



GENUS Digital 1000 Series module

Wide Band (1.2 GHz) 1 channel - RF over IP/Digital IF

2U, 2 Genus Slots - operating with 1.2 GHz of Instantaneous Bandwidth on a single full duplex RF channel.

Preliminary Specifications

RF Parameters		
Model Numbers	DI-GNS-S2-1801-S5	
RF Capacity	Single Channel Full Duplex	Rx & Tx are fully independent
Instantaneous Bandwidth	1.2 GHz	
ADC Sample Depth	12 bits per I or Q sample	
DAC Sample Depth	16 bits per I or Q sample	
Digital Data Transport	QSFP28 100GbE	
Data Protocol	IEEE-ISTO Std 2900-2021 (DIFI)	Supported Information Classes: 0x0000, 0x0002, 0x0003, 0x0004, 0x0100, 0x0102, 0x0103, 0x0104
Output Bandwidth	150MHz, 300MHz, 600MHz or 1200MHz	Selectable
Input & output ports	RF (x4): 50Ω SMA Sample / Context Data: QSFP28 1PPS: Chassis Reference 10MHz: Chassis Reference Control: RJ45 Software Update: RJ45	
Frequency range	850 to 2450 MHz	
Flatness	±0.1 dB	
Input Gain Control	15 dB	Manual in 0.25dB steps
Output Gain Control	10 dB	Manual in 0.25dB steps
Input Slope Control	10 dB	
Output Slope Control	10 dB	
Input Return Loss	Typ. 17 dB	
Output Return Loss	Typ. 17 dB	
SFDR	60dBc	
Out of Band Rejection	50dB	
Noise Figure	24dB	
1dB GCP	-5dBm	
OIP3	5dBm	



RF Parameters		
RF Power Detect	Range -50dBm to -0dBm Accuracy +/- 2dB	total power across RF band
Input RF Power	0dBm (Absolute total maximum)	
Module DC Power	12VDC	
DC consumption	<60W Full Load (Max. consumption at steady state)	
User Alarms	Via Chassis Ethernet	
Remote Control & Monitoring	REST API SNMP V3, V2C	
MTBF	TBC	

Environmental	
Operating Temperature	-0°C to +50°C
Storage Temperature	-20°C to +60°C
Location	Indoor use only, within parent GENUS chassis
Humidity	20 to 90% non-condensing, relative humidity
Operating Altitude	10,000ft / 3,000m above mean sea level
Storage Altitude	30,000ft / 9,000m above mean sea level
IP Rating	IP21

Physical Dimensions & Parameters	
Size	2Ux 2 Slots Genus compatible
Module Finish	Passivated Aluminium

Note 1: The specification is subject to regular reviews and will be updated from time to time as part of our continuing product development and improved spec accuracy.

Note 2: Operation beyond the quoted limits stated above may cause instantaneous and permanent damage.

Note 3: This product is classified as Dual Use and is subject to United Kingdom export control regulations.