IPM-1SE/V35
E1/V.35 over Ethernet Access Unit

IPM-1SE/V35 is designed as a multi-service access platform for PDH and V.35 over Ethernet applications. Structured/unstructured E1 and V.35 data can be mapped/de-mapped into/from Ethernet packets. An adaptive clock recovery method for Ingress PDH (PSN -> TDM) clock generation is implemented to support E1 (ITU-T G.824) Jitter performance.

Cost-effective LAN deployment (PDH and V.35 over ethernet)

IPM-1SE/V35 provides cost-effective applications of traditional circuit-switched system over Ethernet. With IPM-1SE/V35, it is easy to interconnect with existing phone systems and V.35 over Ethernet that are used to carry data, voice and video.

Transparent transmission

IPM-1SE/V35 can transparently transport proprietary signaling that are required to support PBX features, including call conference, call forwarding and SS7. Customer can easily apply and enjoy better integration of TDM, V.35 and Ethernet devices with lower network expense.

Bypass international toll

With a pair of IPM-1SE/V35 and guaranteed internet bandwidth, it is sure to save cost dramatically, and to ensure the QoS of voice based on interconnections of TDM telecommunications equipment.

Features

- Supports IEFT RFC4533 Structure-Agnostic TDM over Packet (SAToP), Metro Ethernet Forum MEF8.
- One E1 NRZ Serial Interface with LOS/AIS detection.
- One V.35 (Nx64K) interface.
- Use Raw Encapsulation method for PDH payload over Ethernet packet.
- Supports Circuit Emulation Service over Ethernet (CESoE) transport over Ethernet networks.
- Comply with IEFT draft standard for CESoPSN and SAToP; Metro Ethernet Forum MEF8 IA.
- Supports both Point-to-Point and Point-to-Multipoint operation.
- Supports Adaptive Clock recovery block for Ingress PDH (PSN -> TDM) clock generation. Recovered clock jitter is compliant to ITU-T G.824 (E1 Jitter Control).
- Configurable jitter buffer depth to compensate up to 40ms of Packet Delay Variation.
- Lost packets processing/compensation via PW (Pseudo Wire) control field Sequence Number.
- Provides Subscriber side data traffic bandwidth control to guarantee enough TDM payload bandwidth.
- PDH LOS detection triggered PW L field or payload AIS generation at Egress direction (TDM -> PSN).
- Configurable IEEE 802.3 DA/SA assignment.

Specifications

Line interface (CPE side)	Port: One E1 (ITU-T G.703) and one V.35. Interface: RJ-48c (120 Ohm), BNC (75 Ohm) and M/34 female (V.35, DCE). E1 Line Coding: HDB3
Ethernet interface (CPE/CO side)	Port: two 100 Base-T Ethernet. One is for downlink and the other is for uplink. Interface: RJ-45
Dimensions	44 x 370 x 215 mm (D x W x H)

Power	AC: 110 ~ 240V @ 47 ~ 65Hz DC: -72V ~ -36V
Environment	Ambient temperature: 0°C ~ 50°C (0°C ~ 65°C, optional) Storage temperature: 0°C~ 85°C Relative humidity: 5 ~ 95% non condensing
Management	Console port (CLI) or SNMP-based / Web GUI management

Application

Server — E1 — **IPM-1SE/V35**

IPM-1SE/V35 — V.35 — Router
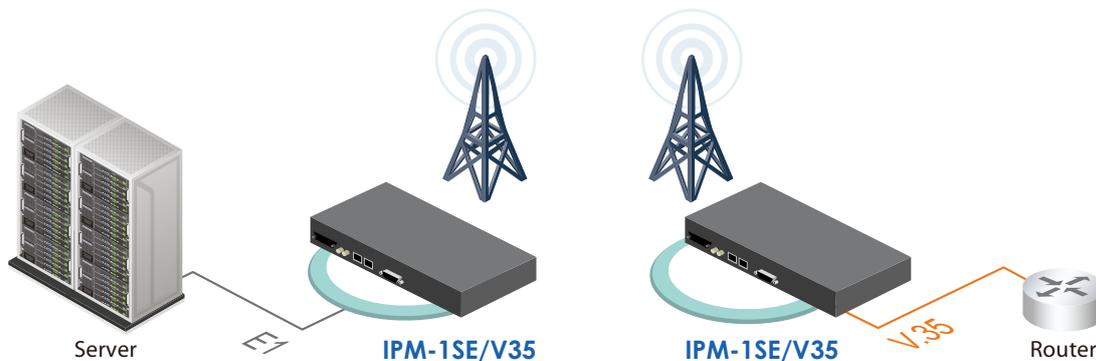
Ordering Information

Model Name	Description
IPM-1SE/V35-AD	E1/V35 over Ethernet access unit with AC+DC Power

IPM-E1/IPM-4E1

E1/4E1 over Ethernet
Web Management

IPM-E1/4E1 is designed as a multi-service access platform for PDH over IP applications. E1 frames can be mapped/de-mapped into/from IP packets. An adaptive clock recovery method for Ingress PDH (PSN->TDM) clock generation is implemented to support E1 (ITU-T G.823) Jitter performance.

IPM-E1/4E1 provides cost-effective applications of traditional circuit-switched system over IP. It is easy to interconnect existing phone systems over IP that are used to carry data, voice and video. With high precision clock recovery technology, IPM-E1/4E1 is capable of supporting 2G/3G/4G backhaul and provides smooth services. IPM-E1/4E1 can transparently transport proprietary signaling that are required to support PBX features, including call conference, call forwarding and SS7. Customer can easily apply and enjoy better integration of TDM and IP devices with lower network expense. With a pair of IPM-E1/4E1 and guaranteed internet bandwidth, it is sure to save cost dramatically, and to ensure the QoS of voice based on interconnections of TDM equipment.
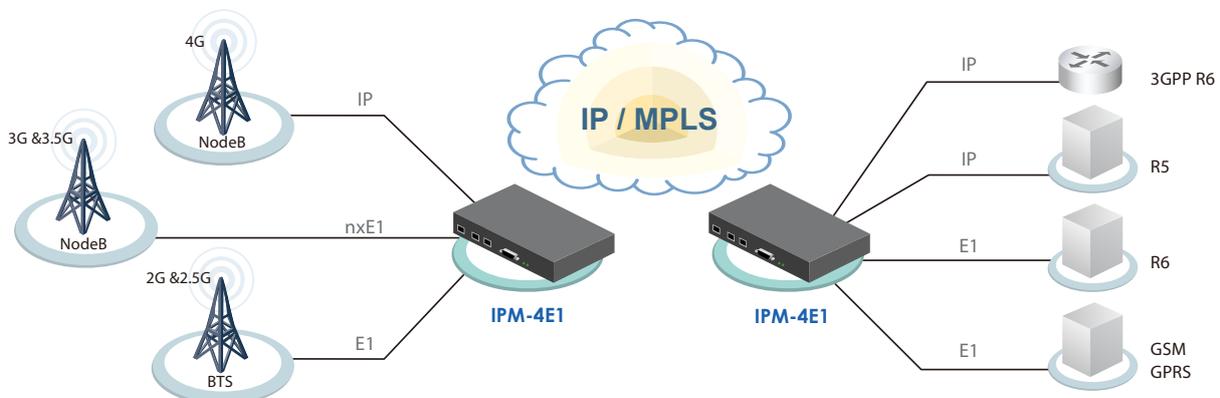
Features

- Supports Web Management
- Supports IETF RFC4553 Structure-Agnostic TDM over Packet (SAToP), Metro Ethernet Forum MEF8
- Use Raw Encapsulation method for PDH payload over Ethernet packet
- Supports Circuit Emulation Service over Ethernet networks
- Comply with IETF draft standard for CESoPSN and SAToP; Metro Ethernet Forum MEF8 IA
- Supports both Point-to-Point and Point-to-Multipoint operation
- Supports Adaptive Clock recovery block for Ingress PDH (PSN -> TDM) clock generation. Recovered clock jitter is compliant to ITU-T G.823 (E1 Jitter Control)

- Configurable jitter buffer depth to compensate PDV (Packet Delay Variation) with the flexible setting of 11ms, 23ms, 40ms, 75 ms
- Lost packets processing / compensation via PW (Pseudo Wire) control field Sequence Number
- Provide Subscriber side Data traffic bandwidth control to guarantee enough TDM payload bandwidth
- PDH LOS detection triggered PW L field or payload AIS generation at Egress direction (TDM->PSN)
- Configurable IEEE 802.3 DA/SA assignment
- LED alarm display for E1 Power failure status
- E1 NRZ Serial Interface with LOS/AIS detection

Specifications

E1 Interface	Standards	ITU-T G.703, G.704, G.706, G.732
	Ports	1 or 4-Port
	Data Rate	2.048Mbps ±50ppm
	Connector	RJ-48c for 120 ohm
	Line Coding	HDB3
Ethernet Interface	WAN Port	100 Base-TX Ethernet
	Interface	RJ-45
	LAN port	100 Bases-TX Ethernet
	Interface	RJ-45

Dimensions	125 x 320 x 44 mm (D x W x H)
Power	AC: 85 ~ 264V @ 47 ~ 63Hz
	DC: -72V ~ -36V
Environment	Ambient temperature: 0° ~ 50°
	Storage temperature: 0°~ 85°
	Humidity: 5 ~ 95% non-condensing
Management	Console or Telnet / Web / SNMP management (via Ethernet)

Application

Ordering Information

Model Name	Description
IPM-E1-AD	E1 over Ethernet with built-in AC+DC Power
IPM-4E1-AD	4E1 over Ethernet with built-in AC+DC Power

Port Number   Power Type

IPM – ☐☐☐ – ☐☐

Example: IPM – 4E1 – AD

Specifications & design are subject to change without prior notice. Please visit CTC Union website for more details.

IPM-E1 & IPM-4E1

www.ctcu.com
sales@ctcu.com

CTC
union

10-2

IPM-8E1/IPM-16E1

16 or 8x E1 over Ethernet
Web Management

IPM-8E1 & IPM-16E1 is designed as a multi-service access platform for PDH over IP applications. E1 frames can be mapped/de-mapped into/from IP packets. An adaptive clock recovery method for Ingress PDH (PSN->TDM) clock generation is implemented to support E1 (ITU-T G.823) Jitter performance.

IPM-8E1 & IPM-16E1 provides cost-effective applications of traditional circuit-switched system over IP. It is easy to interconnect existing phone systems over IP that are used to carry data, voice and video. With high precision clock recovery technology, IPM-8E1 & IPM-16E1 is capable of supporting 2G/3G/4G backhaul and provides smooth services. IPM-8E1 & IPM-16E1 can transparently transport proprietary signaling that are required to support PBX features, including call conference, call forwarding and SS7. Customer can easily apply and enjoy better integration of TDM and IP devices with lower network expense. With a pair of IPM-8E1 & IPM-16E1 and guaranteed internet bandwidth, it is sure to save cost dramatically, and to ensure the QoS of voice based on interconnections of TDM equipment.

Features

- Supports Web Management
- Supports IETF RFC4553 Structure-Agnostic TDM over Packet (SAToP), Metro Ethernet Forum MEF8
- 8 /16 x E1 NRZ Serial Interface with LOS/AIS detection
- Use Raw Encapsulation method for PDH payload over IP packet
- Supports Circuit Emulation Service over IPE
- Comply with IETF draft standard for CESoPSN and SAToP; Metro Ethernet Forum MEF8 IA
- Supports both Point-to-Point and Point-to-Multipoint operation
- Configurable IEEE 802.3 DA/SA assignment

- Supports 8/16 independent Adaptive Clock recovery block for Ingress PDH (PSN->TDM) clock generation. Recovered clock jitter is compliant with ITU-T G.823 (E1 Jitter Control)
- Independent configurable jitter buffer depth to compensate up to 250ms of Packet Delay Variation
- Lost packets processing / compensation via PW (Pseudo Wire) control field Sequence Number
- PDH LOS detection triggered PW L field or payload AIS generation at Egress direction (TDM->PSN)
- LED alarm display for E1 Power failure status

Specifications

E1 Interface		
	Standards	ITU-T G.703, G.704, G.706, G.732
	Ports	8 or 16-Port
	Data Rate	2.048Mbps ±50ppm
	Connector	RJ-45 for 120 ohm
	Line Coding	HDB3
Ethernet Interface	WAN Port	1 x 100Base-TX Ethernet
	Interface	RJ-45
Dimensions	268 x 290 x 44 mm (D x W x H)	

Power		
	AC: 85 ~ 264V @ 47 ~ 63Hz	
	DC: -72V ~ -36V	
Environment	Ambient temperature: 0° ~ 50°	
	Storage temperature: 0°~ 85°	
	Humidity: 5 ~ 95% non-condensing	
Management	Console port or Telnet/ Web / SNMP-based management via NMS port	

Application
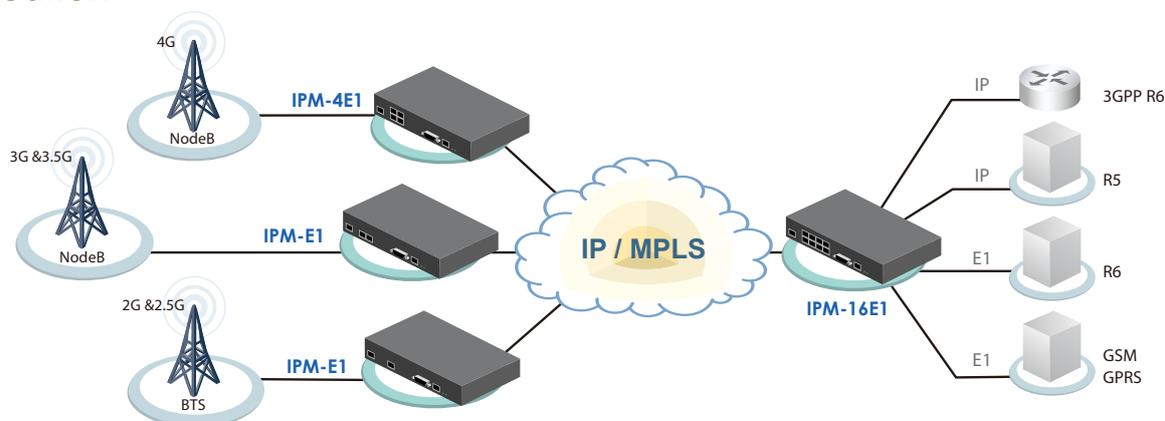
Ordering Information

Model Name	Description
IPM-8E1-AD	8E1 over Ethernet with built-in AC+DC Power
IPM-16E1-AD	16E1 over Ethernet with built-in AC+DC Power

Port Number   Power Type

IPM – ☐☐☐☐ – ☐☐

Example: IPM – 16E1– AD

www.ctcu.com
sales@ctcu.com

Specifications & design are subject to change without prior notice. Please visit CTC Union website for more details.

IPM-8E1 & IPM-16E1