

# **Dragon Digital IF System**

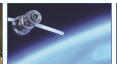
The Dragon DIF system provides digitization and reconstruction of signals in the L-band range of 850 to 2450MHz. The digitizer has input 4 channels each with 512MHz instantaneous bandwidth spanning this frequency range. These channels are transmitted via high speed ethernet in a Vita-49.2 format, compatible with IEEE-ISTO Std 2900. Similarly, it accepts multiple streams via the ethernet port, which it in turn reconstructs to L-band RF.





















# PRELIMINARY SPECIFICATION

### Technical specifications and operating parameters

		RF Parameters
Frequency		850 to 2450MHz
Rx Capacity		Up to 4 Channels ADC , option dependent
Tx Capacity		Up to 4 channels DAC , option dependent
Instantaneous Bandwidth		512MHz per channel (DAC or ADC)
Sample Rate		4 GSPS per channel, Input sample rate, excluding multirate signal processing
Sample Depth		24 bits per IQ sample, As transmitted over digital link
Digital Data Transport		QSFP+ , 2 ports – one for future expansion
Data Protocol		IEEE-ISTO Std 2900-2021
Channelization		Up to 12 sub-channels per channel At 1MHz Resolution
Gain (dB)		0±2 Typical, mean across band
Gain Flatness (dB)	Full band	±2.0
	500 MHz	±1.5
	Any 36MHz	±0.5
Input Return Loss (dB)	Тур.	17
	Min.	12
Output Return Loss (dB)	Тур.	17
	Min.	12
Isolation (dB)		X Min. between any two output ports
Noise Figure (dB)		26 Typical
Phase Noise (dBC/ Hz)	Offset	PN
	100Hz	-62
	1kHz	-78
	10kHz	-89
	100kHz	-95
	1MHz	-106
	10MHz	-116

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: 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.

















# PRELIMINARY SPECIFICATION

### Technical specifications and operating parameters

	RF Parameters
1dB GCP (dBm)	3, 1dB Gain Compression point, output power
OIP3 9dBm)	15
SFDR (dBm)	60
Maximum Latency	<10mS
Latency Variation	+/- 250uS
WAN Synchronization	GPS (10MHz, 1PPS, NMEA timecode) Enquire for other formats
GPS Input	Active Antenna (Provided)
Frequency Reference	10MHz
Input & Output ports	50Ω SMA
Input RF Power	TBC
PSU Power	85-264Vac 50/60Hz, absolute maximum
PSU Redundancy	Dual Redundant and Alarmed, Diode OR. Hot swap.
AC Consumption	TBC
Alarms	Via Ethernet PSU, Fan Status, others TBC
Remote Control & Monitoring	Ethernet (RJ45) on Rear Panel
MTBF	TBC
	Environmental Conditions
Operating Temperature (°C)	0 to 45°C
Storage Temperature (°C)	-20°C to +75°C
Humidity	20 to 90% non-condensing
Altitude	10,000 feet AMSL
	Physical Dimensions & Parameters
Weight (kg)	TBC
Dimensions	2U high x 550mm deep x 19" wide
Front Panel Colour	RAL9003 – White (Semi-Matte)

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