

Scanlink

Sentinel

EB450 Digital Base Station

Integrated radio,
modem and
multiplexer

Duplex operation

5W transmitter

15MHz switching
range

Remote & front
panel diagnostics

Single or twin
aerial

Network
Management
System

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The Sentinel range of digital data radios are the latest addition to the Scanlink range of telemetry radios. These are designed for data transmission applications within SCADA systems. Point-to-Point and Point-to-Multi-Point operation is supported.

Features include full duplex operation, rapid Tx/Rx turnaround time, remote diagnostics and a comprehensive network management system (NMS). The NMS requires no operational break in the SCADA data flow.

The Sentinel range is designed for world-wide applications and in particular meets the stringent specifications needed for European operation (ETSI).

The EB450 base station/scanner radio is housed in a rugged 2U high 19" mountable enclosure and is capable of 5W continuous RF output. Using DSP GMSK techniques, the integral modem features error checked high speed data rates of up to 19200 baud with two separate data inputs and multiplexer. Single aerial (with internal duplexer) or twin aerial operation versions are available.

Of particular importance to UK users is the wide switching bandwidth of 15MHz. This will allow the forthcoming change of frequencies to the Utilities Telemetry Band (known as "MPT1411") to be made without change to outstation hardware.

Such changes in frequency can be carried out remotely by command from the Control Centre or Scanner site removing the need for costly site visits.

When used with the ER450 outstation *store and forward* capability the geographic coverage of a radio scheme can be extended, an attribute particularly attractive for secondary automation networks and for remotely located outstations.

This is one of four brochures on the Sentinel range. The others relate to the ER450 digital outstation radio, the EH450 duplicated base station/scanner radio and the Data/NMS protocols used throughout these products.



EB450 Digital Base Station

Radio	
Frequency	380-520MHz (banded)
Frequency split	Various Tx/Rx splits, fully programmable
Channel selection	Fully synthesised, 6.25kHz channel step
Channel spacing	12.5 / 25 kHz
Frequency stability	± 1ppm (-30 to 60°C ambient)
Aging	<= 1ppm / annum
Full duplex	With internal diplexer
Configuration	Using Java based Windows software
Transmitter	
Power	5W (±37dBm) ± 1 dB (software adjustable)
Modulation	Narrow band digital filtered binary GMSK
Occupied bandwidth	Designed to ETSI requirements
Keyup time	< 1 mS
Timeout Timer	Programmable 0 - 255 seconds
Spurious	<= -37dBm
PTT Control	Auto (on data) / RTS line (port A or B) / System Port (override)
Receiver	
Sensitivity	-118dBm for 12dB SINAD
Selectivity	Better than 80dB
Intermodulation	Better than 75dB
Spurious Response	Better than 80dB
AFC Tracking	Digital receiver frequency tracking
Mute	Programmable digital mute
Connections	
User Data Ports	2 x DB9 female ports wired as DCE (modem)
System Port	RJ45 for diagnostic programming
Antenna	2 x N female bulkhead
Power	2 pin locking, mating connector supplied
LED display	Indicators for Pwr, Tx, Rx, Sync, TxD and RxD (Both ports)
General	
Power Supply	13.8 Vdc nominal (11 - 16Vdc)
Transmit current	1000 mA max. @ 1W; 2000 mA max @ 5W
Receive current	<150 mA
Dimensions	19" 2 RU rack mount 485mm x 90mm x 390mm
Weight	5kg Excl internal diplexer
Options	
TVIEW +	Configuration, Network Management and Diagnostic Software
DIAGS/E	Network Management and Remote Diagnostic Facilities per Radio Modem - E Series

Wood & Douglas maintain a policy of continuous improvement and enhancement. As a consequence, the above specification may change without notice.



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