MRR800

1.4GHz Point-to-Point Multirate Radio   DATA SHEET

Basic Description

Now being installed in networks world-wide, the MRR800, is the original of range of 1.4GHz radio systems. The MRR800 is a compact, flexible and feature rich multirate radio system, setting the standard for the supply of products in this international band.

The MRR800 can realistically be utilised in path lengths from hundreds of metres up to 50km. In fact, assuming appropriate line of site conditions, path lengths well in excess of this are achievable. Additionally, the 1.4GHz band provides for robust and reliable long-haul operation even over difficult terrain and in diverse weather conditions where products in higher frequency bands would suffer.

The MRR800 uses the latest radio technology to ensure high performance, high reliability; translating into reduced installation burden, reduced maintenance onus, reduced sparing and reduced training demands. In short, reduced whole life costs. Benefits include;

- Compact 1U rack unit requiring front access only
- International standard traffic interfaces
- User control of all setup and operation parameters from front panel
- Management system for monitoring and control
- 1+1 protected options

The Optimum Solution…

The MRR800 effectively provides a transparent transmission pipe that serves as a cost-effective alternative to fixed lines, providing the added benefit of greater control and ownership of the network. The system can be used to provide the main transmission link, or alternatively as a back up or diverse route to the main link. Features of this system include;

- Full software control and configuration
- Radio Identity Module (RIM) stores all system configurations
- Robust modulation scheme providing excellent performance over long-haul paths
- Full frequency tuning across a range of 1.4GHz band plans

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 an SNMP network management control system. This enables configuration of the system to be performed from a remote control centre, together with monitoring, management and control of the inter-connected systems on the network. An extensive set of alarms, for easy maintenance, are provided in the system and the flexible architecture enables a wide range of network topologies, to be configured.

Product Family …

The MRR800 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 MBR1000, MBR2000, MBR2200 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
- Replacement of analogue radio links (e.g. 400MHz, 800MHz & 1.5GHz systems)
- Cost effective private networks for enterprise, e.g. Oil & Gas platforms etc
- Expedient provision of business services e.g. private circuits, leased lines etc
- Reliable and secure data networks for utilities, public service organisations and military users. e.g.,Airfield Security, coastguards, electricity supply companies etc
- Low cost transmission of video information for broadcast and surveillance, e.g. border control, video conference, road traffic monitoring etc
- Provision of telephony, ISDN and data services to remote sites

Specifications…

Frequency Range		1330MHz – 1530MHz		
		Various including ITU-R 1242, CEPT T/R 13-01 Other frequency plans available upon request		
Channel Spacing		75KHz	250KHz	500KHz
Software Configurable Data Rates (Kbit/s)		64, 80	120, 128, 144, 192 | 256, 320	384, 448, 512, 576, 640, 704, 768
Receiver	**BER 10E-6 (better than)**	-104dBm	-97dBm	-95 dBm
	BER 10E-3 (better than)	-107dBm	-101dBm	-99dBm
	Unfaded BER	10^{-9}	10^{-9} | 10^{-10}	10^{-10}
	Maximum Input Level	-40dBm		
Transmitter	**Transmitter O/P power**	+24dBm		
	Software Control Range	+24dBm to -6dBm (1dBm Steps)		
Mechanical	**Enclosure**	1U ventilated enclosure		
	Rack Practice	19” and ETSI rack – alternatives available		
	Depth	1U, Depth 240mm		
	Weight	5kg (unpackaged) 6kg (packaged)		
General	**Traffic Interface**	X.21 or G.703/G.704 Fractional E1 Other interfaces under development		
	Modulation Type	QPSK/8PSK		
	Alarm Relay Outputs (User Selectable)	4 Outputs Form-C		
	Alarm Inputs (User Definable)	4 Normally Open or Normally Closed Inputs		
	Network Management	SNMP (Version1)		
Connectors	**Traffic Interface**	37 Way D-Type Male		
	Alarm Interface	37 Way D-Type Female		
	Management (NMP1 & NMP2)	9 Way D-Type Male & Female (respectively)		
	DC Input	2-pin Fischer screened, male		
	Antenna Connector	N-Type 50Ω, socket		
Power Requirements	**Voltage Input Range**	24V Variant (18 Vdc to 36 Vdc), either polarity		
		48V Variant (38 Vdc to 59 Vdc), either polarity		
	Power consumption	Less than or equal to 30 watts		
Environmental	**Operating Temperature**	-10°C to +50°C		
	Storage Temperature	-20°C to +70°C		
Type Approvals		ETS 300 630 & UK MPT 1717 and ETS 300 385 & ETS 300 339		