

EtherMux-40M

Data and Voice Microwave WAN Solutions 40Mb/s

What is an EtherMux?

The EtherMux is a point-to-point medium capacity data link operating at microwave frequencies. It enables organisations to significantly boost Wide Area Network (WAN) performance. In the past WAN solutions have often presented a bottleneck in communication networks due to the decreased throughput when compared to the Local Area Network (LAN). The EtherMux alleviates these potential bottlenecks by boosting the overall bandwidth. This enables LAN users to seamlessly communicate across the WAN with virtually no delay, thereby allowing real time data, voice and video communications.

The EtherMux provides customers with their own broadband microwave WAN solution, enabling a throughput of 40Mb/s full duplex. With the option of Class Licence or Licence models, the EtherMux is suited to both short range, from 500 meters to 5km [Class Licence] and medium range up to 25km [Licence].

If you have a WAN that requires a bandwidth of 2Mb/s or above, then the EtherMux microwave link offers an economical solution. EM Solutions' strong network of resellers offers installation and maintenance services.



Flexibility, Reliability and Quality

As the EtherMux is a stand alone hardware product it offers organisations the flexibility to relocate equipment as requirements change, which is not possible with cable solutions. Reliability of 99.99% is typical and five nines can be achieved with redundant systems. In conjunction with this it allows organisations to be independent from network providers thus offering the lowest possible whole of life cost solution.

Product Features

- 40Mb/s Data Rate Full Duplex
- Two Optional Auxiliary Channels
1 x E3 G.703 with 1 x E1 G.703 or 2 x E1 G.703
- Optional Fibre 850nm SM Interface on Ethernet Port
- Class Licence Link up to 5km
- Licence Link up to 25km
- Pole-mount ODU available for use with other Antennas
- 100Base-TX FD Data and Network Management Ports
- Network Management Software includes SNMP v1, EtherMux GUI and Serial Terminal Interface
- IEEE 802.3 compliant with max. frame size of 4090 bytes, Flow Control (MAC Pause)

System Features

- 40Mb/s Data Rate Full Duplex
- Two Optional Auxiliary Channels (1 x E3 + 1 x E1 or 2 x E1)
- Optional Fibre Interface 850 nm SM on Ethernet Ports
- 7.5 or 10.5GHz Frequency Range

RF Head Unit Specifications (ODU)

Item	Frequency	EIRP
Class Licence	10.50 to 10.55GHz	20 dBm
Licence Link Medium Range	10.55 to 10.68GHz	55dBm (600) 60dBm (1200)
Licence Link Long Range	7.425 to 7.7725GHz	25dBm Plus Antenna Gain

Specific Characteristics

RF Bandwidth:	14MHz
Tx Power:	+26dBm
Modulation:	16QAM
Rx Threshold:	-70dBm BER = 1E-6
Residual BER	<1E-8
Rx Overload Threshold:	-10dBm
Image Frequency Rejection:	>50dB
Power Requirements:	48V DC, 1A, Supplied by IDU

Antenna Options

Size mm	Class Licence km	Licence 10.5GHz km
600	2	15
1200	5	25

Mechanical & Environmental

Construction:	Powdercoat Aluminium
Weight:	Reflector 600 35kg Reflector 1200 40kg
Mounting:	90 to 115 mm (OD) Pole
Adjustment:	Elevation +15 to -30° or +30 to -15° Azimuth ±25°
Sealing:	IP54
Temperature:	-10 to +50°C
EMI Emissions:	AS/NZS 3548

Lightning Protection ODU

Surge Protection Isolation 800 V
Surge Current 10 kA

Modem Unit Specifications (IDU)

Modulation	16QAM
Data Throughput	40Mb/s Full Duplex, 14MHz Channel
Data Port	100Base-TX, RJ-45
Serial Channel	Clear Bi-directional RS232 Handshaking, 19.2kb/s, D9(f)

Ethernet WAN

IEEE 802.3 Compliant
Flow Control (MAC Pause)
Non-filtered version suitable for VLAN
Maximum Ethernet Frame Size 4090 bytes

ODU/IDU Interface

Single Cable Data, Power, and Supervisory
N-Type(f) 50 Ohm on ODU and IDU
Maximum Loss < 15 dB @ 670 MHz
Maximum DC Loss < 1.3 Ohm

Power Supply 100-260 VAC, 50/60 Hz

Mechanical & Environmental

Size: 430 (W) x 190 (D) x 44 (H) 1RU
Weight: < 2kg
Finish: Chromate Conversion
Mounting: 1RU Front Panel
Sealing: IP51
Temperature: 0 to +40°C

Network Management

NMS: EtherMux Graphical User Interface [GUI]
SNMP: SNMPv1
Terminal: EtherMux Serial User Interface

Port: 100Base-TX, RJ-45
Serial: Local RS232, D9(f), Rate 9.6kb/s

Two Optional Auxiliary Channels

2 or 1 E1 G.703, BNC (f), 75 Ohm Separate Tx and Rx
1 only E3 G.703, BNC(f), 75 Ohm Separate Tx and Rx

Optional Interface

100Base-FX 850 nm SM Fibre on Ethernet Data Port only

Lightning Protection IDU

Surge Protection Isolation 800 V
Surge Current 10 kA



Contact:
Ph: +61 7 3392 7600
Fax: +61 7 3392 6400

Email:
info@emsolutions.com.au

Web:
www.emsolutions.com.au

em Solutions

© 2003 EM Solutions A.C.N. 082 157 846