



Optimum data delivery

Optical Multiservice Edge OMS840

Marconi's OMS840, part of our world-leading optical portfolio, enables you to reduce the cost of multiservice delivery with customer-located equipment (CLE).



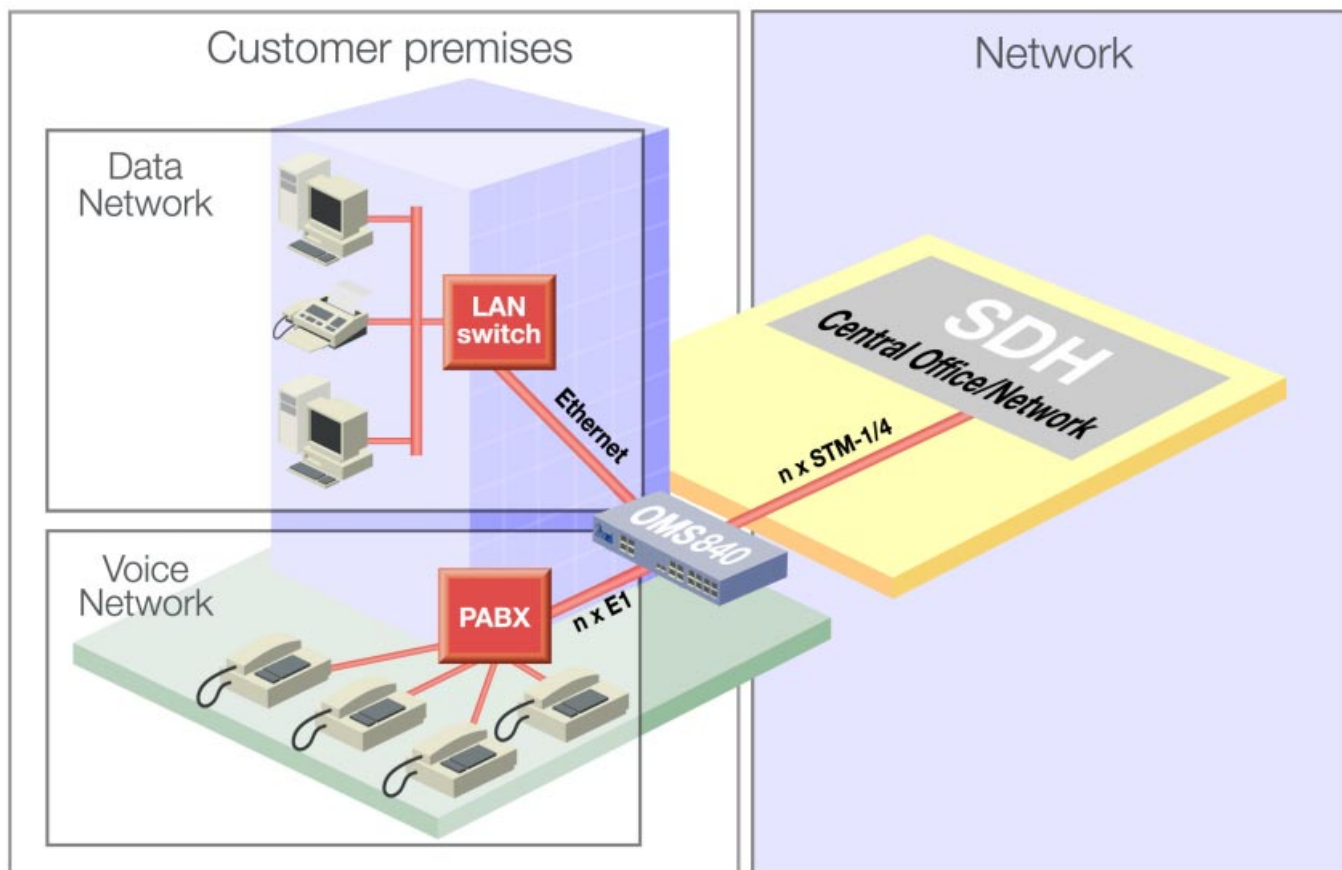
Data services to business customers are an area of significant market activity. But, these new services, whilst consuming high bandwidth, yield relatively low revenue per bit. The challenge therefore is to cost-effectively utilize the widely deployed SDH infrastructure in conjunction with optimized CLE for new customer connections.

Our multiservice devices combine the inherent functionality of Next Generation SDH (NG-SDH) multiplexers with the growing demand for a diverse range of data services. And, as a leader in this market, Marconi is at the forefront of the migration towards multiservice optical networking.

The OMS840 is a compact (1U high) multiservice edge device that allows customers to simultaneously deploy Ethernet services alongside traditional TDM services with rapid payback on investment, providing the most cost-effective ability to progressively migrate to new services and generate new revenue streams. And, with its future-proof architecture it allows for the further evolution of the platform technology.

Key benefits

- Specifically designed for high-speed Ethernet delivery, whilst retaining TDM functionality
- Provides rapid payback on investment
- Maximizes ROI when used as an extension to SDH networks
- Meets customer needs with the world's most popular end-user interfaces
- Supports point-to-point or -multipoint data applications
- Carrier-class availability and reliability to support a wide range of flexible SLAs
- Utilizes:
 - GFP for the efficient mapping of Ethernet frames into SDH payloads (VCs)
 - Virtual Concatenation for the efficient use and allocation of network bandwidth
 - LCAS for the flexibility to adjust bandwidth in service.



The OMS840 is fully compatible with Marconi's NG-SDH and Optical Multiservice products, management systems and PacketSpan technology

Applications

Marconi's OMS840 allows you to address business customers with Ethernet services alongside traditional TDM services with rapid payback on investment. The product can be equipped with 4 x 2 Mbit/s ports (balanced or unbalanced) and 4 x Fast Ethernet, whilst having the flexibility to be an STM-1 or STM-4 ADM or terminal.

This provides the ability to support legacy types of services such as TDM leased lines and PBX connections alongside new service offerings such as Ethernet Private Line (EPL), and developing multipoint Ethernet services such as Ethernet Virtual Private Line (EVPL), Internet/IP Access and EVPLAN/VPN*. The OMS 840 provides a cost-effective way of providing these applications, and preserves the carrier's brand image.

The product is transparent to the operation of the LAN and to the end-users, making the most of the ubiquity of Ethernet as the customer port.

The OMS840 can also be managed across islands of networks (via leased bandwidth from the PTT) via the creative utilization of the SDH payload overhead.

Features

- **TDM interfaces**
2 Mbit/s (E1 balanced and unbalanced) alongside STM-1 or 4 SFPs (Small Form Pluggable modules) for scalability and flexibility.
- **Wirespeed Ethernet interfaces**
10Base-T and 100Base-Tx Ethernet interfaces ensure the widest application.
- **Ethernet-to-SDH conversion**
This cost-effective solution avoids the need to deploy separate general-purpose routers or LAN switches on the customer's premises, or the need for customers to add costly telco interfaces.

The OMS840 provides Ethernet-to-SDH conversion at the transport layer (via GFP), transporting Ethernet frames transparently across the SDH network. It also provides Ethernet domain statistics.

GFP provides a major benefit in terms of the possibility of multi-vendor (and operator) interworking.

* The applications EVPL, Internet/IP Access and EVPLAN/VPN are in conjunction with the PacketSpan Layer 2 tributary card.

Data summary

General

This equipment is designed to meet the appropriate sections of ITU-T Recommendations G.664, G.703, G.704, G.707, G.783, G.957, Ethernet-to-SDH schemes of: GFP - G.7041 and LCAS - G.7042, and IEEE802.3

Interfaces

2 x STM-1/STM-4 line interfaces
4 x E1 Tributary interfaces (Balanced or Unbalanced), 4 x Fast Ethernet data interfaces
1 x FastE for Management Access and IP Tunnelling, 1 x RS232 for local LCT access
2 x Auxiliary V.11 (64 kbit/s)
1 x T4 clock output (2 Mbit/s, 2 MHz, SSMB), 1 x T3 clock input
1 x EDI (User I/O: 6 inputs, 2 outputs)
1 x Power Supply (48V with integrated alarm signalling for battery option)

Customer connectors

RJ45, Coax (DIN 1.0/2.3 mm), LC duplex receptacle, 9-SubD type male

Supply voltage

-48V to -60V DC nominal

Dimensions

45 mm high, 450 mm wide, 210 mm deep
Battery, Fibre handling, Wall, Desktop or Rack mounting options

Environment

Storage: ETSI EN 300 019-1-1 Class 1.2
Transport: ETSI EN 300 019-1-2 Class 2.3
Operation: ETSI EN 300 019-1-3 Class 3.2

- **Efficient bandwidth usage**

The OMS840 transports Ethernet traffic efficiently over N x VC-12, 3 or 4 channels providing configurable and flexible bandwidth utilization options (via Virtual Concatenation), with the ability to upgrade or downgrade the links in service (via LCAS). LCAS additionally allows the benefit of re-use of protection bandwidth for traffic, and the ability to offer differentiated service classes. Virtual Concatenation allows the best use of network bandwidth via the ability to diversely route traffic, whilst avoiding the need to upgrade intermediate nodes.

Carrier-class reliability and availability
The carrier-class reliability inherent in the OMS840 design significantly reduces wholelife costs by minimizing the number of customer site visits needed to maintain service. The carrier-class availability of the OMS840 and the underlying SDH transport mechanism ensures that delivery of Ethernet traffic is as dependable as a conventional telephone call.

- **Easy installation**

The OMS840, with its focused functionality and telecommunications equipment base, can be installed without needing costly and specialist skills from outside your traditional sources.

Management

The OMS840 is managed centrally from ServiceOn via Element Management and Network Management systems.

The management architecture is partitioned to match operator expertise and organization. The SDH domain provides bearer capacity and the data domain configures and monitors the parameters associated with the data service. Alarm data is automatically shared between the domains.

This approach allows different personnel, if required, to be responsible for the different domains without needing knowledge of the other domain. Alternatively, the two domains can be managed via the same systems.

Software download from the central management system facilitates the addition of new features, as the standards of the technologies and services evolve.

All units contain both fixed and configurable inventory information, which can be read from the management system.





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