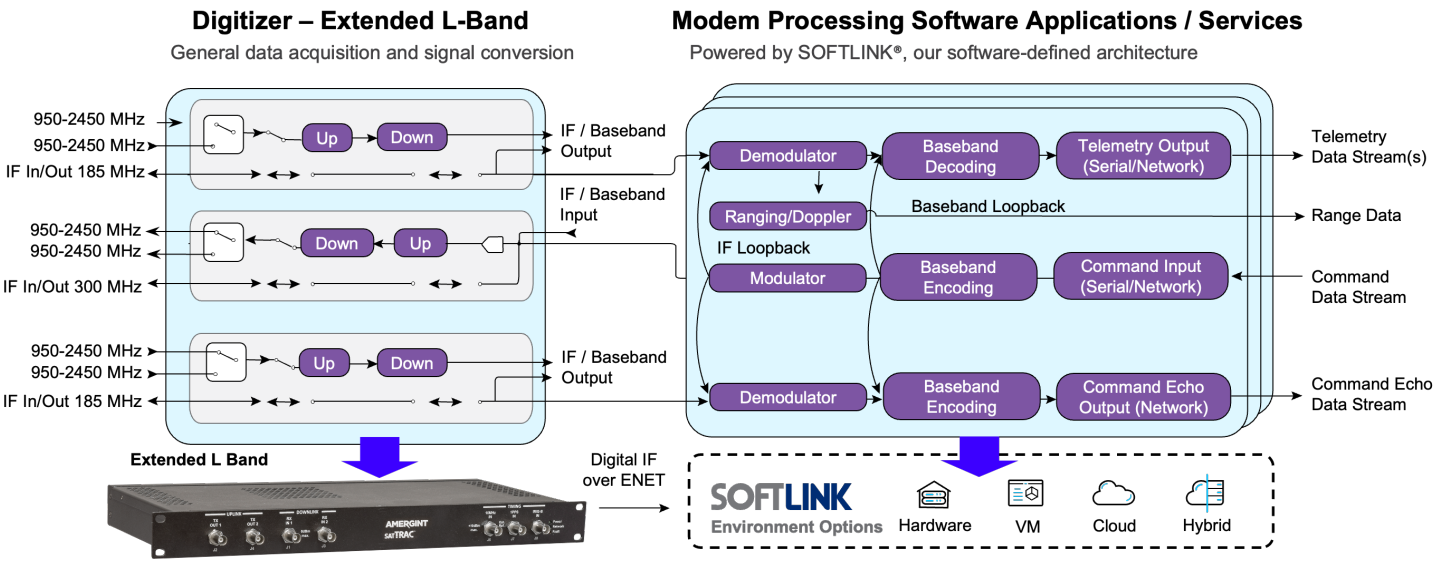
ARKA

EXTENDED L-BAND DIGITIZER

Use with our satTRAC® Modem

Our satTRAC Modem—a true software modem—uses one or more software applications / services and a variety of digitizer options to support a wide range of satellite TT&C, payload, communications, and test functions.



Visit our website for additional information on our satTRAC family of products.

SPECIFICATIONS

TIMING & REFERENCE SIGNALS	SPECIFICATION
Frequency Reference	10 MHz
Internal Frequency Reference Accuracy	< 0.1 ppm
External Frequency Reference Input:	
Level Range	-10 to +10 dBm
Impedance	50 Ohms
Phase-Lock Frequency Range	+/-5 Hz
Spurious	-60 dBc max
Phase Noise at Offset ≥ 10 Hz	-86 dBc/Hz max
Time References Supported	IRIG-B, 1PPS, NTP
Time Reference Voltage Levels (for IRIG and 1PPS)	0.3 to 5 V peak-to-peak
Time Reference Impedance (for IRIG and 1PPS)	10K Ohms

ANALOG VIDEO I/O	SPECIFICATION
Video Input & Output Channels	2 In, 2 Out
Video Bandwidth	7.5 MHz
Input / Output Impedancy	50 Ohms

PHYSICAL INFORMATION	SPECIFICATION
Weight	< 65 lbs
Server Dimensions	3.4 H x 19 W x 25.5 D (in)
satTRAC Dimensions	1.75 H x 17.1 W x 15 D (in)
Power Requirements	+12 V DC at 6 Amps max

SPECIFICATIONS (CONT.)

IF OUTPUT	SPECIFICATION
Architecture	Dual Conversion
Number of Output Channels	1 (1 of 2 selectable ports)
Frequency Range	950 to 2450 MHz
Output Power Range	-30 to +10 dBm
Output P1dB	+14 dBm
Output Power Accuracy	+/-0.5 dB
Instantaneous Dynamic Range	80 dB
Noise Power Density (at +/-100 MHz from center frequency with +10 dBm)	TBD dBm/Hz
Output VSWR	1.8:1
Output Impedance (nominal)	50 Ohms
Instantaneous Bandwidth	100 MHz
Tuning Step Size	< 1 µHz
Output Spurious (in-band)	< -65 dBc
Output Spurious (out-of-band)	< -55 dBc
Frequency Stability and Aging (using internal reference)	+/- 5 ppb over operating temp range, < +/- 100 ppb/yr
Amplitude Response (Flatness)	+/- 0.2dB over 4 MHz
Phase Noise:	
10 Hz	-60 dBc/Hz
100 Hz	-80 dBc/Hz
1 kHz	-90 dBc/Hz
10 kHz	-95 dBc/Hz
100 kHz	-97 dBc/Hz
1 MHz	-115 dBc/Hz
10 MHz	-124 dBc/Hz
100 MHz	-136 dBc/Hz
IF Input / Output Frequency	300 MHz

EXTENDED L-BAND DIGITIZER CHASSIS FRONT

UNIVERSAL DIGITIZER CHASSIS BACK

RF INPUT	SPECIFICATION
Architecture	Dual Conversion
Number of Input Channels	2 (1 of 2 selectable ports per channel)
Frequency Range	950 to 2450 MHz
Operational Input Power Range	-100 to -25 dBm
Input P1dB	-20 dBm
Maximum Input Signal (damage)	+23 dBm
Instantaneous Dynamic Range	> 74 dB
Noise Figure (at max gain)	≤ 8 dB
Input VSWR	1.8: 1
Input Impedance (nominal)	50 Ohms
AGC (50 dB range) Time Constant	0.001 to 1 seconds
Instantaneous Bandwidth	100 MHz
Tuning Step Size	< 1 µHz
Amplitude Response (flatness)	+/- 0.2dB over 4MHz
Image Rejection:	
First IF Second IF	75 dB 60 dB
Input Frequency Response:	
Out-of-Band	-45 dB @ fin ≥ 3600 MHz -45 dB @ fin ≤ 615 MHz
In-Band	-45 dB @ offset ≥ ± 300 MHz
Amplitude Response (Flatness)	± 0.2 dB over 4 MHz
IF Input/Output Frequency	185 MHz

ENVIRONMENTAL INFORMATION	SPECIFICATION
Server Temperature (Operating)	-5°C to 40°C
Server Temperature (Storage)	-40°C to 65°C
Server Relative Humidity	5% to 90% non-condensing
satTRAC-70MHz Temperature (Operating)	-5°C to 45°C
satTRAC-70MHz Temperature (Storage)	-40°C to 65°C
satTRAC-70MHz Relative Humidity	5% to 90% non-condensing

FOR ADDITIONAL INFORMATION:
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