High-Rate Receiver 1200

For Remote Sensing and Earth Observation

THE NEW STANDARD IN WIDEBAND DATA RECEPTION

» Multi-mission
» License-free
» Reliable and secure
» Innovative

From the world leader in Earth Observation ground systems, the Viasat High-Rate Receiver 1200 provides high-speed demodulation and decoding of wideband transmissions at X- and Ka-band. Supporting current and future optical, SAR, scientific, and meteorological satellites with the latest waveforms, a single receiver can provide multi-channel support up to 2.4 Gbps data rate. With two IF inputs, each with two demodulators, it is particularly suited for high-resolution multi-channel or dual polarization satellites with wideband downlinks such as Worldview or Pleiades.

The receiver is designed to optimize the entire ground station, simplifying station design and maximizing reliability. With user selectable IF frequency bands and multi-channel tuning, legacy station components can be eliminated and overall station design optimized. The high reliability, FPGA/Linux-based design maximizes station reliability, ensuring images are received when it counts.

The receiver interfaces to popular image processors through ECL or 10 GbE connections and is typically used with a companion Viasat data processor to provide further data processing, data storage, and FTP and TCP forwarding.

The true multi-mission design allows it to be used in a variety of applications, from multi-satellite ground stations to satellite test-bench environments.

SUPPORTED SATELLITES

» Aqua/Aura/Terra
» Worldview-1/2/3
» Landsat-7/8
» Pleiades-1A/1B
» Spot-6/7
» Kompsat Series
» RadarSat-1/2
» TerraSAR-X/TanDEM-X
» IRS Series
» CartoSat Series
» COSMO-Skymed
» Gokturk-1/2/3
» GeoEye-1
» CBERS Series
» Sentinel Series
» Many Others...

HIGH-RATE RECEIVER 1200 AT-A-GLANCE

Hardware Advantages

» Two IF inputs
» Four demodulators
» Test modulator
» 2.4 Gbps total throughput
» Advanced coding
» Adaptive equalization
» Compact 2U design

Optimizes System Design

» User selectable input band
» Tunable IF frequency
» Multi-mission design

User Friendly

» All web GUI design
» Intuitive JSON interface

Security

» Hardware-based design
» Linux-based M&C

Reliability

» Non-PC based
» Redundant power supplies
» User serviceable fans
» MIL-STD-810 tested

Options

» VDP processor/storage
» LVDS or CML output
» Customized waveforms

SPECIFICATIONS

MODULATIONS AND RATES

M d a	BPSK, QPSK, OQPSK, AQPSK[2], 8PSK,16QAM[1,2]
Va ab e M d a	OQPSK/8PSK (Worldview-3)
S b Ra e	» 7.5 to 200 MBd x 4 channels » 7.5 to 400 MBd x 2 channels
Ba eba d I e ace	» Dual 10 GbE » ECL, data/clock interface[2]
Da a Ra e	» 7.5 to 600 Mbps x 4 channels » 7.5 to 1200 Mbps x 2 channels
P e S a f F e	» Root-raised cosine (0.2 to 1.0), Unshaped (sinc spectrum/I&D)

FEC

C e