

# Multi-Channel Direct Digital Synthesizer (DDS)

Our synthesizers offer solutions for laser applications requiring precise frequency tuning and agile control. We offer both single and multi-channel models with an embedded controller that manages bi-directional data between a computer and an acousto-optic device. Our models have multiple communication ports and firmware allowing frequency scanning, wavelength locking and temperature compensation.

Applications	
■ Spectroscopy	■ Fluorescence
■ Microscopy	■ Flow Cytometry
■ Laser Projection/Light Show	
■ Supercontinuous Laser Wavelength Selection	

Frequency Specifications	Units	1-Channel	8-Channel	8-Channel HP
Range	MHz	25-160	25-160	25-160
Resolution	Hz	0.1	0.1	0.1
Stability	ppm/°C	±2	±2	±2
Preload Time	µs	<10	<10	<10
Toggle Time	ns	<20	<20	<20

Amplitude Specifications	Units	1-Channel	8-Channel	8-Channel HP
Output Power, nominal for all channels on	Watt	0.2	1.0	3.2
Output Power, per channel	Watt	0.2	0.125	0.4
Modulation Bandwidth	MHz	>2	>2	>2
Dynamic Range	dB	>40	>30	>30
Intermodulation and Spurious	dBc	>-45	>-45	>-45
Signal to Noise Ratio	dB	>90	>65	>65

Power Input	Units	1-Channel	8-Channel	8-Channel HP
AC powered, 19-inch Rack Model	Vac	NA	100-240 @ 50-60Hz	NA
DC powered, OEM Configuration	Vdc	—	24 @ 2A	24 @ 2A

Environmental	Units	1-Channel	8-Channel	8-Channel HP
Operating temperature	°C	10-40	10-40	10-40
Size	mm	—	250 x 200 x 44	250 x 200 x 44



1-Channel Digital Synthesizer (DDS)

## GENERAL FEATURES

- 1, 8 channels, combined as composite output
- On-board composite output power measurement
- Independent linear amplitude modulation on each channel
- Common blanking signal for all channels
- Independent frequency shift modulation on each channel
- Wavelength locking / temperature compensation