSI / EN300 429           QAM constellations         16, 32, 64, 128, 256, 64B, 256B QAM           Output symbol rate         2-7.2MS/s           I/Q Amplitude deviation         0.2%           I/Q Phase deviation         ≤0.2°           Phase jitter         ≤0.5°RMS           RF Output         Agile 48MHz~862MHz, adjustable           RF output level         100~113dBuV (Adjustable)           RF output impedance         75Ω           RF harmonics and spurious         55dBc           Phase noise         ≤-90dBc/Hz           Modulation Error Ratio (MER)         ≥35dB @256QAM (Typical)           RF output return loss         ≥14dB           General         Operating temperature         0°C~60°C           Power requirement         AC 90~240V, 50Hz±2Hz, 30W           Net weight         5Kg           Gross weight         6.6Kg           Net Dimension         483mm×350mm×44mm	Packet Length	188 or 204
Interface   75Ω, BNC	Signal Level	0.1~2.0Vp-p
Bit rate         44.736Mbps           Format         DS3, Framed or Unframed (Per G804/G752)           QAM Modulating         DVB-C ETSI / EN300 429           Full compliance         DVB-C ETSI / EN300 429           QAM constellations         16, 32, 64, 128, 256, 64B, 256B QAM           Output symbol rate         2-7.2MS/s           I/Q Amplitude deviation         0.2%           I/Q Phase deviation         ≤0.2°           Phase jitter         ≤0.5°RMS           RF Output         Agile 48MHz~862MHz, adjustable           RF output frequency         Agile 48MHz~862MHz, adjustable           RF output level         100~113dBuV (Adjustable)           RF output impedance         75Ω           RF harmonics and spurious         55dBc           Phase noise         ≤-90dBc/Hz           Modulation Error Ratio (MER)         ≥35dB @256QAM (Typical)           RF output return loss         ≥14dB           General         O°C~60°C           Power requirement         AC 90~240V, 50Hz±2Hz, 30W           Net weight         5Kg           Gross weight         6.6Kg           Net Dimension         483mm×350mm×44mm	DS3 IN/OUT (Optional)	
Format         DS3, Framed or Unframed (Per G804/G752)           QAM Modulating           Full compliance         DVB-C ETSI / EN300 429           QAM constellations         16, 32, 64, 128, 256, 64B, 256B QAM           Output symbol rate         2~7.2MS/s           I/Q Amplitude deviation         0.2%           I/Q Phase deviation         ≤0.2°           Phase jitter         ≤0.5°RMS           RF Output         Agile 48MHz~862MHz, adjustable           RF output frequency         Agile 48MHz~862MHz, adjustable           RF output level         100~113dBuV (Adjustable)           RF output impedance         75Ω           RF harmonics and spurious         55dBc           Phase noise         ≤-90dBc/Hz           Modulation Error Ratio (MER)         ≥35dB @256QAM (Typical)           RF output return loss         ≥14dB           General         O°C~60°C           Power requirement         AC 90~240V, 50Hz±2Hz, 30W           Net weight         5Kg           Gross weight         6.6Kg           Net Dimension         483mm×350mm×44mm	Interface	75Ω, BNC
QAM Modulating           Full compliance         DVB-C ETSI / EN300 429           QAM constellations         16, 32, 64, 128, 256, 64B, 256B QAM           Output symbol rate         2~7.2MS/s           I/Q Amplitude deviation         0.2%           I/Q Phase deviation         ≤0.2°           Phase jitter         ≤0.5°RMS           RF Output         Agile 48MHz~862MHz, adjustable           RF output frequency         Agile 48MHz~862MHz, adjustable           RF output level         100~113dBuV (Adjustable)           RF output impedance         75Ω           RF harmonics and spurious         55dBc           Phase noise         ≤-90dBc/Hz           Modulation Error Ratio (MER)         ≥35dB @256QAM (Typical)           RF output return loss         ≥14dB           General         Operating temperature         0°C~60°C           Power requirement         AC 90~240V, 50Hz±2Hz, 30W           Net weight         5Kg           Gross weight         6.6Kg           Net Dimension         483mm×350mm×44mm	Bit rate	44.736Mbps
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QAM constellations       16, 32, 64, 128, 256, 64B, 256B QAM         Output symbol rate       2~7.2MS/s         I/Q Amplitude deviation       0.2%         I/Q Phase deviation       ≤0.2°         Phase jitter       ≤0.5°RMS         RF Output       Agile 48MHz~862MHz, adjustable         RF output level       100~113dBuV (Adjustable)         RF output impedance       75Ω         RF harmonics and spurious       55dBc         Phase noise       ≤-90dBc/Hz         Modulation Error Ratio (MER)       ≥35dB @256QAM (Typical)         RF output return loss       ≥14dB         General       Operating temperature       0°C~60°C         Power requirement       AC 90~240V, 50Hz±2Hz, 30W         Net weight       5Kg         Gross weight       6.6Kg         Net Dimension       483mmx350mmx44mm	QAM Modulating	
Output symbol rate         2~7.2MS/s           I/Q Amplitude deviation         0.2%           I/Q Phase deviation         ≤0.2°           Phase jitter         ≤0.5°RMS           RF Output         Agile 48MHz~862MHz, adjustable           RF output level         100~113dBuV (Adjustable)           RF output impedance         75Ω           RF harmonics and spurious         55dBc           Phase noise         ≤-90dBc/Hz           Modulation Error Ratio (MER)         ≥35dB @256QAM (Typical)           RF output return loss         ≥14dB           General         Operating temperature         0°C~60°C           Power requirement         AC 90~240V, 50Hz±2Hz, 30W           Net weight         5Kg           Gross weight         6.6Kg           Net Dimension         483mmx350mmx44mm	Full compliance	DVB-C ETSI / EN300 429
I/Q Amplitude deviation         0.2%           I/Q Phase deviation         ≤0.2°           Phase jitter         ≤0.5°RMS           RF Output         Agile 48MHz~862MHz, adjustable           RF output frequency         Agile 48MHz~862MHz, adjustable           RF output level         100~113dBuV (Adjustable)           RF output impedance         75Ω           RF harmonics and spurious         55dBc           Phase noise         ≤-90dBc/Hz           Modulation Error Ratio (MER)         ≥35dB @256QAM (Typical)           RF output return loss         ≥14dB           General         Operating temperature           Operating temperature         0°C~60°C           Power requirement         AC 90~240V, 50Hz±2Hz, 30W           Net weight         5Kg           Gross weight         6.6Kg           Net Dimension         483mm×350mm×44mm	QAM constellations	16, 32, 64, 128, 256, 64B, 256B QAM
I/Q Phase jitter         ≤0.5°RMS           RF Output         Agile 48MHz~862MHz, adjustable           RF output frequency         Agile 48MHz~862MHz, adjustable           RF output level         100~113dBuV (Adjustable)           RF output impedance         75Ω           RF harmonics and spurious         55dBc           Phase noise         ≤-90dBc/Hz           Modulation Error Ratio (MER)         ≥35dB @256QAM (Typical)           RF output return loss         ≥14dB           General         Operating temperature           Operating temperature         0°C~60°C           Power requirement         AC 90~240V, 50Hz±2Hz, 30W           Net weight         5Kg           Gross weight         6.6Kg           Net Dimension         483mm×350mm×44mm	Output symbol rate	2~7.2MS/s
Phase jitter       ≤0.5°RMS         RF Output         RF output frequency       Agile 48MHz~862MHz, adjustable         RF output level       100~113dBuV (Adjustable)         RF output impedance       75Ω         RF harmonics and spurious       55dBc         Phase noise       ≤-90dBc/Hz         Modulation Error Ratio (MER)       ≥35dB @256QAM (Typical)         RF output return loss       ≥14dB         General         Operating temperature       0°C~60°C         Power requirement       AC 90~240V, 50Hz±2Hz, 30W         Net weight       5Kg         Gross weight       6.6Kg         Net Dimension       483mm×350mm×44mm	I/Q Amplitude deviation	0.2%
RF OutputRF output frequencyAgile 48MHz~862MHz, adjustableRF output level100~113dBuV (Adjustable)RF output impedance75ΩRF harmonics and spurious55dBcPhase noise≤-90dBc/HzModulation Error Ratio (MER)≥35dB @256QAM (Typical)RF output return loss≥14dBGeneralOperating temperature0°C~60°CPower requirementAC 90~240V, 50Hz±2Hz, 30WNet weight5KgGross weight6.6KgNet Dimension483mm×350mm×44mm	I/Q Phase deviation	≤0.2°
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Phase jitter	≤0.5°RMS
RF output level $100\sim113dBuV\ (Adjustable)$ RF output impedance $75\Omega$ RF harmonics and spurious $55dBc$ Phase noise $\leq -90dBc/Hz$ Modulation Error Ratio (MER) $\geq 35dB\ @256QAM\ (Typical)$ RF output return loss $\geq 14dB$ General $O$ °C $\sim 60$ °CPower requirement $AC\ 90\sim240V\ ,\ 50Hz\pm2Hz\ ,\ 30W$ Net weight $5Kg$ Gross weight $6.6Kg$ Net Dimension $483mm\times350mm\times44mm$	RF Output	
RF output impedance $75Ω$ RF harmonics and spurious $55dBc$ Phase noise≤-90dBc/HzModulation Error Ratio (MER)≥35dB @256QAM (Typical)RF output return loss≥14dBGeneralOperating temperature $0°C~60°C$ Power requirement $AC 90~240V, 50Hz\pm2Hz, 30W$ Net weight $5Kg$ Gross weight $6.6Kg$ Net Dimension $483mm\times350mm\times44mm$	RF output frequency	Agile 48MHz~862MHz, adjustable
RF harmonics and spurious       55dBc         Phase noise       ≤-90dBc/Hz         Modulation Error Ratio (MER)       ≥35dB @256QAM (Typical)         RF output return loss       ≥14dB         General       0°C~60°C         Power requirement       AC 90~240V, 50Hz±2Hz, 30W         Net weight       5Kg         Gross weight       6.6Kg         Net Dimension       483mm×350mm×44mm	RF output level	100~113dBuV (Adjustable)
Phase noise         ≤-90dBc/Hz           Modulation Error Ratio (MER)         ≥35dB @256QAM (Typical)           RF output return loss         ≥14dB           General           Operating temperature         0°C~60°C           Power requirement         AC 90~240V, 50Hz±2Hz, 30W           Net weight         5Kg           Gross weight         6.6Kg           Net Dimension         483mm×350mm×44mm	RF output impedance	75 <b>Ω</b>
Modulation Error Ratio (MER)       ≥35dB @256QAM (Typical)         RF output return loss       ≥14dB         General         Operating temperature       0°C~60°C         Power requirement       AC 90~240V, 50Hz±2Hz, 30W         Net weight       5Kg         Gross weight       6.6Kg         Net Dimension       483mm×350mm×44mm	RF harmonics and spurious	55dBc
RF output return loss         ≥14dB           General         Operating temperature         0°C~60°C           Power requirement         AC 90~240V, 50Hz±2Hz, 30W           Net weight         5Kg           Gross weight         6.6Kg           Net Dimension         483mm×350mm×44mm	Phase noise	≤-90dBc/Hz
GeneralOperating temperature0°C~60°CPower requirementAC 90~240V, 50Hz±2Hz, 30WNet weight5KgGross weight6.6KgNet Dimension483mm×350mm×44mm	Modulation Error Ratio (MER)	≥35dB @256QAM (Typical)
Operating temperature0°C~60°CPower requirementAC 90~240V, 50Hz±2Hz, 30WNet weight5KgGross weight6.6KgNet Dimension483mm×350mm×44mm	RF output return loss	≥14dB
Power requirementAC 90~240V, 50Hz±2Hz, 30WNet weight5KgGross weight6.6KgNet Dimension483mm×350mm×44mm	General	
Net weight         5Kg           Gross weight         6.6Kg           Net Dimension         483mm×350mm×44mm	Operating temperature	0°C~60°C
Gross weight         6.6Kg           Net Dimension         483mm×350mm×44mm	Power requirement	AC 90~240V, 50Hz±2Hz, 30W
Net Dimension 483mm×350mm×44mm	Net weight	5Kg
	Gross weight	6.6Kg
Dimension 550mm×510mm×170mm	Net Dimension	483mm×350mm×44mm
	Dimension	550mm×510mm×170mm

Note: All specifications are subject to change without notice.



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