

BSR200

RECEIVE



Broadband Satellite Receiver

The BSR200 is a professional DVB receiver which provides a solid and still flexible platform for receiving, processing, and forwarding of DVB signals. The well-defined base system is offered in different versions. Together with a set of available equipment options, the BSR200 can be tailored to the demands of our customers. Being small, ruggedized, powerful, and energy efficient, the device fits perfectly in every operating environment. The possibility for automation and integration is a key aspect of all gcs products and is addressed by the *Flex:RPC* and SNMP interfaces, based on public standards and open technology.

Applications

Tune/Monitor DVB-S/S2 Signals

Tuning and monitoring signal characteristics is one of the most basic applications provided by the BSR200, and is as easy as it can be. The user just has to enter the frequency and symbol rate of the carrier and the BSR200 does the rest. The high-quality demodulator hardware provides numerous signal quality and performance indicators. This data is available at the user interface, but can also be accessed by other systems programmatically, using the *Flex:RPC* or SNMP interfaces.

View/Access DVB Service Information

Once a carrier is locked, the BSR200 also receives and interprets service information present on the current carrier. By doing so, the BSR200 gains knowledge about all services/programs hosted on the selected carrier. It also collects statistics on the individual streams of the TS multiplex and items/sections contained in it. This service information, combined with the statistics being collected, is presented by the user interface in an intuitive manner. This view also allows to easily identify the broadcast network and service providers, as well as other carriers referred by the signaling information.

Receive IP Services

Based on the services view, the user can select data broadcast services which are intended to be received. The BSR200 will then automatically decode the data streams (PIDs) belonging to the service(s), and output the data packets on the data network interface. Besides this, it is also possible to select single streams that should be received, that may not be referenced by a service. Finally, the BSR200 is also capable of receiving all IP streams on the complete carrier at once. Note that the device will by itself determine the properties of the data stream, such as encapsulation protocols and extensions used – the operator does not need to supply any extra information.

Convert between Satellite L-Band, RTP and ASI

Due to its manifold input/output capabilities, the BSR200 is most suitable for converting among different link types and data formats commonly used in digital broadcasting environments.

Key features

- ▶ CCM, VCM, and ACM operation mode
- ▶ ProACM™ support
- ▶ DVB-S and DVB-S2 compliant (EN 301 421, EN 302 307)
- ▶ QPSK / 8PSK / 16APSK / 32APSK demodulation
- ▶ Normal and short FEC frames, pilots on or off
- ▶ Automatic IP decoding
 - Fully automatic detection of encapsulation protocols / extensions
 - Decapsulation based on gcs technology (*Flex:DVB* processing)
 - MPE / ULE support (MPE section packing, ULE extensions)
 - Generic Stream Encapsulation (GSE)
 - Full-carrier decapsulation
 - Reception of data broadcast services
- ▶ Input options
 - DVB-S/S2 professional mode (GSE, ULE, MPE)
 - DVB-S/S2 broadcast mode (ULE, MPE)
 - ASI (ULE, MPE)
 - Hardware time-stamping
- ▶ Output capabilities
 - MPEG-2 TS over RTP/UDP or UDP
 - BBFrames over UDP (professional mode)
 - IP streams (layer 2 or layer 3)
- ▶ Management and configuration
 - LCD front panel
 - Operator console
 - Web interface
- ▶ Monitoring
 - SNMP
 - Dual change over switch contacts alarm output
- ▶ *Flex:RPC* interface
 - For extended integration/instrumentation demands
 - Provides access to all device capabilities

Specification

DVB-S/S2 Input Characteristics

- ▶ L-Band Input
 - Frequency:
 - 950 to 2150 MHz
 - Characteristics
 - 2x F-type female
 - Impedance: 75 Ω
 - Return Loss: > 10 dB
 - Input Power: -70 dBm to -20 dBm
- ▶ Symbol Rates
 - DVB-S2:
 - QPSK / 8PSK: 60 ksps – 60 Msps
 - 16APSK: 60 ksps – 45 Msps
 - 32 APSK: 60 ksps – 40 Msps
 - DVB-S / DSNG:
 - QPSK / 8PSK: 60 ksps – 60 Msps
 - Step size: 1 sps
- ▶ DVB-S2 Demodulation
 - Outer BCH Code
 - FEC-Frames
 - $n_{ldpc} = 64800$ (normal FEC frame) or $n_{ldpc} = 16200$ (short FEC frame)
 - Inner LDPC Code
 - QPSK: 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
 - 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10
 - 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
 - 32APSK: 3/4, 4/5, 5/6, 8/9, 9/10 automatically selected CCM/ACM
- ▶ DVB-S Demodulation
 - Outer Reed Solomon Code: 188/204, T=8
 - Convolutional Interleaving: Depth I =12
 - Inner Code: QPSK 1/2, 2/3, 3/4, 5/6, 6/7, 7/8 (Convolutional K=7) automatically selected according EN300421

Interfaces

- ▶ Output: Auto-switching 10/100/1000 Base-T Ethernet (RJ-45)
 - MPEG-2 TS over RTP/UDP or UDP
 - BBFrames over UDP (BSR200-P)
 - IP streams (layer 2 or layer 3)
- ▶ Control network: Auto-switching 10/100 Ethernet (RJ-45)
- ▶ Local control & management
 - 2x USB2.0, VGA
 - LCD / operation keys
- ▶ Alarm: Dual change over switch contacts, DSUB-9, female

Physical, Power, Environment

- ▶ Power
 - Supply
 - 100 to 240 V AC with 50 to 60 Hz
 - optional 48V supply available
 - Current
 - <0.8 A (RMS) at 230 V AC
 - <1.3 A (RMS) at 115 V AC
 - Consumption
 - < 50 Watt
 - Connector
 - 2P+E (single phase)
 - Conforming to IEC-60320-C14
- ▶ Temperature Ranges
 - Operational: 0° to 40° C / 32° to 104° F
 - Storage: 0° to 70° C / 32° to 158° F
- ▶ Dimensions
 - 1RU, width 19", rack-mountable
 - 482 x 300 x 44 mm
- ▶ Weight
 - 4.6 kg
- ▶ Compliance
 - Fully EMC compliant
 - CE label

Ordering Options: ◦ Available • Included

		GSE	Flex:RPC
BSR200-A	ASI mode (ASI, MPE/ULE)		◦
BSR200-B	Broadcast mode (DVB-S/S2, CCM, MPE/ULE, QPSK/8PSK)	◦	◦
BSR200-P	Professional mode (DVB-S/S2, MPE/ULE, CCM/VCM/ACM (ProACM™), QPSK/8PSK/16APSK/32APSK)	◦	◦

Contact Information

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Product category: Receive



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Related Products: **ODG200** – Open DVB Gateway | **QMS200** – Quality Monitoring System