

MRR400M

1.4GHz Point-to-Point MiniMux Radio

DATA SHEET



Basic Description

Now being installed in networks world-wide, the MRR400M, is a new entry to range of 1.4GHz radio systems. The MRR400M is a compact, flexible and feature rich radio system with integral multi-channel multiplexer. This provides a high performance, integrated solution capable of reliable, long haul voice and data transmission.

The MRR400M 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 Optimum Solution...

The MRR400M uses new MiniMux interface card. This has three separate audio channels, two data channels with three pairs of control signals. Each control pair can be individually allocated as required. The audio channels can be configured for full E&M signalling allowing 2 or 4 wire RS464 types I, II, III and V as selected by the user connection method. Audio band width (± 2 db) is from 300Hz to 3400Hz. Line impedance is 600ohms. Coding is user selectable – either A-law or μ -law and maximum signal input voltage is 60v DC.

One Asynchronous data channel provides operation at data rates of 300, 600, 1200, 2400, 4800 and 9600 baud. The second data channel operates at these rates plus 19200 and 38400 baud. For use with the Asynchronous channels, three pairs of control signals are also available. These provide 3 control signals in each direction.

Product Family ...

The MRR400M is part of a growing family of communications products designed to serve the needs of public network and commercial users. Other important network elements which are available include MRR800, MBR1000 and 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...

- 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
- Provision of telephony 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		250KHz (8PSK Modulation)
Modulation		8PSK
Data Rate		320kb/s
Receiver	BER 10E-6 (better than)	-97dBm
	BER 10E-3 (better than)	-101dBm
	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 (1) Traffic Interface (2) Traffic Interface (3)	2 or 4 Wire E&M Audio Channel (64k PCM, 600 ohm) 2 or 4 Wire E&M Audio Channel (64k PCM, 600 ohm) 2 of 4 Wire E&M Audio Channel (64k PCM, 600 ohm) (All can be user configured for A-law or μ -law coding)
	Traffic Interface (4)	Asynchronous Data (300, 600, 1200, 2400, 4800, 9600 baud)
	Traffic Interface (5)	Asynchronous Data (300, 600, 1200, 2400, 4800, 9600, 19200, 38400 baud)
	Traffic Interface (6) Traffic Interface (7) Traffic Interface (8)	Control Signal (1 input and 1 output) Control Signal (1 input and 1 output) Control Signal (1 input and 1 output)
	Modulation Type	QPSK
	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 50 Ω , 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