

SUNNISKY DSP1000 Digital DVB-C/QAM Agile Signal Processor

SUNNISKY DSP1000 is a high performance, professional quality digital DVB-C/QAM agile frequency 870MHz TV signal processor, it could realize the RF frequency (or TV channel) conversion for DVB-C/QAM digital RF signal, and conveniently re-arranges the frequency (or Channel) of various TV stations at local in order to solve the problem of frequency interference.

Rock solid PLL controlled tuning by advanced microprocessor insures precise UHF, VHF or CATV channel access. Careful design of the RF agile frequency input achieves a wide dynamic range and very low noise figure within tuning covers the range of 48 to 870MHz (DVB-C). The agile frequency output ranges from 48 to 870MHz (DVB-C) under controlling by another PLL circuit. Both the RF input and output channels have non-volatile memories that restore the channels automatically in the event of a power failure.



Feature

- Fully complies with DVB-C ETSI / EN 300429 standard
- Any CATV channel or agile frequency digital TV signal input within the frequency range of 48 to 870MHz (DVB-C CH1~56)
- Support ITU-T J.83 Annex A
- +58dBmV modulated CATV or UHF RF signal output within the frequency range of 48 to 870MHz (DVB-C CH1~56) with very low spurious response
- Constellation range of 16QAM / 32QAM / 64QAM / 128QAM / 256QAM
- Adjustable symbol rate from 2 to 7.2MS/s
- RF AGC (automatically gain control)
- Controls PLL tuning for precise input or output frequency by microprocessor
- Professional grade SAW filters allow true feature for adjacent channel
- -55dBc spurious performance in full 870MHz bandwidth
- Convert IF input signal to RF output (as one up-converter); And also convert RF input signal to IF output
- User friendly channel selection by push-button
- Automatically restored after power failure
- LCD display and user friendly operation
- Low power consumption
- Running continuously with excellent stability

Specification

RF Input	
Input frequency range	Agile 48 to 870MHz (DVB-C)
Input level	60 to 90dBμV (70dBμV recommended)
Input AGC Range	±10dB /±1dB
RF level control range	0 to 16dB continuously adjustable (1dB step)
QAM constellations	16, 32, 64, 128, 256 QAM
Output symbol rate	2~7.2MS/s
Input impedance	75Ω
Input Return Loss	≥12dB
IF Input and IF Output	
IF frequency	44MHz
IF output level	+20dBmV±2dB
In/output impedance	75Ω
In/output return loss	>14dB
RF Output	
Out frequency range	Agile 48 to 870MHz (DVB-C)

QAM constellations	16, 32, 64, 128, 256QAM
Output symbol rate	2~7.2MS/s
Precision of frequency conversion	$\leq 5\text{KHz}$
Phase Noise	$\geq 96\text{dBc}@10\text{KHz}$ (30~300MHz) $\geq 94\text{dBc}@10\text{KHz}$ (300~550MHz) $\geq 92\text{dBc}@10\text{KHz}$ (550~860MHz)
Plainness within 8MHz bandwidth	$\leq \pm 1\text{dB}$
Output level	+118dB μ V
RF level control range	0 to 16dB continuously adjustable (0.5dB step)
Spurious output	-55dBc
Output impedance	75 Ω
Output Return Loss	$\geq 12\text{dB}$
General	
Operating temperature	0°C~60°C
Power requirement	AC 198~240V, 50Hz \pm 2Hz, 30W
Net weight	5Kg
Net Dimension	483mm \times 410mm \times 44mm

Note: All specifications are subject to change without notice.



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