

Multiservice Enterprise Access (MEA)

MEA-240H

Shelf and Accessories

Advanced System Design



As part of the MEA product suite, the MEA-240H allows the delivery of aggregated TDM telephony and high-speed data services in the access networks of today and tomorrow.

The MEA-240H compact (5RU) chassis can terminate and originate a number of service applications and/or topologies within the same shelf, maximizing the service providers' capacity and flexibility per square foot of rack space. Although typically deployed in headends or Central Offices (COs), the MEA-240H is also ideally suited for remote sites that require multiple point-to-point outbound connections.

The MEA-240H is a modular, carrier-class platform (NEBS L3) that provides 16 slots for service interface modules, four slots for ring termination/aggregation modules (1+1 protected), two slots for 1:1 redundant CPU modules, and redundant/field-replaceable power supplies (DC or AC). The shelf is arranged in two halves (or groups), designated the A-side and B-side, while sharing common CPU and power supply resources. Each side has 64 individual pin connectors on the back for high count DS1/E1 terminations and BNC connectors on the front for DS3 (M13) terminations. Each side also allows aggregation of data from the eight I/O service slots to either one or two (1+1 protected) aggregation-slots. The independent A and B side aggregation facilities implement two separate access networks in a single chassis.

You can configure and manage the MEA-240H, and all subordinated MEA-120s and MEA-240Ps locally through the craft interface on the shelf, or remotely through element management software.

Provides a cost effective solution for various access applications that require the transport of multi-services (TDM and Ethernet) over fiber.

The flexibility of the solution supports multiple topologies: Point-to-Point, ring based, or a combination of the two.

KEY FEATURES INCLUDE:

- Compact shelf
- Modular construction with 16 I/O service slots and 6 common slots
- Services supported: DS1/3, E1/3
- 10/100BTx Ethernet and Gigabit Ethernet
- Optional system redundancy
- Optional link and/or equipment protection
- Flexible reach with Small Form-Factor Pluggable (SFP) optics
- Diagnostic capabilities that include far end or near end loop-backs
- Aggregation capacity in one MEA-240H: 4 Gbps of Ethernet data and 2 DS3 (56 x DS1 or 42 x E1) in support of multiple topologies



Interface Modules

Fast Ethernet and DS1/E1 Module (MEA-240H MC-FE)

This module multiplexes 4 DS1s or E1s and a fast Ethernet stream into a single fiber pair connected to the MEA120F. It also provides a management channel for remote configuration and monitoring of the MEA-120F. SFP optical transceivers provide flexible reach. An optional redundant optical line is available.

Gigabit Ethernet and DS1/E1 Module (MEA-240H MC-GbE)

This module multiplexes 4 DS1s or E1s and a Gigabit Ethernet (1000Base-SX) stream into a single fiber pair connected to the MEA-120G. It also provides a management channel for remote configuration and monitoring of the MEA-120G. SFP optical transceivers provide flexible reach. An optional redundant optical line is available.

Gigabit Ethernet and DS3/E3 Module (MEA-240H MC-GbE3)

This module multiplexes a single DS3 or E3 and a Gigabit Ethernet stream into a single fiber pair to the MEA-120G3. It also provides a management channel for remote configuration and monitoring of the MEA-120G3. SFP optical transceivers provide flexible reach. An optional redundant optical line is available.

STM-1 Module (MEA-240 STM1)

This module multiplexes the E1 services into a STM-1 for connectivity between the MEA-240 and the metro core network. The STM-1 works in conjunction with the ring termination/aggregation modules and supports 1+1 protection.

100FX Star Module (MEA-240 ST)

This module supports downstream 100FX Ethernet links that carry multiplexed TDM and Ethernet traffic. The module is used in pt-to-pt links when the application is to aggregate multiple links into DS3/STM-1 and Gig E uplinks towards the core metro network. The module supports path protection (1+1). SFP optical transceivers provide flexible reach.

Gigabit Ethernet Module (MEA-240 GbE)

This module provides Gig E connectivity between the MEA-240 and the metro core network and works in conjunction with the ring termination/aggregation modules and SFP optical transceivers provide flexible reach.

DS3 Module (MEA-240H DS3)

This module multiplexes the DS1 services into a DS3 for connectivity between the MEA-240 and the metro core network. The DS3 works in conjunction with the ring termination/aggregation modules and supports 1:1 protection.

Ethernet and TDM Native Service Modules (MEA-240 NSM-*)

This module provides client side Ethernet and TDM interfaces supporting the following configurations:

- 2 x 10/100BTx and 2 x DS1/E1 (MEA-240 NSM-2E2T)
- 4 x 10/100BTx (MEA-240 NSM-4ETX)
- 4 x DS1/E1 (MEA-240 NSM-4T)

The Ethernet and TDM Native Service Modules works in conjunction with the ring termination/aggregation modules

Control and Aggregation Modules

Ring Termination/Aggregation Module (MEA-240 RTA)

This module grooms/aggregates TDM (DS1/E1) and Ethernet traffic received from the remote star-connected MEA-240P's/120's and/or locally served customer traffic. The module also grooms/aggregates TDM (DS1/E1) and Ethernet traffic received from a Gig E ring topology and transfers the TDM and Ethernet to the metro core over native DS3/STM-1 and Gig E connections. SFP optical transceivers provide flexible reach on the two Gig E ports.

Control and Management Module (MEA-240 CMM)

Occupying the middle two slots of the full-length modules, the CMM card contains the processor required for the Element Management System. It also provides control and coordination of the shelf's functionality with respect to the interface cards and aggregation cards.

SPECIFICATIONS

DS1/E1 Service Interface (through modules)

DS1 Connector	RJ-48, 100 Ohm balanced
E1 Connector	RJ-48, 120 Ohm balanced
DS3/E3	BNC, 75 Ohm
Jitter Performance	G.823
Line Coding	HDB3, B8ZS, AMI
Compliance	ANSI T1.1, G.703

Ethernet Interface (through modules)

100BaseT Connector	RJ-45
Gig E	SFP
Auto-negotiate	
Half/Full Duplex	
Compliance	IEEE 802.3

GENERAL

Dimensions	17.3" W x 8.0" H x 12" D (43.9 cm x 20.3 cm x 30.5 cm)
Weight	16 lbs. (7.3 kg) non-populated
Power	88-264 VAC, 47-63 Hz
Power Consumption	300 watts max
Operating Temperature Range	0°C to +50°C
Storage Temperature Range	-30°C to +80°C
Altitude	-150' to 10,000'
Humidity	5-95% non-condensing
Shelf TDM connectors	
DS3	BNC
DS1/E1	Telco 64 pin

Certification

CE approved
 FCC part 15 class B, EN300-386 class B
 Laser Safety: EN60825-1, 21 CFR 1040

RELATED MEA Platform Equipment

Model Number	Description
MEA-240P	MEA customer site modular platform
MEA-120F	MEA customer site platform supporting 1 x 100BTx and 4 x DS1/E1
MEA-120G1	MEA customer site platform supporting 1 x Gig E and 4 x DS1/E1
MEA-120G3	MEA customer site platform supporting 1 x Gig E and 1 x DS3/E3

Specifications are subject to change without notice

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