

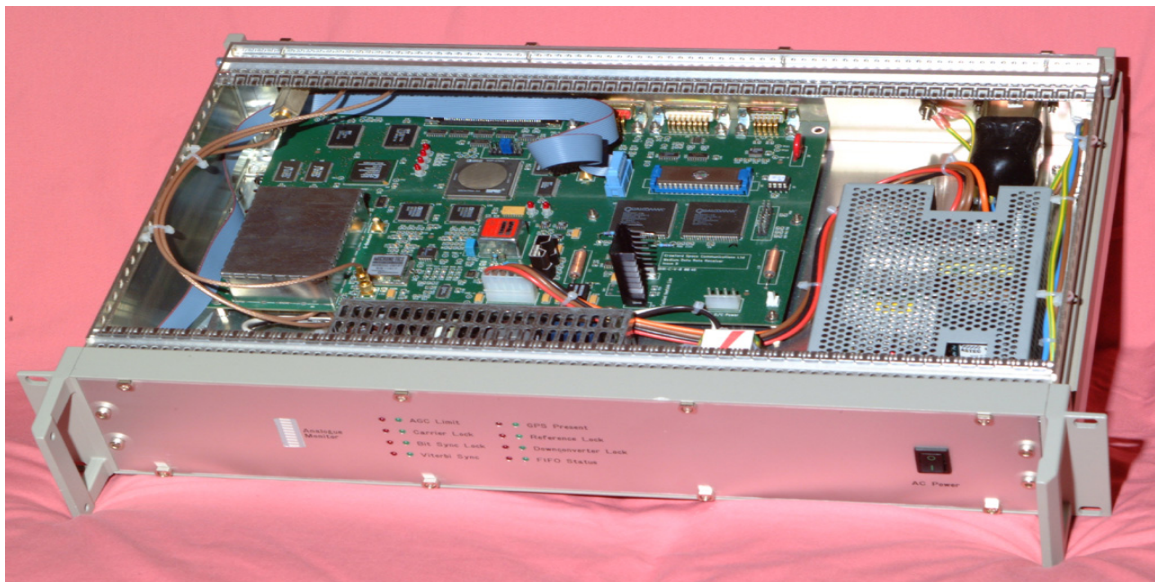
HARDWARE

2met![®] DSR III Release 2.3 Adaptable Satellite Telemetry Receiver

New earth observation satellites are coming soon. VCS has set up a new development for covering the development in the Earth Observation Satellite business. The new 2met![®] DSR III will operate on various modulation / coding formats, with advanced monitoring capabilities and is ready for ingesting data from several EO missions.

Your investment into the future – the adaptable telemetry receiver

2met![®] DSR III



FUNCTIONS	ADVANTAGES
<ul style="list-style-type: none"> ▪ Handling of several missions such as EOS TERRA and AQUA, NOAA HRPT, Feng Yun C-HRPT, METOP A-HRPT ▪ Supporting of BPSK / QPSK / OQPSK / 8PSK in NRZ modulation ▪ Configuration via editable text files extended rate XR version 	<ul style="list-style-type: none"> ▪ Simplified system layout ▪ Data output primarily by a 16-bit parallel interface ▪ Multi-mission capability ▪ CLK/NRZ output on RS422 ▪ Parallel interface card (EDT) drivers running on LINUX, SOLARIS or Windows operating systems

■ Description

The implementation of the **2met!® DSR III** allows for reception of several Earth Observation Satellites. It supports data rates from ~0.5Mbit/s to ~60Mbit/s operation de-pendent on various modulation / coding formats, with advanced monitoring capabilities and comprehensive user programmability via a number of utility programs. The main functions are

- standard IF input is 1-1.5GHz but others (e.g. a fixed 720MHz IF) can be supplied
- Modulation supported is BPSK / QPSK / OQPSK / 8PSK
- Software frame synchronisation (to various standards e.g. CCSDS or special formats)
- Viterbi decoding for R=1/2 K=7 operation (ESA/NASA standard) in BPSK like "serial" mode (e.g. Terra), or QPSK like "parallel" mode (e.g. MSG HRIT)
- Provision of monitoring information

After appropriate filtering, the IF input signal is processed by a dedicated I/Q de-modulator chip. Baseband filter and A/D conversion follow before an FPGA translates the samples to soft decision values. Supplied utility software allows missions to be downloaded and uploaded via a RS232 serial link from user edited text files.

Data output is primarily by a 16-bit parallel interface (EDT PCI CD-60 interface card in the PC) and this can sustain up to 480Mbit/s in hard decision mode, or 120Mbit/s in 4-bit soft decision mode.

Tuning / search range is programmable up to +/- 14MHz so the system can easily cope with satellite frequency uncertainty and LEO Doppler to beyond 30GHz carrier downlinks.

Also provided is an always-on CLK/NRZ output on RS422, and a matching select-able RS422 input (both to 15Mbit/s by RS422 standard), either for legacy frame sync hardware or to allow an external decryption box to be inserted.

■ Technical Descriptions

IF Specifications

Input frequencies 1 – 1.5 GHz

Electrical Specifications

Supply Voltage 85-250 V AC

Power Consumption 100 VA

Technology Loss 0.4 dB typical

Interface Specifications

16-bit parallel or RS422

Environmental

Temperature 0 ... + 40° C

Humidity 10% ... 95%

Mechanical Specifications

Size 2HU, 19" Form factor

Supported Missions/Models

QPSK parallel	MSG HRIT
QPSK, R=3/4	METOP A-HRPT
BPSK serial	Terra MODIS
QPSK async	Terra convolution coded part

■ Ordering Information

- **2met!® DSR III**

This version provides all functions to receive data from all relevant HRPT missions.

■ Contacts

If you have any questions, please contact our Marketing and Sales Department at

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