

Two Channel Genus Digital 5000 Series Providing Up To 1GHz IBW in an IP65 Rated Outdoor Chassis

Genus Digital 5000 Series, model DI-G3I-S2-5501-S5, is a full duplex 2 channel converter that digitises and reconstructs IF signals in the L-band range 850 to 2450MHz. The system provides up to 1GHz total instantaneous bandwidth via 2 x 512MHz channels at up to 12 bits bit depth. QSFP28+ IP 100GbE data connectors provide the full duplex operation to the DIFI standard IEEE-ISTO Std 4900-2021. Control & Monitor is via the front panel HMI or remotely via an RJ-45 1GbE ethernet link. The converter is housed in an IP65 rated weatherproof outdoor chassis and benefits from field replaceable modules and dual redundant hot-swap power supplies. IF connectors are SMA 500hm.



Secure Communications with SNMPv3, HTTPS



Remote control & monitoring via RJ45 Ethernet via RJ45, 10BaseT/100BaseTx, ETL TCP/ IP protocol, -SNMPv3 & Web Browser Interface



Resilience from dual redundant hot-swap power supplies & field serviceable RF modules & CPU -Optional Air Conditioning units for higher operating temperature







*ODU for indication purposes only

















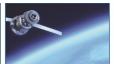
Technical specifications and operating parameters

		Digital Parameters
Rx Capacity		2 Channels ADC
Tx Capacity		2 Channels DAC
Instantaneous Bandwidth		512MHz per channel (DAC or ADC)
Sample Rate		4 GSPS per channel, Input sample rate, excluding multirate signal processing
Sample Depth		*12 bits, As transmitted over digital link
Digital Data Transport		QSFP28, 100GBe SR4
Data Protocol		(DIFI) IEEE-ISTO Std 2900-2021
WAN Synchronization		GPS (10MHz, 1PPS, NMEA timecode) Enquire for other formats
		RF Parameters
Frequency		850 to 2450MHz
Gain		0±2dB Typical, mean across band
Gain Flatness	Full band	±2.0dB
	500 MHz	±1.5dB
	Any 36MHz	±0.6dB
Input Return Loss	Тур.	17dB
	Min.	12dB
Output Return Loss	Тур.	17dB
	Min.	12dB
Noise Figure		26dB Typical
Phase Noise (dBc/ Hz)	Offset	PN
	100Hz	-62
	1kHz	-78
	10kHz	-89
	100kHz	-93
	1MHz	-106
	10MHz	-114

* 8 bits currently available

















Technical specifications and operating parameters

RF Parameters			
OIP3	15dBm		
SFDR	60dBc		
GPS Input	Active Antenna (Provided)		
Frequency Reference	10MHz		
Input & Output ports	50 Ω SMA		
Input RF Power	0dBm		
PSU Power	85-264Vac 50/60 Hz, absolute maximum		
PSU Redundancy	Dual Redundant and Alarmed, Diode OR. Hot swap.		
AC Consumption	~100W		
Alarms	Via Ethernet PSU, Fan Status, others TBC		
Remote Control & Monitoring	Ethernet (RJ45) on Rear Panel		
MTBF (Hours)	91164		
	Environmental Conditions		
Operating Temperature	-20°C - +45°C		
Storage Temperature	-40°C to +80°C Not Powered		
Humidity	20 to 90% non-condensing Relative to Humidiity		
Altitude	10,000 feet AMSL		
	Physical Dimensions & Parameters		
Weight	<18kg TBC		
Dimensions	500mm high x 550mm wide x 300mm deep Please confirm size requirements with ETL prior to order		
Front Panel Colour	RAL9003 – White (Semi-Matte)		

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 specification accuracy.

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

Note 3: Typical parameters are guide figures and measured data may deviate from the quoted figures. ETL endeavours to exceed the quoted typical parameters where practically possible.

Note 4: Please see https://www.etlsystems.com/legal-notices/ for IP rights and details.

Note 5: This product is Dual Use and subject to Export Control by the UK Government.





