

Highlights

- ☑ Multiplexing of up to 4 x E1/T1 (structured/unstructured) or 4 x Synchronous (RS530, X.21, V.24, V.35, V.36) over IP networks
- ☑ Data rates of 56/64 Kbit/s up to 1544/2048 Kbit/s
- ☑ Fully transparent to all signaling and protocols
- ☑ Additional Ethernet interface for cascading or for connecting a local network
- ☑ Optional Fiber Optic Interface for different distances and wavelengths available
- ☑ Integrated Management via VT100, SNMP and Telnet
- ☑ Support of test loops and performing BERT tests via management
- ☑ Power Supply 100-240V AC or -48V DC
- ☑ Available as 4-channel multiplexer or 1-channel endpoint unit

hybrid IPM

TDM over IP Multiplexer / LeasedLineEmulation for E1/T1 or synchronous Data



Transmitting voice and data in a transparent mode over IP networks, the hybrid IPM enables a cost-effective migration to IP packet technology using legacy PBX equipment and existing IP networks.

The **hybrid IPM 1241/1211** transports PBX's E1/T1 lines in various structured or unstructured modes as E1-over-IP or T1-over-IP.

The **hybrid IPM 1242/1212** transports classic synchronous data lines like RS530, V.24, X.21, or

V.35 together with their handshake signals.

The data are mapped into a special TDM-over-IP packet stream for transportation and routing over the Ethernet/ IP network. In order to ensure optimum transmission quality, QoS and VLAN tagging are supported. The combined signals will be extracted by the remote unit, timing information will be restored.

By using GHMoIP, data become routable over long distances.

A second Ethernet interface offers local workgroup access to the IP network or allows for cascading IPM devices.

Optical line transmission is available using the fiber optic option which is ideal for laser link applications. This allows simultaneous transfer of up to 4x 2.048Mbps of serial data and approx. 90Mbps of Ethernet data over freespace optic.

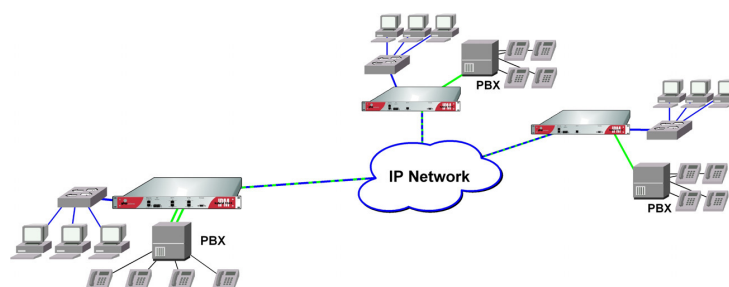
Configuration and maintenance are simplified via VT100, Telnet and SNMP management.

All 1-channel and 4-channel IPM devices are fully compatible, offering various applications like single end point or multipoint connections.

With the hybrid IPM family, both Enterprise and Carriers can save on access and equipment costs and create revenue offering TDM-over-IP or other different types of seamless new services over existing Ethernet networks.

Application Examples

- Connecting E1/T1 PBXes over Ethernet/IP-Networks
- Tunneling of classic synchronous data streams through IP
- Point-to-point Ethernet+PBX Connection over Fiber or FSO
- Last-Mile Service for Telcos or Carriers/Providers



Multiplexer Application with one hybrid IPM1241 and two hybrid IPM1211 connecting 3 PBXes on different Locations over an IP Network

hybrid IPM

TDM over IP Multiplexer / LeasedLineEmulation for E1/T1 or synchronous Data

Specification

G.703 E1/T1 Interfaces (hybrid IPM 1241/1211)	T1 unstructured, D4, ESF with 56 Kbit/s - 1.544 Mbit/s E1 unstructured, Framed, CRC with 64 Kbit/s - 2.048 Mbit/s Compliance: TBR12, TBR13, G.703, G.704, Jitter G.823 RJ45 Connector
Synchronous Interfaces (hybrid IPM 1242/1212)	RS530, X.21, V.24/RS232, V.35, V.36/RS449 with 56 Kbit/s - 2.048 Mbit/s in multiples of 56 and 64 Kbit/s V.24 async up to 115 Kbit/s Up to 4 handshake signals (2 in each direction) DB-25 Connector
Clock Modes	External, Internal, Adaptive
Ethernet	2 x 10/100 Base-T, Auto Negotiation, MDI / MDI-X RJ45 Connector
Fiber Optic (optional)	100Base-FX, various types and wavelengths SC Connector
GHMoIP Data Transmission	Ethernet/IP Routable Data Stream with Jitter Integration and Timing Recovery, VLAN and QoS supported
Management	VT100 and Telnet Console SNMP Configuration and Monitoring Power and Status LEDs (E1/T1) Software Update via TFTP
Diagnostics	Local/Remote Loop, BERT Generator / Test on each Interface
Power Supply	100 - 240V AC or -48V DC
Mechanical	19" 1HU, Depth 260 mm
Environmental	Temperature 0-40°C, Humidity max. 90%, Non-condensing

Ordering Information

E1/T1/S2M over IP hybrid IPM 1241 Multiplexer 4 x switchable E1/T1structured/unstructured 2 x 10/100 Base-T RJ45 Order Code: G1241-FO-PS hybrid IPM 1211 Endpoint unit 1 x switchable E1/T1 structured/unstructured 2 x 10/100 Base-T RJ45 Order Code.: G1211-FO-PS	Synchronous data over IP hybrid IPM 1242 Multiplexer 4 x switchable RS530, X.21, V.24, V.35, V.36 2 x 10/100 Base-T RJ45 Order Code: G1242-FO-PS hybrid IPM 1212 Endpoint unit 1 x switchable RS530, X.21, V.24, V.35, V.36 2 x 10/100 Base-T RJ45 Order Code: G1212-FO-PS
FO = Fiber Optic Option 0=none MM=Multi-mode 1310nm (2km) SS=Single-mode 1310nm Short Distance (10km) SL=Single-mode 1310nm Short Distance (40km) Other Fiber Optic Types on request	PS = Power Supply Option EU=100-240V EU plug US=100-240V US plug 48=-48V DC Power Supply