

CL-MC-XE1-IP-Y Multiplexer Solution

Multi-Service over 100Mbase-Tx

CL-MC-XE1-IP-Y Series (1/2/4 E1)

User Manual

Release 1.05

Doc No.: EX05-MN-001-MDN



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Caution

Circuit/electrical equipment is sensitive to the impact of static electricity, which can endanger their delicate electronics. Dry weather conditions or walking across a carpeted floor may cause you to acquire a static electrical charge.

To protect your equipment, please pay attention to the following:

- ◆ Touch the metal chassis of your computer to ground the static electrical charge before you pick up the circuit equipment.
- ◆ Pick up the device by holding it on the left and right edges only.
- ◆ Put on the strap of static-electricity-proof to avoid impacting the function during the equipment is operating.

Accessories Per Package

Please check the following accessories before installation :

- ◆ CL-MC-XE1-IP-Y x 1 set (Please verify the part number)
- ◆ (Optional) "x 1 piece AC Power Cord" or "Power Adapter (+5VDC ← 110/220 VAC)"
- ◆ (Optional) A pair of L-shaped brackets and mounted screws
- ◆ A copy of electrical file of user manual for buyer

Contact Information

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Abbreviation

AIS	Alarm Indication Signal
ANSI	American National Standards Institute
AP	Access Point
CESoPSN	Circuit Emulation Service over Packet Switch Network
CLI	Command Line Interface
FE	Fast Ethernet
ITU	International Telecommunication Union
LED	Light Emitting Diode
LOS	Loss of Signal Alarm
LOF	Loss of Frame Alarm
MAC	Media Access Control
OOF	Out of Frame
L-bit	Remote Defect Indication
RDI	Remote Detect Indicator

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Chapter 1 Introduction

1-1 Functional Description

The CL-MC-XE1-IP-Y series is a “Multi-service (TDM and Ethernet) over Ethernet” bridge, which transports upto four ports of E1 and one LAN into Ethernet packets. Its target application shown in Figure 1-4.1 is the transparent E1 port interconnection via the IP networks (using Ethernet packets). CL-MC-XE1-IP-Y series implements the newest Circuit Emulation System over IP technology.

The E1 over IP of CL-MC-XE1-IP-Y is compliant with IETF “CES over IP” standard. Versatile LEDs are provided for alarms and status indication.

1-2 Features

- Support 1~4 E1 over 100M Ethernet (WAN).
- Provide 1-port Ethernet LAN for Ethernet access.
- User side as standard TDM (E1) interfaces.
- Full-duplex 100Mbps Ethernet Interface.
- Provides auto-negotiation which can auto configure CL-MC-XE1-IP-Y to 100M depending on the speed of Ethernet port.
- Support “E1” clock source with alternative “E1 line recovered clock”, “adaptive clock” and “internal clock”.
- Provide “ACT” and “ALM” LED indicators for each TDM interface.
- Provide “Link/Activity” and “Link Speed” LED indicators for Ethernet interface.
- Stand-alone desktop unit, optional 19” rack mountable.
- Power Support (i) Built-in “AC 110/220 VAC input” or “DC -36 ~ -72VDC input”
(ii) (optional) +5VDC power jack .

1-3 CL-MC-XE1-IP-Y Outlook



Figure 1-3.1 CL-MC-XE1-IP-Y 4-Port E1 Outlook

1-4 Applications of CL-MC-XE1-IP-Y

The CL-MC-XE1-IP-Y is mainly applied for the solution of wireline usage connected with PSTN via E1 and Router via 100BaseTx and for integrating the various equipment based traditional TDM and popular IP services.

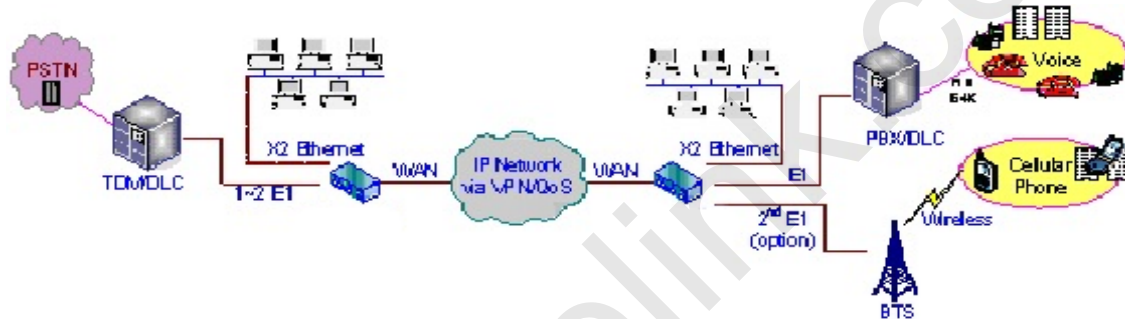


Figure 1-4.1 Application Configuration of CL-MC-XE1-IP-Y Multiplexer

1-5 Technical Specifications

(1) **Construction**

■ **Physical Dimension**

Height: 44 mm (1U)

Width: 320 mm

Depth: 125 mm

Weight: 1.2 Kg ~ 1.3kg (depending on which model is purchased)

(2) **100M Ethernet Interface**

- a. Compliant with 802.3/802.3u standards
- b. 100-BaseT with RJ45 connector
- c. Full-duplex
- d. Support Auto-negotiation
- e. LED indicator for Ethernet: Link status and Act activity

(3) **TDM Interfaces : E1 Interface**

- a. Data Rate: 2.048 Mbit/s \pm 50 ppm
- b. Line Code: Bipolar with HDB3
- c. Test Load Impedance: 120 ohms \pm 5% resistive, balanced.
- d. LED indications for E1: ACT, ALM
- e. Connector Type: RJ48c

(4) Power Supply

- a. AC: 85~264V, 47~63Hz or
(Optional) DC: -36 ~ -72 V
- b. (Optional) +5VDC Power Jack : external power adapter with +5VDC \leftarrow 110/220 VAC
- c. Maximum Power Consumption: < 15 watts

(5) Operating Environment

- a. Ambient temperature: 0 ~ 40 °C for indoor application
(Optional): 0 ~ 55 °C
- b. Storage temperature: 0 ~ 85 °C
- c. Relative humidity: 5 ~ 95% non condensing

1-6 Order Information**Feature Options:**

[Downlink Interface] 1x E1 2x E1 4x E1

[Management] Craft terminal Craft terminal + SNMP-based MIB management

[Power] 1x AC 1x DC +5VDC power jack input port 1x AC + 1x DC

+5VDC power jack input port + 1x AC +5VDC power jack input port + 1x DC

Chapter 2 Installation Notes

2-1 Description

This chapter provides the information needed to install CL-MC-XE1-IP-Y series. It is important to follow the installation instructions to ensure normal operation of the system and to prevent damages from human negligence.

2-2 Unpacking

If there is a possibility for future relocation of the CL-MC-XE1-IP-Y unit, please keep the packing cartons and protection packaging material.

Please carefully unpack and inspect the unit and accessories for potentially damaged and missing parts. Contact our nearest sales representative or our company directly if you detect any damaged or missing parts. Improper handling during shipment may cause early failure.

2-3 Site Requirements

Users should follow the precautions below to insure the safety and to minimize the risk of damage to the equipment:

Make sure that the power outlet is properly grounded. Please refer to article 250 of the National Electrical Code (NEC) Handbook. Proper grounding should include a minimum of:

- A grounded rod buried outside the building at least 8 feet (2.44 meters) deep.

2-4 Site Selection

For best performance, the distance of 6 feet (1.83 meters) from the AC power outlet to CL-MC-XE1-IP-Y series is preferred. To allow easy access to the equipment, leave at least 36 inches (90 cm) clearance in the front and at least 4 inches (10.2 cm) at the rear.



Caution: To avoid overheating, leave at least 1 inch (2.5 cm) on either side of the CL-MC-XE1-IP-Y series. Also, DO NOT stack other equipments on top of the CL-MC-XE1-IP-Y unit in order to ventilate the system normally.

2-5 AC or DC Electrical Outlet Connection

For safety and to prevent damage to CL-MC-XE1-IP-Y series, make sure that the power requirement matches the appearance of user electric outlets. Connect power source to CL-MC-XE1-IP-Y unit and power on the equipment.



Caution: Damage to compact key components may occur if the output voltage applied to device is not within the specified range.

2-6 Rack Installation Configuration

There are 3 kinds of common parts for each CL-MC-XE1-IP-Y pack, including 1 set of TDM over IP multiplexer, 1 piece of AC power cable. If CL-MC-XE1-IP-Y intends to be mounted into a rack, a pair of L-shaped brackets with 10 pieces of screws should be requested by user's order. The following Figure 2-6.1 as desktop mode and Figure 2-6.2 as rack mode, and the procedures are to show the installation configuration.



Figure 2-6.1 CL-MC-XE1-IP-Y series as desktop mode



Figure 2-6.2 CL-MC-XE1-IP-Y series as rack mount mode

2-7 Getting Start

1. Place both CO and CPE CL-MC-XE1-IP-Y devices on a flat work surface.
2. Connect the Ethernet cable to the CO CL-MC-XE1-IP-Y device's WAN port and the other end of the Ethernet cable to the CPE CL-MC-XE1-IP-Y device's WAN port.
3. Ensure that CO and CPE CL-MC-XE1-IP-Y devices are both switched on.
4. Connect your computer to the LAN port of the CL-MC-XE1-IP-Y device.
5. Check LAN and WAN Ethernet ports LED status as shown in Table2-7.1.
6. You may need to set up further parameters via a RS232 console port or a telnet session as described in section 3-9 "Command Line Interface for Setup". Examples to configure CL-MC-XE1-IP-Y can be found in Appendix section.

Table 2-7.1 LED Indications of CL-MC-XE1-IP-Y 1/2/4-Port E1

LED Name	State	Description
PWR	Green	Power is on.
	Off	No power present.
Ethernet Link/Activity	Green	Ethernet link is up.
	Blinking Green	Tx/Rx traffic is traversing the port.
	Off	Ethernet Link is down.
Ethernet Link Speed	Orange	100 Mbps
	Off	10 Mbps
E1 ACT	Green	E1 port is enabled and traffic is traversing the port.
	Off	E1 port is disabled.
E1 ALM	Orange	E1 link error has occurred.
	Off	No alarm present.
ALM	Red	Alarms raised from any of E1 link
	Off	No alarm present.

Chapter 3 Operating Instructions

3-1 Description

CL-MC-XE1-IP-Y series consists of the front panel and the rear panel. The views and description of front and rear panels are shown in Figure 3-2.1 and 3-3.1 for details.

3-2 Front Panel



Figure 3-2.1 CL-MC-XE1-IP-Y 1-Port E1 Front Panel



Figure 3-2.2 CL-MC-XE1-IP-Y 2-Port E1 Front Panel



Figure 3-2.3 CL-MC-XE1-IP-Y 4-Port E1 Front Panel

(1) System Indicators

PWR (Power On/Off LED)

ALM (failures/errors from any of E1 link)

(2) Reset Button

Use this button to restart the system.

(3) LAN Ethernet Connector and Indicators

The Ethernet interface is a RJ45 connector with two LED indicators and its pin assignments are shown in Figure 3-2.4. Two LED indicators are described below.

- **GREEN LED:** Solid Green indicates Ethernet link is up; Blinking Green indicates Tx/Rx traffic is traversing the port.
- **ORANGE LED:** Solid Orange indicates 100 Mbps link speed; Off indicates 10 Mbps link

speed.

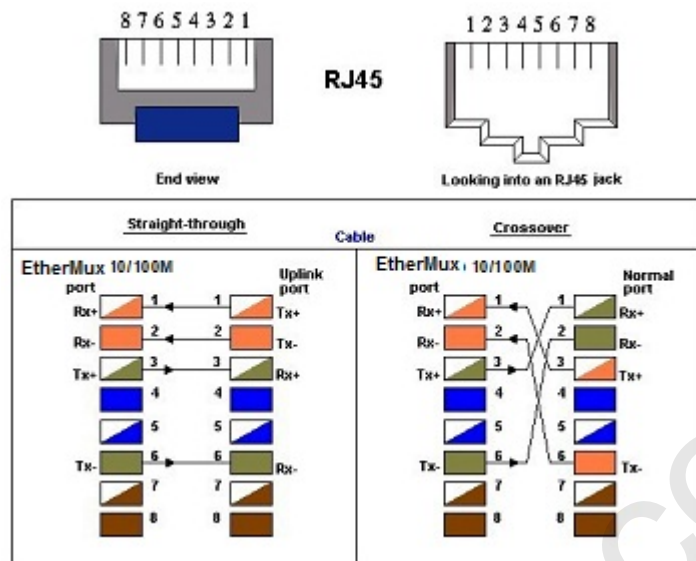


Figure 3-2.4 Ethernet Pin Assignment

(4) E1 Interface Connectors and Indicators

The E1 interface is a RJ48c connector with two LED indicators.

- **GREEN LED:** Solid Green indicates E1 port is enabled and traffic is traversing the port; Off indicates E1 port is disabled.
- **ORANGE LED:** Solid Orange Indicates E1 link error has occurred; Off indicates no alarms or failures.

The “Orange” LED indicates one of the following alarms occurred:
E1 LOS, LOF, AIS or L-bit received from the remote device.

E1 Pin Assignments are shown in Figure 3-2.5.

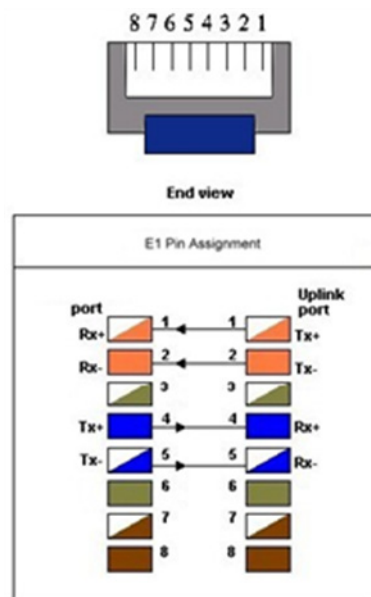


Figure 3-2.5 E1 Pin Assignments

(5) RS232 Connector

A RS232 interface with baud-rate 115200bps via DB9 (female)-to-DB9 (male) cable is provided for diagnostic. The user commands (CLI command) are listed in Table 3-9.1.

(6) NMS Ethernet port

It can be used for device management (local or remote access via Telnet or SNMP-based management). Provide a user-friendly interface for the management of CL-MC-XE1-IP-Y devices.

3-3 Rear Panel**Figure 3-3.1 CL-MC-XE1-IP-Y Rear Panel****(1) WAN Ethernet Interface:**

The Ethernet interface is a RJ45 connector with two LEDs and its pin assignments are shown in Figure 3-2.4. Two LED indicators are described below.

- **GREEN LED:** Solid Green indicates Ethernet link is Up; Blinking Green indicates Tx/Rx traffic is traversing the port.
- **ORANGE LED:** Solid Orange indicates 100 Mbps link speed; Off indicates 10 Mbps link speed.

(2) AC Power Socket and Switch (On/Off switch for AC):

The built-in power module provides AC 110V/220V with the input voltage range of 85 to 264VAC.

(3) DC Power Socket and Switch (On/Off switch for DC):

The built-in -48VDC power module provides the power with the input voltage range of -36 to -72VDC.

Either built-in AC power module or built-in DC power module is shipped with CL-MC-XE1-IP-Y.

(4) +5VDC Power Jack:

Used to connect the external power supply with the CL-MC-XE1-IP-Y.

3-4 Loopback Mode

The CL-MC-XE1-IP-Y provides two types of loopback: "E1 Remote Loopback" and "E1 Local Loopback". (Please refer to Figure 3-4.1).

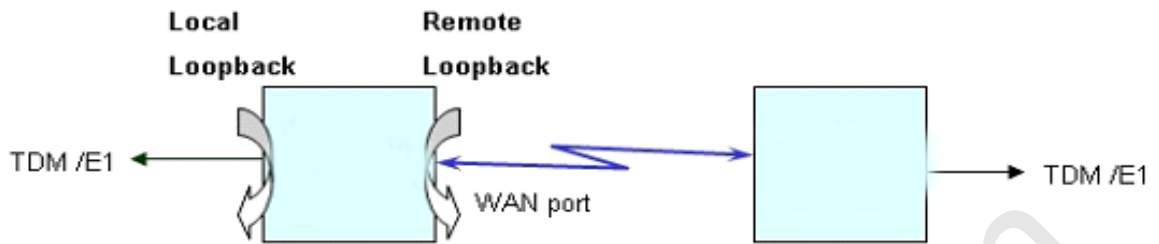


Figure 3-4.1 CL-MC-XE1-IP-Y E1 Loopback Mode

3-5 IP Configuration

The IP address, subnet mask, and default gateway address can be setup through RS232/Telnet or via management tools.

3-6 Interface Configuration

LAN Ethernet port provides the bandwidth control. This feature allows users to limit the data rate from LAN to WAN port. Implementing this feature is to ensure the quality of service in TDM circuits. For different applications, there are 16 different bandwidth options available for users to choose (50K, 100K, 150K, 200K, 250K, 300K, 350K, 400K, 800K, 1.6M, 3.2M, 6.4M, 12.8M, 25.6M, 51.2M and 100M). In addition, setting a 100Mbps bandwidth option is to only utilize the rest of the available bandwidth of 100Mbps minus the bandwidth being reserved for all E1 traffic.

As to E1 interface, the LEDs will be lit after enabling the E1 channel and user can map to the remote different E1 channel for flexible selection. Jitter Buffer is also used to minimize packet delay variations between two devices, including 8 available options of 11, 23, 40, 75, 99, 145, 192 and 239 ms based on the standard Ethernet frame size of 1518 bytes.

3-7 Fault Report

E1 active alarms can be displayed by executing a CLI command "almall". This information is useful for a technical support personnel who performs diagnostic tasks. The alarms are interpreted as follows:

E1LOS: Loss of receiving signal of E1 from the upstream equipment connected to the E1 port.

E1AIS: AIS (Alarm Indication Signal, a message consisting of all "1"s) signal received from the upstream equipment connected to the E1 port.

PWLBIT: E1 LOS or AIS alarm has been raised at the remote E1 port.



PWRBIT: Packets loss occurred at remote Ethernet WAN port.

PWSEQNUMERR: Packets received out of sequence at local Ethernet WAN port.

JBUFEMP: Jitter buffer empty occurred at the E1 port. (Possible reasons could be due to WAN port Ethernet link down or pseudowire ID mismatched.)

JBUFOV: Jitter buffer overflow occurred at the E1 port.

3-8 Save Configuration

After change the settings of device, please execute **csave** command to save the new settings to the device. This can prevent all of your settings loss if you reboot or power cycle the device.

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3-9 Command Line Interface for Setup

a. Hyper-terminal as Local Craft Terminal

When logging into the Hyper-terminal, set up the craft port as follows:

- Bit rate: 115200bps
- Data bit: 8
- Parity: none
- Stop bit: 1
- Flow control: none
- Login password: *admin*

b. Telnet as Remote Craft Terminal

The CL-MC-XE1-IP-Y device supports a telnet service for remote configuration. Any host with telnet client enabled can access to a command line interface of the EtheMux device. The telnet port has been changed to port 8888 because of security issues with default port 23. Please follow instructions below for remotely login to a device via telnet connection. The illustration is based on CL-MC-XE1-IP-Y device default factory settings listed below.

CL-MC-XE1-IP-Y Device Default Factory Settings

	CO device	CPE device
NMS port IP address	192.168.1.11	192.168.2.11
NMS port subnet mask	255.255.255.0	255.255.255.0
Default gateway	172.16.1.2	172.16.1.1
WAN port IP address	172.16.1.1	172.16.1.2
WAN port subnet mask	255.255.255.0	255.255.255.0
LAN to WAN port bandwidth	400Kbps	400Kbps

To telnet to an CL-MC-XE1-IP-Y CO device from your computer, connect your computer to the LAN port of CO device with an Ethernet cable, then follow these steps:

- Step 1:** Configure your computer IP address as 172.16.1.100 and subnet mask set to 255.255.255.0
- Step 2:** On the command terminal of your computer, type telnet 172.16.1.1 8888.
- Step 3:** When the device prompts a password, just enter the default password "admin".
- Step 4:** Type ? to display a list of commands available for a user.
- Step 5:** If want to see a full list of commands, type "passwd" command and input password "gciadmin" to enter administration mode.
- Step 6:** Type ? to display a full list of commands.

To telnet to an CL-MC-XE1-IP-Y CPE device from your computer, connect your computer to the LAN port of CPE device with an Ethernet cable, then follow same steps described above except **Step 2** type telnet 172.16.1.2 8888 instead, telnet to a CPE device's IP address.

The CLI commands are summarized as the following table:

Table 3-9.1 CLI Command Description

CLI Command	Description
System Command	
logout	Logout CLI System
cdisp	Display CL-MC-XE1-IP-Y current configurations.
csave	Save current configurations: CL-MC-XE1-IP-Y & relative setting.
cloud	Load configuration setting from FLASH.
passwd	Enter password to change user-mode. (i.e. View/Setup/Admin mode) PS: If inputted password is not for "setup" or "admin", it will enter the "view" mode.
setpass mode	Modify password for user-mode. mode: 's' for setup mode, 'a' for admin mode, 'c' for CLI login
ipset ip_addr net_mask gw_addr	Set NMS port IP address, subnet mask and gateway address. ip_addr: NMS port IP address to be assigned. net_mask: subnet mask of IP address. gw_addr: gateway IP address. Example: ipset 192.168.1.11 255.255.255.0 192.168.1.254
ipget	Display NMS port current IP address.
trapset mode trap_ip_addr	Set SNMP Trap Mode & Host IP mode: 0 for disable SNMP trap, 1 for enable SNMP trap Example: trapset 1 192.168.1.200 (enable SNMP trap function and set host 192.168.1.200 to receive the trap message)
trapget	Get SNMP Trap Mode & Host IP
ntpset mode server_ip_addr	Set NTP Enable Mode & NTP Server IP mode: 0 for disable NTP function, 1 for enable NTP function Example: ntpset 1 192.168.1.201 (enable NTP function and set NTP server address to 192.168.1.201)
ntpget	Get NTP Enable Mode & NTP Server IP
upgrade tftp_server_ip file_name	Upgrade SW image file from TFTP server tftp_server_ip: TFTP server IP address file_name: the file name of software image to be upgraded EX: upgrade 172.16.1.101 CL-MC-XE1-IP-Y_v100_f110418.bin
backup tftp_server_ip file_name	Backup the system configuration to TFTP server tftp_server_ip: TFTP server IP address file_name: backup file name EX: backup 172.16.1.101 CL-MC-XE1-IP-Y_co_backup_1
restore tftp_server_ip	Restore the backup system configuration from TFTP server



CLI Command	Description
file_name	tftp_server_ip: TFTP server IP address file_name: backup file name EX: restore 172.16.1.101 CL-MC-XE1-IP-Y_co_backup_1
timeset hour min sec	Set current time with 'hour', 'minute' and 'second'. Example: timeset 7 30 00 (set CL-MC-XE1-IP-Y's real time clock to 7:30AM)
dateset year month day	Set current date with 'year', 'month' and 'day' Example: dateset 2011 07 05 (set CL-MC-XE1-IP-Y's date to July 5, 2011)
timeget	Get current time and date
ping ip_addr	Use ICMP to check connection EX: ping 192.168.1.11
version	Display software version and related information
logout	Quit EtherMate CLI session and return to CLI login prompt
reboot	Perform a warm startup on EtherMate. Ethernet data will be interrupted during this operation.
Provision Command	
gci	Global Chipset Initialization at Middle Ware & CESoPSN chip Initial relative Tasks, Messages and Semaphores.
srcnet ip_addr net_mask [source_mac(AA:BB:CC)]	Set WAN port IP address, subnet mask, gateway IP address and its MAC address. If source_mac is omitted, the last three numbers of WAN port IP address will be used as its MAC address. ip_addr: WAN port IP address to be assigned. net_mask: subnet mask of IP address. [source_mac(AA:BB:CC)](OUI is fixed): WAN port MAC address. EX: srcnet 172.16.1.1 255.255.255.0 (WAN port MAC address will be set to OUI+10:01:01) EX: srcnet 172.16.1.1 255.255.255.0 0A:0B:0C (WAN port MAC address will be set to OUI+0A:0B:0C)
lanset enable bandwidth	Enable LAN port and set its bandwidth enable: 0:disable, 1:enable LAN port bandwidth: 0: 50Kbps, 1: 100Kbps, 2: 150Kbps, 3: 200Kbps, 4: 250Kbps, 5: 300Kbps, 6: 350Kbps, 7: 400Kbps, 8: 800Kbps, 9: 1.6Mbps, 10: 3.125Mbps, 11: 6.25Mbps, 12: 12.5Mbps, 13: 25Mbps, 14: 50Mbps, 15: 100Mbps. EX: lanset 1 7 (enable LAN port and limit its bandwidth to 400Kbps)
vlanset op_mode	Enable or disable E1 channel vlan mode



CLI Command	Description
	op_mode: 0:disable, 1:enable EX: vlanset 1 (enable E1 channel vlan mode)
ceschset ch_no enable [dest_ip] [dest_mac]	Set CESoPSN Channel and its destination IP and MAC address of the remote device. ch_no: E1 channel number (1~4) enable: 0:disable, 1: enable. [dest_ip]: destination IP address. Can be omitted if disable E1 channel. [dest_mac]: destination MAC address. Example 1: Enable E1 port #1, set the dest_ip, then automatically get the dest_mac address from the remote device only if the local device can communicate with the remote device via its WAN port. EX: ceschset 1 1 172.16.1.2 Example 2: Enable E1 port #1 and specifically set the destination ip and mac address of the remote device. EX: ceschset 1 1 172.16.1.2 AA:BB:CC:DD:EE:FF
cespwidset ch_no TrPWID PrPWID	Set CESoPSN Channel TrPWID and PrPWID. ch_no: E1 channel number (1~4) TrPWID: Transmit PW ID. PrPWID: Provision PW ID. EX: cespwidset 1 1 1
jitterbd ch_no depth	Set CESoPSN Channel Jitter Buffer Depth. ch_no: E1 channel number (1~4) depth(pktsize=0): jitter buffer depth 0~7 (0:11ms, 1:23ms, 2:40ms, 3:75ms, 4:99ms, 5:145ms, 6:192ms, 7:239ms) EX: jitterbd 1 1 (set jitter buffer to 23msec when pkt_size is set to 1518 Bytes)
pktsize ch_no pkt_size	Set CESoPSN Channel Packet Size ch_no: E1 channel number (1~4) Pkt_size: 0 ~ 3 (0: 1514 Byte, 1: 782 Byte, 2: 178 Byte, 3: 306 Byte) EX: pktsize 1 1
ceschclkset ch_no clksrc	Set Channel transmit clock source ch_no: E1 channel number (1~4) clksrc: 0:Adaptive, 1:Internal, 2:RxLine.
lpkset ch_no mode enable	Enable/Disable E1 channel loopback mode. ch_no: E1 channel number (1~4) mode: 0:Disable-All, 1:E1-Remote (FE), 2:E1-Local (NE) enable: 0:disable, 1:enable. EX: lpkset 1 1 1
lpkget	Get current loopback mode of E1 channel.

CLI Command	Description
cesfe1mode ch_no en(1/0)	Set TDM PW to Transparent E1 (SAToP) or Fractional E1 N x 64k mode (CESoPSN) ch_no: E1 channel number (1~4) enable: 0:disable, 1: enable. EX: ceschmode 1 1 (Set E1 port #1 to Fractional E1 (CESoPSN) mode)
cesfe1crc ch_no en(1/0)	E1 G.704 CRC4 generation/analyze control for Fractional E1 mode. This setting only affect E1 ports set to FE1 N x 64k mode, for E1 ports set to Transparent E1 mode this setting has no effect. ch_no: E1 channel number (1~4) enable: 0:disable, 1: enable. EX: cesfe1crc 1 1 (Enable G.704 CRC4 generation/analyze on E1 port #1.)
cesfe1tstmap ch_no TsMap	Set 64k PCM channel number to be transported over the TDM PW for FE1 (CESoPSN) mode. This setting only affect E1 ports set to FE1 N x 64k mode, for E1 ports set to Transparent E1 mode this setting has no effect. ch_no: E1 channel number (1~4) TsMap: bit mask for DS0, b31:TS31 ~ b0:TS0 EX: cesfe1tstmap 1 x000007FE Timeslot #1 ~ 10 of E1 port #1 will be transported over the TDM PW. x000007FE (hexadecimal)=0000 0000 0000 0000 0000 0111 1111 1110 (binary) TS31: the most left bit, TS0: the most right bit, TS0 is used for frame alignment and can't be counted in your timeslots and always set to 0.
ceschvlanvlpid ch_no vlp id	Set CESoPSN Channel vlan tag ch_no: E1 channel number (1~4) vlp: vlan priority, 0 ~ 7(highest priority) id: vlan id, 0 ~ 0xFFFF Ex: ceschvlanvlpid 1 7 5 (set E1 port #1 traffic with vlan tag, set priority to 7 and set vlan ID to 5)
Alarm Command	
almall	Display all alarm status (CESoPSN)

Appendix

A) Script for resetting CL-MC-XE1-IP-Y to default I

Script for setting the device back to default I (LAN bandwidth is 400 kbps)

Script for setting **CO** site configuration back to default I

```
#Execute global chip initialization
gci
```

```
#Configure an ip address for the WAN port
srcnet 172.16.1.1 255.255.255.0

#Configure an ip address and gateway for the NMS port
ipset 192.168.1.11 255.255.255.0 172.16.1.2

#Enable LAN port and set the bandwidth to 400Kbps.
lanset 1 7

#Save the configuration
csave
```

Script for setting CPE site configuration back to default I

```
gci
srcnet 172.16.1.2 255.255.255.0
ipset 192.168.2.11 255.255.255.0 172.16.1.1
lanset 1 7
csave
```

B) Script for resetting CL-MC-XE1-IP-Y to default II**Script for setting the device back to default II****(Enable E1 port#1 and set LAN bandwidth to 400 kbps)****Script for setting CO site configuration back to default II**

```
gci
srcnet 172.16.1.1 255.255.255.0
ipset 192.168.1.11 255.255.255.0 172.16.1.2

#Set both transmitting and receiving pseudowire ID to 1 for E1 port#1
cespwidset 1 1 1

#Set the transmit packet size to 782 byte for E1 port#1
#Usage: pktsize ch_no pkt_size(0~3) !
#pkt_size(total len)=> (0: 1514 Byte, 1:782 Byte,
#                        2: 178 Byte, 3: 306 Byte)
pktsize 1 1

#Set the jitter buffer depth to 11.5 msec for E1 port#1
#Usage: jitterbd ch_no depth !
#depth(pktsize=0) (0: 11 ms, 1: 23 ms, 2: 40 ms, 3: 75 ms,
```

```
#           4: 99 ms, 5: 145 ms, 6: 192 ms, 7: 239 ms ).
# since the packet size is set to 1 (782 Bytes) which is about half
# length of 1514 Bytes, the jitter buffer depth for packet size of
# 782 bytes will be 23msec/2 = 11.5msec
jitterbd 1 1

#Set the transmit clock source to RxLine for E1 port#1
#Usage: ceschclkset ch_num clksrc(0:Adaptive/1:Internal/2:RxLine)
ceschclkset 1 2

#Enable E1 port #1, and specifically set the destination IP and MAC
#address of the remote device (CPE).
ceschset 1 1 172.16.1.2 00:0b:f9:10:01:02

lanset 1 7
csave
```

Script for setting CPE site configuration back to default II

```
gci
srcnet 172.16.1.2 255.255.255.0
ipset 192.168.2.11 255.255.255.0 172.16.1.1
cespwidset 1 1 1
pktsize 1 1
jitterbd 1 1
ceschclkset 1 0
ceschset 1 1 172.16.1.1 00:0b:f9:10:01:01
lanset 1 7
csave
```

C) Script for resetting CL-MC-XE1-IP-Y to default III**Script for setting the device back to default III****(Enable E1 port#1 and port#2 and set LAN bandwidth to 400 kbps)****Script for setting CO site configuration back to default III**

```
gci
srcnet 172.16.1.1 255.255.255.0
ipset 192.168.1.11 255.255.255.0 172.16.1.2

#Set both transmitting and receiving pseudowire ID to 1 for E1 port#1
```

```
#Set both transmitting and receiving pseudowire ID to 2 for E1 port#2
cespwidset 1 1 1
cespwidset 2 2 2

#Set the transmit packet size to 782 byte for both E1 port#1 and
# port#2.
pktsize 1 1
pktsize 2 1

#Set the jitter buffer depth to 11.5msec for both E1 port#1 and
# port#2.
jitterbd 1 1
jitterbd 2 1

#Set the transmit clock source to RxLine for both E1 port#1 and
# port#2.
ceschclkset 1 2
ceschclkset 2 2

#Enable both E1 port#1 and port#2, and specifically set the
#destination IP and MAC address of the remote device (CPE).
ceschset 1 1 172.16.1.2 00:0b:f9:10:01:02
ceschset 2 1 172.16.1.2 00:0b:f9:10:01:02

lanset 1 7
csave
```

Script for setting CPE site configuration back to default III

```
gci
srcnet 172.16.1.2 255.255.255.0
ipset 192.168.2.11 255.255.255.0 172.16.1.1
cespwidset 1 1 1
cespwidset 2 2 2
pktsize 1 1
pktsize 2 1
jitterbd 1 1
jitterbd 2 1
ceschclkset 1 0
ceschclkset 2 0
```

```
ceschset 1 1 172.16.1.1 00:0b:f9:10:01:01
ceschset 2 1 172.16.1.1 00:0b:f9:10:01:01
lanset 1 7
csave
```

D) Script for resetting CL-MC-XE1-IP-Y to default IV

Script for setting the device back to default IV (Enable E1 port #1 to #4 and set LAN bandwidth to 400kbps)

Script for setting CO site configuration back to default IV

```
gci
srcnet 172.16.1.1 255.255.255.0
ipset 192.168.1.11 255.255.255.0 172.16.1.2

#Set both transmitting and receiving pseudowire ID to 1 for E1 port#1
#Set both transmitting and receiving pseudowire ID to 2 for E1 port#2
#Set both transmitting and receiving pseudowire ID to 3 for E1 port#3
#Set both transmitting and receiving pseudowire ID to 4 for E1 port#4

cespwidset 1 1 1
cespwidset 2 2 2
cespwidset 3 3 3
cespwidset 4 4 4

#Set the transmit packet size to 782 byte for E1 port#1 to
# port#4.
pktsize 1 1
pktsize 2 1
pktsize 3 1
pktsize 4 1

#Set the jitter buffer depth to 11.5msec for E1 port#1 to
# port#4.
jitterbd 1 1
jitterbd 2 1
jitterbd 3 1
jitterbd 4 1

#Set the transmit clock source to RxLine for E1 port#1 to
```



```
# port#4.
ceschclkset 1 2
ceschclkset 2 2
ceschclkset 3 2
ceschclkset 4 2

#Enable E1 port#1 to port#4, and specifically set the destination
#IP and MAC address of the remote device (CPE).
ceschset 1 1 172.16.1.2 00:0b:f9:10:01:02
ceschset 2 1 172.16.1.2 00:0b:f9:10:01:02
ceschset 3 1 172.16.1.2 00:0b:f9:10:01:02
ceschset 4 1 172.16.1.2 00:0b:f9:10:01:02

lanset 1 7
csave
```

Script for setting CPE site configuration back to default IV

```
gci
srcnet 172.16.1.2 255.255.255.0
ipset 192.168.2.11 255.255.255.0 172.16.1.1
cespwidset 1 1 1
cespwidset 2 2 2
cespwidset 3 3 3
cespwidset 4 4 4
pktsize 1 1
pktsize 2 1
pktsize 3 1
pktsize 4 1
jitterbd 1 1
jitterbd 2 1
jitterbd 3 1
jitterbd 4 1
ceschclkset 1 0
ceschclkset 2 0
ceschclkset 3 0
ceschclkset 4 0
ceschset 1 1 172.16.1.1 00:0b:f9:10:01:01
ceschset 2 1 172.16.1.1 00:0b:f9:10:01:01
ceschset 3 1 172.16.1.1 00:0b:f9:10:01:01
```

```
ceschset 4 1 172.16.1.1 00:0b:f9:10:01:01
lanset 1 7
csave
```

E) Script for resetting CL-MC-XE1-IP-Y to default V

Script for setting the device back to default V (Enable E1 port#1 as Fractional E1 [10 timeslots] and set LAN bandwidth to 400 Kbps)

Script for setting CO site configuration back to default V

```
gci
srcnet 172.16.1.1 255.255.255.0
ipset 192.168.1.11 255.255.255.0 172.16.1.2
cespwidset 1 1 1
pktsize 1 1
jitterbd 1 1
ceschclkset 1 2

#Enable E1 port#1 to the fractional E1 mode
cesfelmode 1 1

#Configure 10 timeslots allocated to the fractional E1 port#1
cesfeltsmap 1 x7FE

ceschset 1 1 172.16.1.2 00:0b:f9:10:01:02
lanset 1 7
csave
```

Script for setting CPE site configuration back to default V

```
gci
srcnet 172.16.1.2 255.255.255.0
ipset 192.168.2.11 255.255.255.0 172.16.1.1
cespwidset 1 1 1
pktsize 1 1
jitterbd 1 1
ceschclkset 1 0
cesfelmode 1 1
cesfeltsmap 1 x7FE
ceschset 1 1 172.16.1.1 00:0b:f9:10:01:01
lanset 1 7
csave
```



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