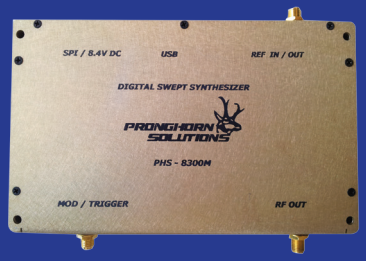
PRONGHORN 8300M

Systems Module Synthesizer 10 MHz – 18.0 GHz



The 8300M Systems Module Synthesizer is part of Pronghorn's 8300 family of microwave synthesizers which cover the frequency range of 10 MHz to 18 GHz. The 8300M is the world's smallest and lightest instrument grade 18 GHz synthesizer. In addition to the Systems Module solution, the family includes a Bench Top model (8300B) and a Handheld model (8300H). Any programs written to control the Hand Held or Bench Top models are 100% compatible with the System Module which has been designed to be used in automated manufacturing test systems or in embedded systems that need a computer controlled broad band synthesizer. The 8300 series can be ordered with an upper frequency of 6 GHz, 9 GHz, or 18 GHz.

FEATURES

- Frequency Range 10 MHz to 18 GHz
- Power output > 5 dBm
- 2 Hz Frequency Resolution
- Synthesized Frequency Sweep
- Digital Power Sweep
- Excellent Phase Noise, Spurious & Stability
- Excellent Harmonics and Subharmonics
- Lab Instrument Class performance
- USB and Front Panel Control
- Labview®, IVI compatibility
- Battery option, with 2+ hours of operation
- Weight < 1 lb
- Economical
- Digital Level Control

APPLICATIONS

- Wireless Infrastructure
- Embedded Systems
- Automatic Test Systems
- Laboratory Applications
- Amplifier and other Component Testing
- Multi-Tone Tests
- Power Amplifier Testing
- Production Testing

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PHS - 8300M

Systems Module Synthesizer 10 MHz – 18.0 GHz

The 8300M has been designed to handle a multiplicity of user applications at the lowest cost with no sacrifice in performance. It's USB and SPI interfaces plus Labview® and IVI compatibility make the 8300M an ideal component in automated test systems.

The built in TCXO provides excellent stability and will satisfy the most stringent test applications. The external reference option allows the test engineer additional flexibility and to be able to run multiple units with the same reference. The phase noise, spurious, and harmonic output performance are comparable to instrument synthesizers that are 10 times heavier and cost many times as much. The 8300M's size and power consumption are ideal for automated test systems.

KEY SPECIFICATIONS

Frequency Related

Frequency Range	150 MHz – 18 GHz
Optional	10 MHz – 18 GHz
Frequency Resolution	
Front Panel Controlled	100 kHz
USB / Computer Controlled	5 kHz (2 Hz optional)
Internal Frequency Reference	20 MHz
Temp Stability	+/- 2.5 PPM (Higher stability options available)
Internal Reference Output	Provided
External Frequency Reference	20 MHz
Reference Level	10 dBm
Connector	SMA
Switching Speed, USB Control	<200 µs (typical, no power control)

Frequency Sweep

Frequency Sweep Function	Synthesized from Start to Stop Frequency
Sweep Steps	
Manual	100
USB	10 to 10,000
Sweep Direction	
Manual	Low to High
USB Controlled	Any Direction
Dwell time at each frequency	
Manual	Fixed at 50 ms at each frequency
USB Controlled	Programmable from 10 µs
Sweep Mode	Anywhere within output frequency range Continuous Digital Sweep

Power Output

Power Output	
10 MHz - 6.0 GHz	7 dBm min
6.0 GHz - 18.0 GHz	5 dBm min
Output Power Adjustability Range	20 dB Typical, Minimum 10 dB
Power Adjustment Step Size	0.5 dB (USB), 1 dB Manual
Power Accuracy	+ 2 dB (typical)

Power Sweep

Power Sweep Function	1 dB steps from Start to Stop 0.25 dB specifiable in USB
Sweep Direction	
Manual	Low to High
USB Controlled	Either Direction
Dwell Time at each Power Level	
Manual	50 msec at each power level
USB Controlled	Programmable from 10 µs
Sweep Mode	
Manual and USB Control	Continuous Digital sweep between any two power levels

Phase Noise

	at dBc/Hz Offset			
Carrier Frequency	1 kHz	10 kHz	100 kHz	1 MHz
500 MHz	-102	-101	-124	-149
2 GHz	-90	-90	-112	-137
9 GHz	-70	-75	-96	-123
18 GHz	-70	-70	-93	-120

PHS - 8300M

Harmonics and Sub-harmonics - Typical

Frequency	Harmonics (dBc) Typ	Sub-harmonics (dBc)
0.2 GHz	30 dBc	-
0.5 GHz	30 dBc	-
1.0 GHz	40 dBc	-
2.0 GHz	60 dBc	-
4.0 GHz	40 dBc	-
6.0 GHz	30 dBc	20 dBc
8.0 GHz	30 dBc	15 dBc
12.0 GHz	30 dBc	20 dBc
18.0 GHz	30 dBc	15 dBc

Power Output

Size	6.15 " X 3.75 " X 0.75 "
Weight	< 1 lb Non-battery Option
Storage Temperature	-20° C to +70° C
Operating Temperature	0° C - 50° C Extended Range Available
Power Dissipation	7 Watts

Electrical

Input Power	+7.4 Volts DC , 900 mA, 110 V AC Power Plug w Dongle

Spurious

@ > 100 KHz offset	> 60 dB Typical

Modulation

Pulse Modulation Optional

Ordering Information

8300M	Systems Modiule Synthesizer	(Please choose a frequency option: 006, 009, 018)
Opt 006	150 MHz to 6 GHz	
Opt 009	150 MHz to 9 GHz	
Opt 018	150 MHz to 18 GHz	
Opt 100	1 PPM Reference	
Opt 101	1 Hz step size to 9 GHz/2 Hz Steps to 19GHz	
Opt 102	Ext Ref In	
Opt 131	Rechargable Battery -- 2 hours	
Opt 140	Pulse Modulation	
Opt 150	Digital Sweep Pulse Out	
Opt 151	Sweep Trigger Input	
Opt 210	Extended Low end Freq (10 MHz)	
Opt 250	Extended Low end Freq (50 MHz)	

Note: Can order only order one of the following options: 102, 150, 151.

Vertrieb durch

TACTRON ELEKTRONIK

CONTACT US

P.O Box 3316, Englewood CO 80155

+1 720 808 9832 | +1 408 836 8472 sales@pronghorn-solutions.com

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