

# MRS46xx Series

## Ethernet over 4,8 or 16 E1 Aggregation Gateway



- > Up to 31 remote LANs over n\*E1 or n\*64K circuits aggregation
- > Built-in 10Gbps switch fabric
- > Support 2047 bytes jumbo frames
- > Support VLAN tagging and QinQ function
- > Support E-Tree and E-LAN.
- > Support HDLC/PPP-BCP(RFC3518)/GFP-F encapsulation
- > Support E1 frame or un-frame application, and N\*64K for framed mode
- > Provide statistics for each E1 channel
- > Support E1 proprietary ring protection
- > Configure via CLI/Web/SNMP(v1/v2c/v3)
- > Support software and firmware upgrade
- > -48VDC/110/220VAC flexible redundant power inputs

## Overview

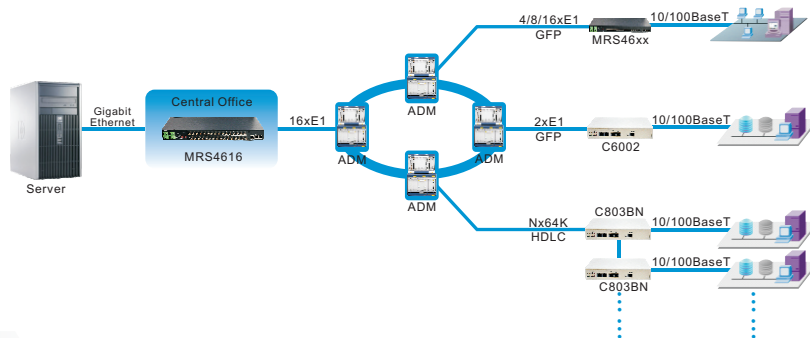
MRS46xx Series Gateway is a channelized Ethernet gateway for interconnecting TDM and packet-based networks. The Ethernet Gateway aggregates and switches Ethernet traffic into 4, 8 or 16 channelized E1 circuits, each supporting up to 31 Ethernet logical channels (31 over N\*64K). Ethernet traffic over channelized E1 lines is aggregated and transferred to the packet-switched network via the unit's Gigabit Ethernet ports. The encapsulation method support HDLC/PPP-BCP(RFC3518)/GFP-F.

## Typical Applications

Typically deployed at a central location, MRS46xx Series Gateway aggregates Ethernet Data received from devices (such as Grancom's C80 series, C600x series, CS1200 series, or third-party devices), thus completing a full access solution from the service provider's central site to the customer premises. The unit supports up to maximum 31 logical channels, allowing the connection of up to maximum 31 different customers per site.

### Other typical applications include:

- Ethernet private E-line/E-LAN/E-tree services
- Aggregation of Ethernet traffic over TDM wireless links
- Network management backhauling.



## Specifications

### E1 Interface

- Number of Ports:
  - MRS4604:4
  - MRS4608:8
  - MRS4616:16
- Interface Standard: G.703 G.704
- Line Impedance and Connector
  - 120 Ω, balanced, RJ-48
  - 75Ω, unbalanced, BNC
- Data Rate: 2.048 Mb/s
- E1 Line Protection:
  - 15 KV ESD protection for all signals
  - 4 KV/2KA (level 4) surge protection

### Ethernet Interface

- Number of Ports: 4
- Interface Type: 1000BaseLx and 10/100/1000BaseT (See Ordering Information)
- Compliance: Relevant sections of IEEE 802.3
- Data Rate
  - Optical: 1000 Mbps
  - Electrical: 10/100/1000 Mbps
- Max Frame Size: 2047 bytes
- Connector
  - Optical: LC (SFP-based)
  - Electrical: RJ-45
- Electrical Cable Type: Cat.5
- Magnetic Isolation Protection: 1.5 KV built-in
- Ethernet Line Protection: 6KV/42Ω surge protection

### Encapsulation Protocols

- HDLC (compatible with RAD or RAISECOM's products) –Up to maximum 31 logical channels

- GFP-F (ITU-T G.8040, G.7041/Y.1303)
- VCAT (ITU-T G.7043) –Up to maximum 16 logical channels
- LCAS (ITU-T G.7042)
- PPP/BCP (RFC 3518)
- MLPPP (BCP) according to RFC 1661, RFC 1990, RFC 3518 (Pending)

### Internal Bridge

- Operation Modes: VLAN-aware, VLAN-unaware
- Number of VLANs: Up to 32
- Compliance: Relevant sections of 802.1Q
- LAN Table: Up to 4K MAC addresses (learned)

### Management Ports

- Console Port
  - Interface standard: RS-232
  - Connector: RJ-45
  - Data rate: 115.2 kbps

### Physical Characteristics

- Housing: Metal
- Weight: 2.7kg
- Dimensions: 430 x 200 x 43.5mm (Standard 1U and 19-inch rackmount size)

### Environmental Limits

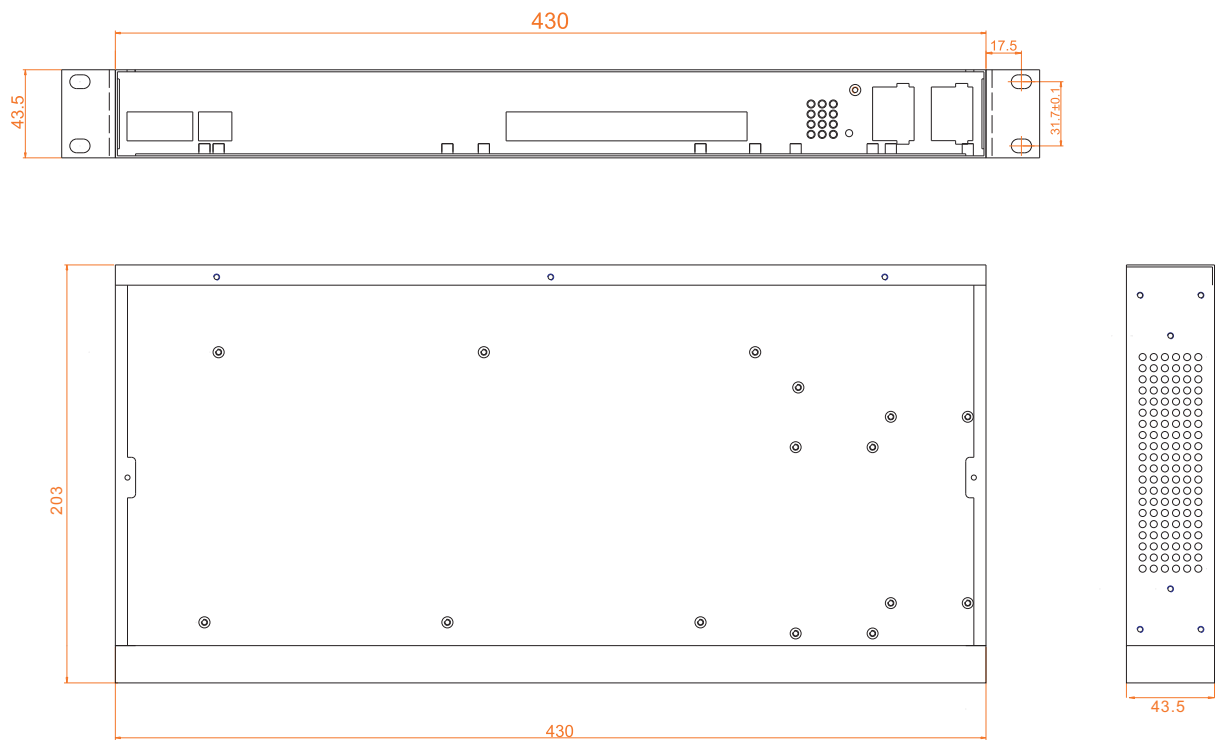
- Operating Temperature: 0 to 50°C
- Storage Temperature: -40 to 85°C
- Ambient Relative Humidity: 5 to 95% (non-condensing)

### Power Requirements

- Input Voltage:
  - AC: 100-240VAC (±10%), 50/60Hz
  - DC: -48VDC (36-72VDC)
- Power Consumption: <15 watts

Dimensions

Unit: mm



Ordering Information

Type	Function Description
MRS4604	Ethernet over 4 E1 Aggregation Gateway. Up to maximum 4 logical channels
MRS4608	Ethernet over 8 E1 Aggregation Gateway. Up to maximum 8 logical channels
MRS4616	Ethernet over 16 E1 Aggregation Gateway. Up to maximum 31 logical channels