AMERGINT

SPECIFICATIONS

Physical Information	Specification
RF Connectors	*Recommend IO panel; loose cables can be provided if IO panel is not an option*
Server Dimensions	*Typical Dell R740 Server: 2U, 3.4 H x 17.08 W x 29.03 D (in)*

Timing and Reference Signals	Specification
Frequency Reference	*10 MHz*
Internal Reference Accuracy	*< 0.1 ppm*
Time Reference Supported	*IRIG-B, 1PPS*
Time Reference Voltage Levels (for IRIG and 1PPS)	*0.1 to 5 v peak-to-peak*
Timing Reference Impedance	*50 Ohms*
Timing Reference Switching Threshold	*-10 dBM*
Timing Reference Max Input Level	*+10 dBM*

RF Input	Specification
Architecture	*14 bit RF SoC ADC*
Number of Input Channels	*8*
Frequency Range	*10 - 6000 MHz*
Power Range	*-100 to +25 dBm*
AGC Range	*59 dB*
Alias Rejection	*75 dB min*
Input Impedance (nominal)	*Ohms*
Input P1dB	*> 0*
Instantaneous Bandwidth	*600 MHz sing channe 1.2 GH max spread ac s all ch nels)*
Instantaneous Dynamic Range	*> 7 dB*
Noise Figure (at max gain)	*≤ 6 dB typical)*
RF Gain	*20 dB*
Sample Rate	*5000 MS/s*
Sample Width	*14 bits / sample*
Tuning Step Size	*< 1 MHz*
VSWR	*< 1.5:1*

Digital IO Card	Specification
Timing Signal / Reference	*1 PPS, IRIG, SMA (2)*
Memory	*2 KB EEPROM*
Digital Interfaces:	*Two (2) 42 pin connectors*
Single-Ended GPIO	*12 bidirectional 3.3V LVCMOS (6 per connector)*
	10 MHz max data rate
LVDS GPIO	*8 Rx irs (4 per connector)*
	8 Tx p s (4 per connector)
	100 Hz max data rate
12C B	*One (1) ind ual addressable b per connector*
	100 K max data rate

RF Output	Specification
Architectur	*14 bit RF SoC DAC*
Number Output nnels	*8*
Frequenc ange	*10 - 6000 MHz*
Pow Range	*-40 to +10 dBm*
ynami nge	*> 74 dB*
Ins tanec s Bandwith	*1250 MHz max*
Instan eous Dynamic Range	*> 65 dB*
mpedance (nominal)	*50 Ohms*
Phase Noise	*TBD*
Power Accuracy	*+/- 0.5 dB*
Sample Rate	*6800 MS/s*
Spurious	*< -65 dBc*
Sweep Modes	*Triangle, Return to 0*
Sweep Rates	*10 kHz/s max*
Sweep Limits	*center-500 to center+500 kHz*
Tuning Step Size	*< 1 MHz*
VSWR	*< 1.5:1*

Environmental spec ations of the wave:IQ, including operating / storage ter erature and relative humidity, are derived from the server that is selected for the PCIe digital IO card. Consult the server manufacturer specifications for this information.

Note: Specification values listed here are preliminary and subject to change.

2315 Briargate Pkwy., Suite 100
Colorado Springs, CO 80920
www.amergint.com | info@amergint.com
719-522-2800

www.amergint.com
@AMERGINT
@AMERGINT
amergint-technologies

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