

Monics® 1500

Monitor Spectrum and Protect Bandwidth



With the increase in the number of satellites, bandwidth and beams, it is becoming more challenging than ever to mitigate potential interference.

This new dense and more congested signal environment requires high bandwidth and advanced spectrum monitoring capabilities.

Protect Your Revenue with Advanced Carrier Monitoring

To address this growing challenge, Kratos has developed the Monics® 1500, a fully featured, high-bandwidth and advanced carrier monitoring product.

The sensor provides key measurements to the industry leading Monics carrier monitoring software which helps operators effectively see what is happening with their communications payloads and protect bandwidth and maintain Quality of Service (QoS).

The Monics 1500 provides 500 MHz of instantaneous bandwidth to monitor high throughput environments. It connects to the local network server (LNS) and can be managed by the Monics central data server (CDS) to provide visibility to the NOC.

Better RF performance and Measurement Speed

The digital signal processing (DSP) technology provides insights beyond a traditional spectrum analyzer with advanced capabilities.



Identify and analyze interfering signals underneath revenue generating bandwidth without service interruptions



Enables advanced analysis capabilities including – carrier under carrier, frequency scan, spectrogram and ESG calibration



Provides standard frequency and power measurements, and carrier modulation analysis up to DVB-S2X 128 APSK



Improves visibility into RF operations and confidence in SLAs with precision measurements that provide repeatable results

Key Features

- Monitor signals and analyze for modulation type, symbol rate, measured Es/NO and interference
- Capable of monitoring 500 MHz Instantaneous Bandwidth
- Supports a frequency range of 950 to 2450 MHz
- Supports DIFI standard

Advanced Carrier Monitoring to Mitigate Interference

The Monics 1500 takes advantage of advanced Digital Signal Processing (DSP) technology to provide monitoring capabilities beyond a spectrum analyzer. The carrier monitoring product provides time domain analysis capabilities including modulation type, symbol rate, measured Es/No, Eb/No and optional FEC detection. It helps operators identify and analyze interfering signals underneath revenue generating bandwidth without service interruptions.

Standard Frequency Domain Measurements	Kratos DSP Enabled Time Domain Measurements
Center Frequency	Modulation Type
Bandwidth	Symbol Rate
EIRP	Es/No
C/No	Data Rate
C/N	BER
Backoff	C/I
PEB (Lease Blocks)	Optional Carrier Standard Detection
(Co+No)/No	Optional FEC Detection



The Monics 1500 sensor provides frequency and advanced time domain measurements.



The DSP enabled measurements enable Monics to deliver sophisticated interference detection capabilities.

Digitizer Specifications

Monics Gateway/Near Edge	1500
RF Inputs(Rx)	1
Frequency Range	950 to 2450 MHz
Instantaneous Bandwidth per RF input	500 MHz
Connector	SMA, 50 Ohms
Input Range	-60 dBm to 0 dBm
LNB Power Supply	13 VDC or 18 VDC
LNB Tone	22KHz
Timing, Frequency, GPS Interfaces	Single SMA connector configurable as: 1 PPS, 10 MHz, IRIG-DC or GPS Antenna
Digitizer Standard Support	DIFI/IEEE-ISTO Std 4900-2021 or VITA 49
Management Interface	10 GbE RJ-45
Mechanical	Height: 1.7" (44.5 mm), Width: 17.2" (436.88 mm) Depth: 16.9" (429.3 mm)
Operating Temperature Range	0°C to 40°C
Compute Specs	
Processor	32 C/ 64 vCPU 5th Gen Intel Xeon D
RAM	256 GB DDR5
Storage	960 GB NVMe SSD
Data Interfaces	2 x SFP28 25 GbE LAN 2 x RJ45 1 GbE LAN (Intel® I350-AM2) 2 x RJ45 1 GbE LAN (Intel® I210-IT) 1 x RJ45 1 GbE Dedicated IPMI LAN
Peripheral Interfaces	1 x VGA 2 x USB 2.0