# OpenSpace® Edge 6500R Series

## Wideband Digitizers for RF Over IP Transport and Virtualized Operations

*OpenSpace Edge 6500R Series Digitizer*

### *Digitize RF for Advanced Capabilities*

- *Transport RF over any distance and network*
- *Digitize RF for virtual signal processing*
- *Enable improved visibility for carrier monitoring*
- *Locate RF interference faster and more accurately*

OpenSpace Edge 6500R series wideband digitizers eliminate the distance constraints of RF transport and open the door to virtualized ground system operations. Edge 6500R digitizers provide options to digitize from 500 MHz to 3 GHz of RF spectrum in real-time, converts the RF signals into network-ready IP packets using the DIFI or VITA 49 standard and transports the data in an assured manner over private and public IP networks.

### Applications

Edge 6500R digitizers support RF over IP transport for wideband satellite signals from the network edge back to data centers or customer systems. These digitizers provide network support for high traffic rate applications including earth observation, satellite communications, carrier monitoring and more.

### Adopt Virtual Ground Station Operations

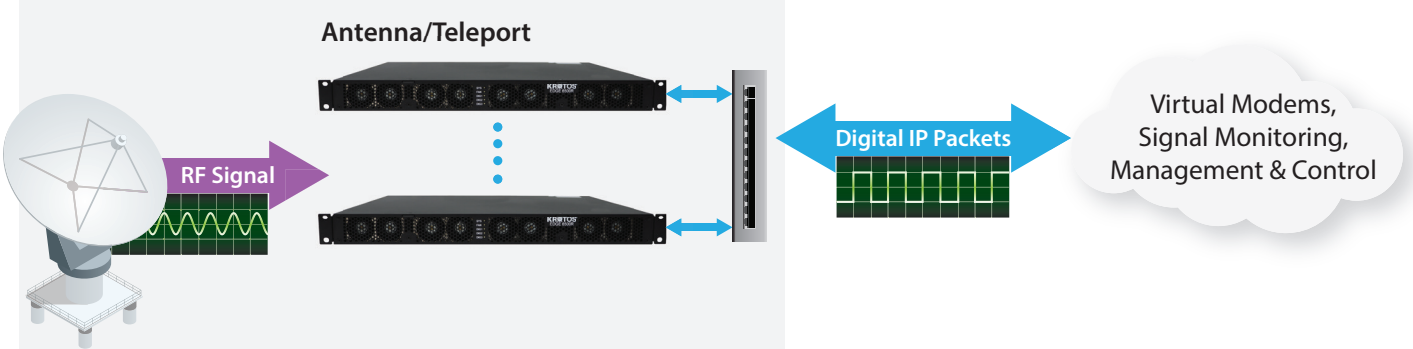
As ground station operations evolve and move toward more digital and virtual infrastructures, Edge 6500R digitizers serve as the on-ramp by converting RF signals into digital IP packets. The digital stream can then be transported reliably and accurately for signal processing in virtualized and cloud-based environments to take advantage of cost and scale efficiencies.

Edge 6500R digitizers serve as the on-ramp for Kratos' OpenSpace Platform, the first fully digital, virtualized, software-defined and orchestrated platform in the satellite industry. The OpenSpace Platform dynamically supports multi-satellite, multi-orbit, multi-payload and multi-band operations.

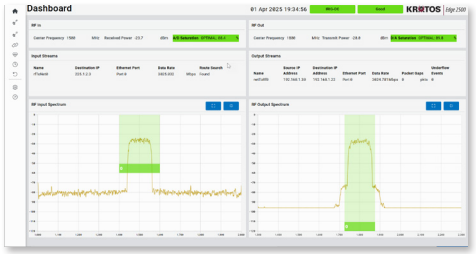
### Transport High-Bandwidth RF over any Distance and any IP Network

Edge 6500R digitizers enable operators to transport signals efficiently, assuring a high quality of service, while also reducing costs by eliminating expensive RF signal processing equipment at every ground station. Analog signals are readily converted into digital IP packets and transmitted over any distance and network. These digitizers provide time deterministic, reliable, and assured data traffic using standards-based DIFI or VITA-49 protocol for processing and utilization in public cloud, private data center or hybrid cloud environments.

Digitizing at up to 12 bits allows RF spectrum quality in the data stream to improve customer data reproduction. Edge 6500R digitizers provide a size, weight and power advantage in the market, offering significantly reduced operational costs and infrastructure impact.

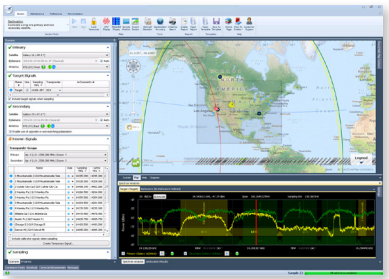



*The Edge 6500 digitizes the RF into IP for processing in the OpenSpace virtualized ground station.*




*The Edge 6500R user interface displays the RF input and output of the digitized stream.*


*Edge 6500R digitizers enable DSP measurement capabilities with Monics to deliver sophisticated interference detection capabilities.*



*satID offers the capability to geolocate within 5 km of the interfering signal.*

## Carrier Monitoring - Monitor and Protect Signal Quality

Edge 6500R series digitizers provide the latest in digital signal processing to unlock the full potential of the industry leading Monics® Carrier Monitoring and Interference Detection System. Satellite operators and service providers can monitor carriers and determine signal information such as modulation type and symbol rate and analyze any interfering signals lurking underneath. This enables Monics to improve visibility into RF operations, monitor signal quality and help assure SLAs.

## Signal Geolocation – Locate RF Interference Faster and More Accurately

Edge 6500R digitizers support the digital signal processing for satID, an accurate, fast, all-in-one solution for locating and identifying sources of interference, including VSAT/TDMA terminals. With satID, operators can locate RF interference faster and more accurately.

### OpenSpace Edge 6500R Series Technical Specifications

| | **6501R** | **6502R** | **6503R** |
|---|---|---|---|
| RF Inputs | 1 x RX/TX | 2 x RX/TX | 3 x RX/TX |
| Additional RF Licenses | Add one additional license | Add up to 2 additional licenses | Add up to 3 additional licenses |
| Frequency | 950 to 2450 MHz | 950 to 2450 MHz | 950 to 2450 MHz |
| Instantaneous Bandwidth per RF input/output | 500 MHz | 500 MHz | 500 MHz |
| TX Interface | | | |
| Connector | SMA, 50 Ohms | SMA, 50 Ohms | SMA, 50 Ohms |
| Output Range | -40 dBM to + 5 dBm | -40 dBM to + 5 dBm | -40 dBM to + 5 dBm |
| BUC Reference | 10 MHz or 50 MHz | 10 MHz or 50 MHz | 10 MHz or 50 MHz |
| RX Interface | | | |
| Connector | SMA, 50 Ohms | SMA, 50 Ohms | SMA, 50 Ohms |
| Input Range | -60 dBm to 0 dBm | -60 dBm to 0 dBm | -60 dBm to 0 dBm |
| LNB Power Supply | 13 VDC or 18 VDC | 13 VDC or 18 VDC | 13 VDC or 18 VDC |
| LNB Tone | 22KHz | 22KHz | 22KHz |
| Timing, Frequency, GPS Interfaces | 1PPS (IRIG-DC) and 10MHz In/Out BNC | 1PPS (IRIG-DC) and 10MHz In/Out BNC | 1PPS (IRIG-DC) and 10MHz In/Out BNC |
| Data Interface | 1 QSFP+ | 2 QSFP+ | 3 QSFP+ |
| Digitizer Standard Support | DIFI/IEEE-ISTO Std 4900-2021 or VITA 49 | DIFI/IEEE-ISTO Std 4900-2021 or VITA 49 | DIFI/IEEE-ISTO Std 4900-2021 or VITA 49 |
| Management Interface | 1 RJ45 1 GbE | 1 RJ45 1 GbE | 1 RJ45 1 GbE |
| Mechanical | 1.7" H x 17.2" W x 15.7" D | 1.7" H x 17.2" W x 15.7" D | 1.7" H x 17.2" W x 15.7" D |
| Operating Temperature Range | 0°C to 40°C | 0°C to 40°C | 0°C to 40°C |
| Weight | 13.5 lbs | 14.5 lbs | 15.5 lbs |