MBR2200

1.4GHz Point-to-Point E1 Radio   DATA SHEET

Basic Description

Now being installed in networks worldwide, the MBR2200 product family, including the MBR4200 provide an advanced nx2Mbit/s digital point-to-point radio solution operating at 1.4GHz. This product offer the advantages of 2E1 user data, coupled with robust and reliable radio transmission operating in the international 1.4GHz band.

The MBR2200 is a compact, flexible and feature rich nxE1 radio system that is part of family of radios and multiplex transmission products. This system is ideally suited to users requiring medium to long range communications (over 50km) with simple installation and set-up, and reliable operation. Operation at 1.4GHz also provides radio transmission advantages for paths over difficult terrain or in harsh environments. Additional benefits include;

- 19" rack unit requiring front access only – no outdoor unit
- International standard traffic interfaces
- User control of setup and operation parameters from front panel
- Management system for monitoring and control
- Modular 1+1 protected options with hitless switching for maximum system availability. Options include Space diversity, Frequency diversity and Monitored Hot-Standby.

The Optimum Solution…

The MBR2200 provides up to four industry standard G.703 (E1) interfaces suitable for connection to a wide range of telecommunication and data communication equipment. With integral multiplex capabilities, the E1 channels are multiplexed on to a single air interface for transmission up to 50km. As the main building block of most network architectures, the E1 traffic channels can be used to carry voice, data, and video signals. Features of this system include;

- Software control and configuration from front-panel, via LMT or remote network management
- Sophisticated alarm and diagnostic aids for easy system supervision and maintenance
- Wholly convection cooled (no onboard fans)
- Selectable SQPSK or 16QAM modulation.
- Full frequency tuning across a range of 1.4GHz bands
- Integral EOW and service channel capabilities

The unit offers a simple front panel control and set-up system to allow operation with the minimum of additional equipment. Also, network management ports are provided to allow configuration by local terminal or connection to a network management control system.

Product Family …

The MBR2200 product is part of a growing family of communications products designed to serve the needs of public network and commercial users. Other important network elements that are available include MRR800, MBR1000, MBR2000 and MBR4200 1.4GHz point-to-point radios, MFS2000 protection switch, MRM1500 and MBM2000 multiplexers, Video Codecs, and nx2Mbit/s Cross Connect Switch.

Typical project applications…

- Cell site backhaul for fixed and rapid deployment of mobile networks, e.g. TETRA, Tetrapol, GSM etc
- Cost effective private networks for enterprise, e.g. Oil & gas platforms
- Expedient provision of business services e.g. private circuits, leased lines
- Reliable and secure data networks for utilities, public service organisations and military users. e.g. Airfield Security, coastguards, electricity supply companies
- Low cost transmission of video information for broadcast and surveillance, e.g. border control, video conference, road traffic monitoring
- Provision of telephony, ISDN and data services to remote sites

Specifications…

Frequency Range		1350MHz – 1517MHz	
		Various including ITU-R 1242, CEPT T/R 13-01 Other frequency plans available upon request	
System Capacity	MBR2200	2E1	2E1
Modulation		SQPSK	16QAM
Channel Spacing		3.5MHz	2MHz
RF Standards		ETS 300-630 Class 3	
Receiver	Receiver Sensitivity 10^{-6}	-86dBm	-86dBm
	Receiver Sensitivity 10^{-3}	-90dBm	-88dBm
Residual BER		10^{-11}	10^{-11}
Transmitter	O/P Power	+27dBm	
Mechanical	Enclosure	2U enclosure for 1+0 topology 3U enclosure for 1+1 topology	
	Rack Practice	19" and ETSI rack	
	Depth	229mm	
	Weight	7kg for 1+0, 12kg for 1+1	
Connectors	G703 Data Port	75ohm or 120ohm via front panel connector	
	Auxiliary Port	37-pin D-Type connector providing 4 off RS-232, 2 off 4W VF 4 relay inputs, 4 relay outputs	
	Network Management Ports	2off 9 way D-type	
	Antenna Connector(s)	N-Type 50Ω, socket	
Power Requirements	Power Supply	$-48V_{DC}$(-36 to $-72V_{DC}$)	
	Power Consumption	50W @ 48V typical (1+0 topology) 70W @ 48V typical (1+1 topology)	
Configuration & Set-up		By front panel display From local terminal/LapTop (via RS-232) From NMS system (via RS-232)	
Status Indications		Incorporated in front panel display via LED's	
Environmental	Operating	Temp -10°C to +50°C Humidity up to 90% non condensing	
	Storage	Temp -5°C to +45°C	