



The DB8200 offers the best **receive solution** for multi-carrier earth stations available today, with eight full-featured demodulators packaged into a single 1U rack unit. Ideal for DVB Return Channel Systems.

The standard units include **Viterbi and Turbo** code forward error correction (FEC) and network management capability.

Power supply, Fans, RF front end and demodulators can all be replaced through the front panel without removing the unit from the rack or disturbing any cables.

The DB8200 provides a full range of features at an affordable price. Each receive channel can be **adjusted independently** for IF frequency, data rate, coding rate, modulation scheme and FEC.

The DB8200 provides the complete **performance and functionality** of up to eight modem receivers in a slim-line 1U, 19 inch rack mount unit and is ideally suited to hub, star or mesh SCPC and packet based network applications

## STANDARD FEATURES

The only product to pack 8 full featured demodulators into a 1U rack case.

Ideal solution for Star, Mesh and Hybrid networks.

Data rates 9.6 kbps to 2 Mbps, adjustable in 1bps steps.

IF frequency range 950 to 1750 MHz adjustable in 100 Hz steps.

Modulation BPSK, QPSK.

Viterbi and TURBO Code FEC, code rates 1/2, 3/4 and 7/8.

Full remote M&C with RS232/ RS485 and Ethernet interfaces.

Simple software / firmware Upgrade via console port.

Fast acquisition - typically 50 msec at 64kbps.

Auto ranging power supply, 110 / 230V AC 50 to 60 Hz.

Analogue output for real time monitoring and alignment.

L-band or 70 / 140 MHz IF versions available



### SUMMARY SPECIFICATIONS

Number of channels:	Eight independent demodulators
IF Frequency Range / Frequency step size	950 to 1750 MHz / adjustable in 100 Hz steps
IF Bandwidth	24 MHz, all carriers must lie within this band, the centre frequency can be adjusted over the full IF frequency range.
Receive Carrier Power / Characteristic Impedance:	-30 to -70 dBm at max data rate -53 to -93 dBm at minimum data rate Maximum composite input -5 dBm / 75 Ohms
Receive Acquisition Range/ step size:	Programmable from 0 to $\pm$ 32 kHz / 1kHz steps
Frequency Reference:	Internal 2.5 ppm.
Modulation Schemes:	BPSK, QPSK
Forward Error Correction:	Viterbi k=7 and Turbo Product Code, Rates 1/2, 3/4, 7/8
Data Rates (Viterbi and Turbo Code) adjustable in 1 bps steps	BPSK, 1/2 rate 9.6 to 1024 kbps QPSK, 1/2 rate 9.6 to 2048 kbps, subject to configuration options selected. QPSK, 3/4 rate 9.6 to 2048 kbps, subject to configuration options selected. QPSK, 7/8 rate 9.6 to 2048 kbps, subject to configuration options selected.
Scrambling	IESS 308, CCITT V35, true and inverted, TPC
Data Interface	RS-422 / EIA-530 (DB25)
BER Performance with Viterbi FEC 1/2 rate:	$10^{-5}$ with Eb/No of 4.8 dB $10^{-7}$ with Eb/No of 6.0 dB
BER Performance with Turbo Code FEC 3/4 rate:	$10^{-5}$ with Eb/No of 3.0 dB $10^{-7}$ with Eb/No of 3.5 dB
Acquisition Performance:	Typically 50 ms at 64 kbps, QPSK at 1/2 rate FEC with 6.0 dB Eb/No and +/-30kHz acquisition range
Monitor and Control	Console port RS232 / RS485 for control, status and local software and firmware upgrade.
Network Management	Telnet
LNB Power supply	20 V dc at 400mA max multiplexed on Rx coax cable controlled by front panel switch and M & C.
Connectors:	IF input F type (f) 75 Ohms, data 8 x DB25, console DB9, Management RJ45
Case Dimensions:	1U, 19 inch rack, 480 x 400 x 44 mm, (19" x 16" x 1.75") approximately.
Input Power Requirements:	110 / 230 VAC (auto select), 50/60 Hz, Approx. 30 Watts.
Temperature operating / storage	0 to 50°C / -25°C to 85°C
Humidity operation / storage	90% non condensing / 99% non condensing