

• IMUX WAN Router with Four Integrated E1 DSU/CSUs •

• Cellular Base Station Backhaul • MPEG Video Distribution

IP•Express GE1-IPM is a high performance, bandwidth scalable, IP WAN router with 4 E1 ports offering a standards based inverse multiplexing (N x E1) capability. The 4 E1 ports are able to be N x E1 inverse packet multiplexed to a remote location from 4 to 8 Mbps. Standards based WAN protocols, PPP and Multilink PPP ensure interoperability.

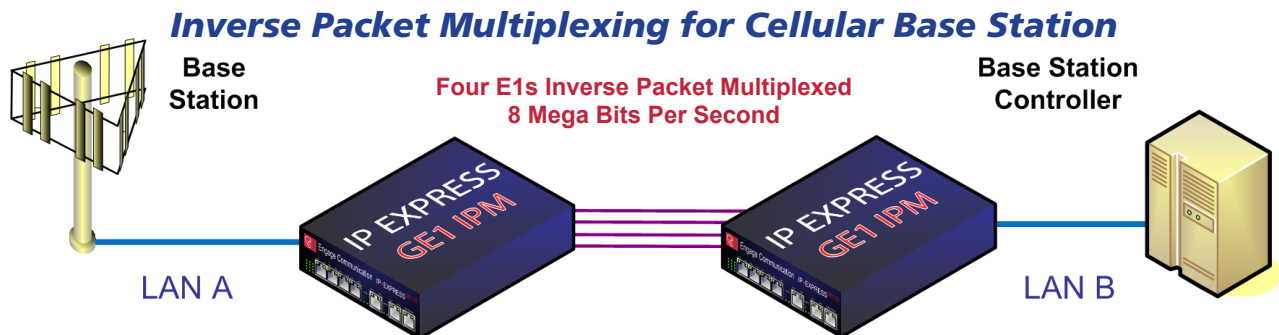
The **IP•Express GE1** interconnects remote LANs and addresses the large market for connectivity in the multi-megabit bandwidth range such as Ethernet based Cellular Base Stations and high quality MPEG Video delivery.

The Integration of the E1 CSUs provides for a complete solution with a straight forward configuration.



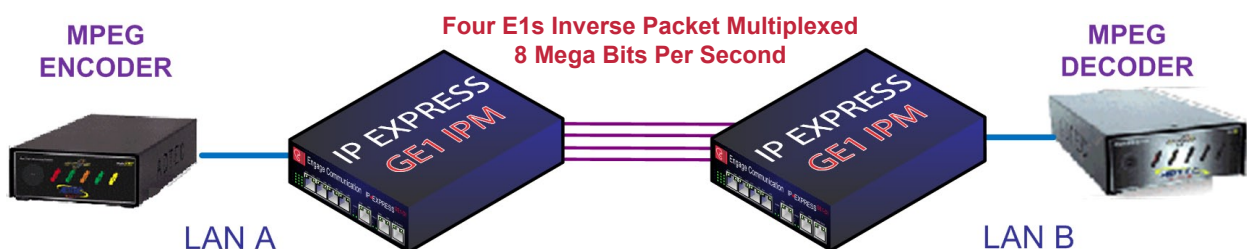
• Cellular Base Station Backhaul •

Cell Site Backhaul - The next generation Mobile Cell Base Stations are going native Internet Protocol on Ethernet interfaces. Ethernet based services are not available at many Cell Sites. Inverse multiplexing E1 circuits delivers the bandwidth required, up to 8 Megabits per **IP•Express GE1-IPM**, for Voice, Data, SMS, Web, Music and mobile TV.



• MPEG Video Distribution •

IP•Express GE1-IPM models deliver **MPEG** IP Streaming Video over Inverse Packet Multiplexed E1s. The Inverse Packet Multiplexor provides the bandwidth necessary for the delivery of 2 broadcast quality video feeds or to deliver near Contribution quality for a single MPEG Video. **IP Multicast** is a standard feature of the **IP•Express GE1** and is utilized to distribute MPEG video simultaneously to multiple decoders.



• Four E1 Inverse Packet Multiplexor •

Inverse Packet Multiplexing delivers 4 to 8 Megabits of inter connectivity over 2,3,4 Dedicated E1 WANs. IETF approved RFC1990 Multilink PPP protocol bonds multiple E1s into a high-speed link that has built-in redundancy. E1 line fault detection provides resilient connectivity for Mission Critical Interconnects.

MPEG IP Video Redundancy Switch - Option

REDundant IP Video configuration automatically switches from the Primary to a Secondary Encoder's IP Video Stream for mission critical broadcasts and is available with the **IP•Express GE1-IPM-RED**. A one second absence of IP packets from the Primary Encoder results in the switch to the Secondary Encoder. The WAN bandwidth is reserved for a single feed.

IP•Express GE1-IPM Technical Specification

LAN Network Interface:

- 10/100 BaseT Ethernet Port
- Auto-negotiate or Configured Speed/Duplex

LAN Network Protocols Supported:

- IP, TCP, UDP, RIP, ICMP
- IP Multicast support
- IP Video Stream Redundancy (Optional)

WAN Network Interfaces:

- Four E1/FracE1 CSU/DSU ports
- Inverse Packet Multiplexing

WAN Network Protocols Supported:

- PPP (RFC 1548, RFC 1332, RFC 1334, PAP)
- Multilink PPP (RFC 1990)
- Frame Relay (ANSI ANNEX D, LMI, RFC 1420)

Routing Protocols Supported:

- RIPv1, Static

E1/Fractional E1 Specifications:

- Framing - CRC4 or FAS or UN-FRAMED
- Coding - HDB3 or AMI
- Supports DS0 assignments from 1 to 32 (64Kbps to 2.048Mbps)

E1 Diagnostic:

- Loopback Test
- Network, Internal, Framer, Payload
- Bert Tests
- 2E07,2E11,2E15,QRSS

TFTP Online Upgrade Capable

- Fully operational during upgrade

Network Security:

- Full On Source, Destination; Port and Flag IP Packet filtering
- Network, Device and Application Layers.

Dimensions:

- 9" (L) x 7.3" (W) x 1.50" (H)

Management:

- Telnet support with Edit and Paste Templates
- Console Port for Out of Band Management
- SNMP support (MIB I, MIB II)
- Remote configuration, monitoring, & reset

Regulatory:

- Safety -IEC60950
- EMC - CFR 47 Part 15 Sub Part B:2002
EN55022:1994+A1&A2
EN55024, ICES-003 1997
CISPR 22 Level A
- Telecom TBR12, TBR13
- CE

Power:

- Locking Power Connector
- 12-24 VDC 1.0A
Ships with Universal Adapter
- Optional -48V 0.25 Amp
- Hot Standby with 2nd Power

How to Order — IP•Express GE1-IPM

Part No.	Description	Notes
085-2048-0x-IPM	IP•Express GE1-IPM, xE1 (x=1 - 4 Ports)	Base Model Specify # of E1 Ports Enabled
U85-2048-0x	IP•Express GE1 E1 Port Upgrade	Enable Additional E1 Ports (up to 4)
Base Options		Specify as suffix
-RED	MPEG IP Video REDundancy Switch	Secondary Encoder Traffic passed on failure of Primary Encoder
Power Options		Specify as suffix
-DCMOD	Power 12/30 VDC w LOCKING CONNECTOR	Ships with Universal Adapter 90/240 50/60
-WIRED	Power 12/30 VDC Stripped Wire Screw	
-N48VDC	Power Supply Module Negative 48 Volt DC	Isolated Negative 48 Volt Power Hot Standby
Rack Mount Option		Specify as suffix
-RACKMNT	19" Wide Rack Mount Brackets	Enclosure Nut Serts Installed