

Product Brief

10 MHz - 20 GHz Low Noise Synthesizer **APSYN420D**



The APSYN420C is a compact, wideband low phase-noise synthesizer operating from 10 MHz up to 20 GHz. The module has a 0.001 Hz frequency resolution uses a high-stability internal reference. The reference can be phase-locked with external reference (1-250 MHz) or completely bypassed for highest phase coherence.

The module has an USB and LAN interface and can be controlled using SCPI 1999 command set. Operated with an external 6V DC supply, it consumes less than 10 watts.

Key Features

- Low phase noise (-130 dBc/Hz at 1 GHz and 20 kHz offset)
- Fast switching (< 100 micro-seconds)
- High output power up to +21 dBm
- FAST PULSE, FM, CHIRPS, Sweeps
- Internal low noise OCXO reference
- Single 6V DC supply

Applications

- ATE
- LO source
- Telecom / SatCom

Key Specifications

Parameter	Value	Notes
Frequency range	0.01 to 20 GHz	
resolution	1 mili-Hz	
Switching speed	< 100 micro-secs	
Sweep	< 1 micro-sec per point	
SSB Phase noise		
at 1 kHz from carrier	-100 dBc/Hz	10 GHz carrier
at 20 kHz from carrier	-108 dBc/Hz	
Power level	17 dBm \pm 2 dB	
Output impedance	50 Ω	
VSWR	< 1.8	
Spectral purity		
output harmonics	-15 dBc	
non-harmonic spurious	-70 dBc	
Modulation	FM, PULSE, Chirps	
Internal reference frequency	10/100 MHz	Programmable
Lock to	1 to 250 MHz	
Output	10/100 MHz, +3 dBm	
Temperature stability	\pm 100 ppb	0 to 50 $^{\circ}$ C
DC Power	+ 6V, 2A max	
Control Interface	LAN, USB, SCPI 1999 command set	
Size (incl. connectors)	21 x 10.5 x 6 cm	
Weight	< 1 kgs	

Output Power

