Antenna Systems Data Processor
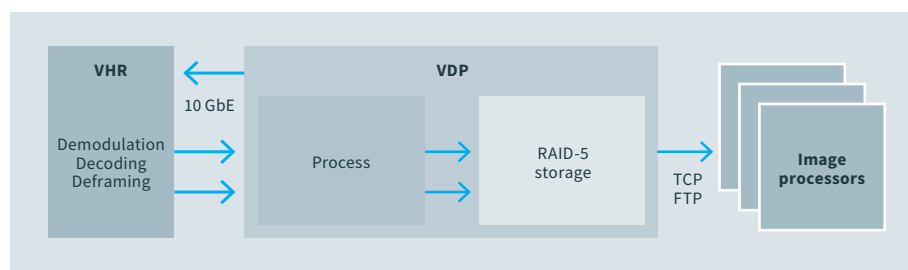
For remote sensing and Earth observation

Data Processor overview

From the world leader in Earth observation ground systems and high-rate receivers, the Viasat Antenna Systems Data Processor (VDP) provides high-speed data processing, storage, and forwarding of X- and Ka-band transmissions. Connecting directly to a Viasat High-Rate Receiver, the processor captures valuable satellite data and quality metadata, performing user-configurable processing and storage to disk. The user can stream data in real time or archive data for later retrieval.

The processor easily interfaces with image processors through TCP, FTP, NFS, or Samba connections and replaces legacy hardware-based connections, such as ECL or LVDS, eliminating costly data capture devices.

Architectural superiority

Having a separate receiver and processor creates unique advantages to the ground station design and operations. Based on an enterprise-class server, the processor provides an unparalleled level of processing power and reliability in a compact package. It can simultaneously store and forward at full data rates, eliminating the possibility of buffer overruns, ensuring no data is lost, and allowing near real-time forwarding of data. The high-speed and highly reliable RAID-5+1 disk configuration provides over 2 TB of data storage with high data throughput. Storage volumes can be increased with a simple hardware upgrade. When connected together, the Viasat processor auto-detects attached Viasat receiver for effortless setup.

Data Processor at-a-glance

POWERFUL HARDWARE
- › Connects to Viasat receiver
- › 8 channels of recording
- › 3.2 Gbps total throughput
- › 2.2 TB of data storage
- › 10 GbE data ports
- › Compact 1U design

FEATURE-RICH
- › File playback
- › PRBS/BER test
- › CADU filtering/sorting
- › CCSDS CFDP/raw

USER-FRIENDLY
- › Web GUI design
- › Intuitive JSON M&C

SECURITY
- › Linux-based
- › Secure data transfer

RELIABILITY
- › Enterprise-class system
- › RAID-5+1 storage
- › Redundant power supplies
- › MIL-STD-810 tested

OPTIONS
- › Increased storage volume
- › Customized processing
- › Security-hardening