

EtherMux

*Data and Voice Microwave WAN
18Mb/s 5.8GHz Class Licence Link*

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 5.8GHz Class Licence product provides customers with their own broadband microwave WAN solution, enabling a throughput of 18Mb/s full duplex. The 5.8GHz EtherMux product is an All Indoor Unit, with an option of either an 800mm or 1200mm Parabolic Antenna.

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

- 18Mb/s Data Rate Full Duplex
- Voice Interface Options include 2 or 4 Channels:
4-Wire+E&M Port or 2-Wire Phone and SLIC Ports
- Class Licence Link up to 5km
- 100Base-Tx (18Mb/s)
- Maximum Ethernet Frame Size 4090 bytes
- Supervisory STD with SNMP and Serial Interfaces
- All Indoor Unit, with RF Cables to External Antenna
- Auxiliary Serial Channel RS232, 19.2Kb/s

System Features

- 18Mb/s Data Rate Full Duplex
- 4 Voice Channels and 1 x RS232 Chl.
- 5.8GHz Frequency Range Class Licence
- Supervisory Std with SNMP and Serial Interfaces



RF Specifications

Antenna	Nominal Range	Total Fade Margin (incl Cable Loss)
800 mm Parabolic	3 km	20 dB
1200 mm Parabolic	5 km	20 dB

Specific Characteristics

RF Bandwidth: 12MHz
 Tx Power: +23dBm EIRP
 Modulation: 4FSK
 Rx Threshold: -74dBm BER = 1E-6
 Residual BER <1E-8
 Rx Overload Threshold: -10dBm
 Image Frequency Rejection: >50dB

Antenna

Construction: Powdercoat Aluminium
 Weight: Reflector 600 < 5kg
 Reflector 1200 < 10 kg
 Mounting: 50 mm (OD) Pole
 Adjustment: Elevation +15 to -30° or +30 to -15°
 Azimuth ±360° via Clamp

Modem Unit Specifications

Data Rate 18Mb/s Full Duplex (9 x E1)
 Data Port 100Base-Tx, RJ-45 (8 Pin)
 Supervisory
 SNMP: SNMP V1
 Port: 100Base-Tx, RJ-45 (8 Pin)
 Serial: Local RS232, D9 (f), Rate 9.6kb/s

Serial Channel Clear Bi-directional RS232
 Handshaking, 19.2kb/s, D9 (f)

Ethernet WAN

Non-filtered version suitable for VLAN
 (Maximum Ethernet Frame Size 4090 bytes)

Indoor Unit to Antenna Interfaces

Cable Type	RF Loss per 30 metre	Rec. Maximum Length
LMR400	11 dB	20
LMR500	9 dB	25
LMR600	7 dB	30

Power Supply 220-250 VAC, 50 Hz, IEC
 Optional 110-120 VAC, 60Hz, IEC

Mechanical & Environmental

Size: 430 (W) x 190 (D) x 86 (H) 2RU
 Weight: < 5kg
 Material/Finish: Aluminium, Chromate Conversion
 Mounting: 2RU Front Panel
 Sealing: IP51
 Temperature: 0 to +40°C

Voice Interface Options

PABX to PABX

4-Wire+E&M Card
 Audio Transformer Isolated
 Signalling Opto-Isolated
 Freq Response/Return Loss – CCITT G712
 Impedance 600 ohm, RJ-45 (8-Pin)

PABX to Phone

2-Wire Phone Card (PABX End)
 2-Wire SLIC Card (Phone End)
 ACA Approvals TS001, 003, 006
 RJ-12 (6-Pin)

Protection IDU

DC: Transorb/MOV
 Data: 90 V Gas Arrestor

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