

ASH4 - BOX



The ASH4-BOX delivers 10/100/1000 Ethernet and TDM services from a SDH/ SONET network. The Ethernet capabilities cost-effectively drive E-Line and E-LAN services to the network edge, delivering resilient, managed IP-based services. Consolidating the infrastructure of large network Add/Drop Multiplexers, the ASH4-BOX achieves both the integrity of TDM and the simplicity of Ethernet in a single, managed unit. The platform delivers traditional TDM E1/T1 services as well as Gigabit Ethernet using VCAT with dynamic LCAS.

Integrated 2.5Gb switch fabric ensures maximum bandwidth utilization by enabling both high order and low order cross connection of tributary services onto available network bandwidth via a user friendly GUI. The platform combines Ethernet and T1/E1 transmission systems over an optical trunk with speeds up to STM-4/OC-12. Four independently configurable Ethernet interfaces are provided. Each interface supports rate limiting and speeds up to the available trunk bandwidth. Up to 24 E1's/T1's interfaces are provided.

Beyond the Network Edge to the Customer Premises

The ASH4-BOX is highly featured Multiservice Provisioning Platform (MSPP) on the market, offering enterprise customers cost-efficient aggregation and transport of voice, data and video between geographically separated LANs. This plug-and-play platform is set to redefine layer 2 transport in enterprise environments, bridging the gap between complex backend telecommunication equipment and affordable, user-friendly, Customer Premises Equipment (CPE). In Small and Medium Enterprise (SME) environments, IT technologies are implemented out of commercial necessity and must demonstrate clear advantages with respect to capital expense, operational expense and return on investment (CapEx, OpEx, ROI). Today's information dependent business environments require real-time exchange of voice, video and data between geographically separated offices. Before now, SMEs, lacking large IT budgets and dedicated technical resources, considered the internetworking of isolated LANs a prohibitively expensive and dauntingly complex exercise. With the emergence of cost-effective, user-friendly Multiservice Provisioning Platforms (MSPPs), SMEs are embracing the possibility of internetworking their LANs to gain a competitive edge. The right network infrastructure can also decrease the cost of bandwidth and improve the responsiveness and timeliness of customer service.

Metro E-Line

The ASH4-BOX transports Ethernet point-to-point, offering services analogous to frame relay or private leased lines but with the additional benefits of multiple bandwidth and connectivity options, as well as dramatic cost reduction. The metro E-Line service is characterized by low frame delay, frame delay variation and frame loss ratio. Most importantly, the CPE Micro Metro E-Line capabilities ensure service frame header and payload integrity as it passes between source and destination UNI. The CPE Micro's Gigabit Ethernet capabilities enable triple-play services to be implemented quickly and cost-effectively in circumstances where the rollout of Carrier Ethernet fiber networks cannot be justified.

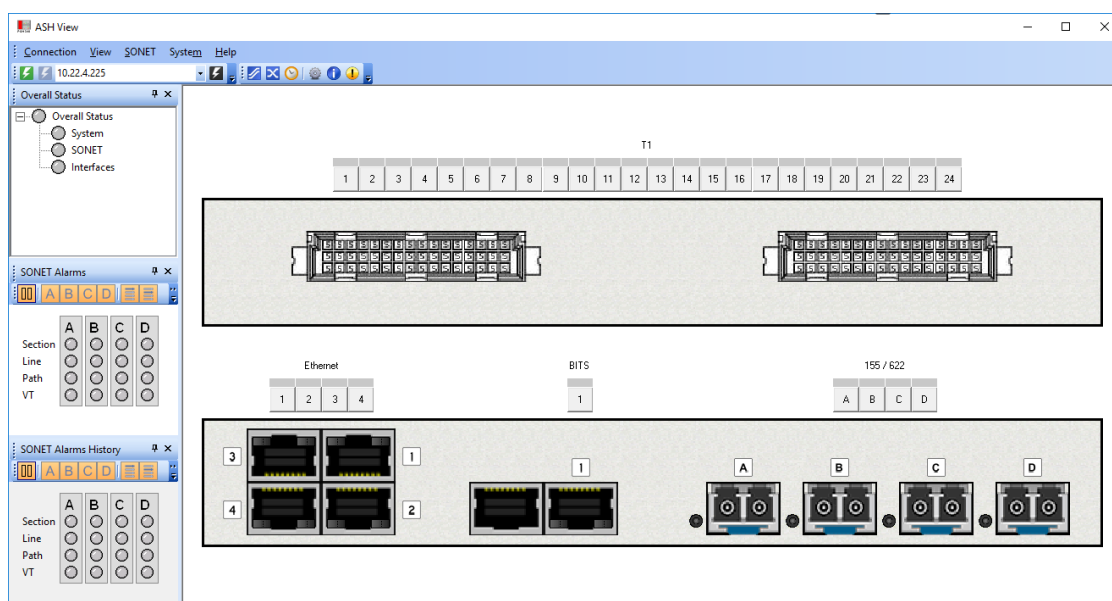


ASH4-BOX consists of the following functional components:

- ● Powered by 2x 48V external rack supply
- ● 2 x STM-1/4 + 2x STM-1 trunk (SFP fiber modules socked)
- ● 2 x 12 x E1/DS1 (E1 front side)
- ● 4 x 10/100/1000BaseT tributary interfaces
- ● management and synchronization

Management

- Managed from Windows workstation
- Managed via USB, Ethernet, Serial
- Remote IP based management
- PPP over SDH DCC
- Standards based management
- SNMP/MIB configuration and alarm
- Text based Syslog
- Digital Access Cross Connect System



ASH4 is managed centrally with LTE ASH-View. This software empowers operators to realize the full potential of their services with the economy of remote management and diagnostics. Windows-driven and ready for integration with concurrent SNMP software. ASH-View offers comprehensive configuration management, fault management, performance management and security management to secure maximal network availability.

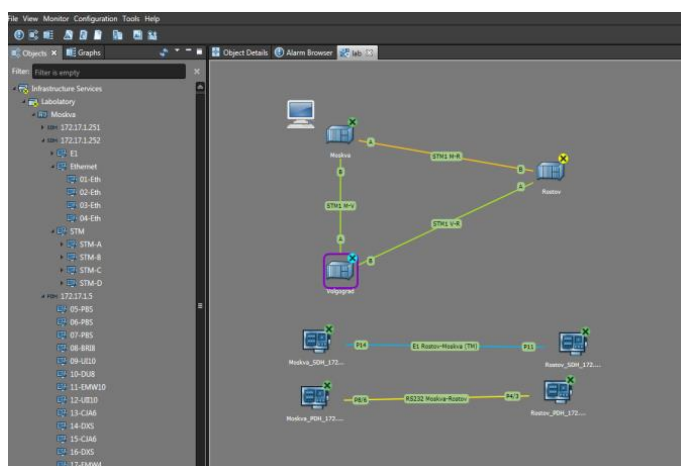
Configuration Management – the system can be configured remotely in minutes, eradicating the need for costly truck rolls and greatly reducing the need for regional technical staff. In a departure from the conventional command line management approach, ASH-View provides a simple but comprehensive solution to rapid service provisioning. The ASH4-BOX also supports management via a front panel USB. Once established, an IP channel allows ASH-View connectivity to the node, plus SNMP configuration and fault management.

Performance Management - ASH-View is equipped with text based periodic performance and alarm reporting through Daemon Syslog. This provides the network operator with timely and relevant status and event information crucial for the reliable transport of mission critical services.

Fault Management - By providing comprehensive monitoring event detection and problem isolation, ASH-View helps secure maximum network availability. Holding the mouse over the interface slot image displays a 'mouse over' information box that contains the configuration and status of the interface. Each interface has alarm parameters that may be set by the network administrator. The most severe alarm level that is currently active on a node is displayed at the top left of the ASH-View screen as "System Status".

Central management system

ASH4-BOX can be operated either as a stand alone unit or, in network solutions, included in the TTC MARCONI's PCM30U-OCH multiplexer system, supporting a wide range of voice/data transmission applications and especially teleprotection applications for the energy and railway sectors. The whole system is then managed by the TOPONET SNMP-oriented central management system based on the HP/LINUX server platform and the Windows-driven terminals.



Topology application

ASH4-BOX integrates PCM30U-OCH's subscriber interfaces as well as E1 and Ethernet subscriber channels in the SDH network.

It has four fiber-optic SDH interfaces, supporting a wide range of topological network configuration schemes, such as terminal, ring, star, back-up or drop-insert.

Installation

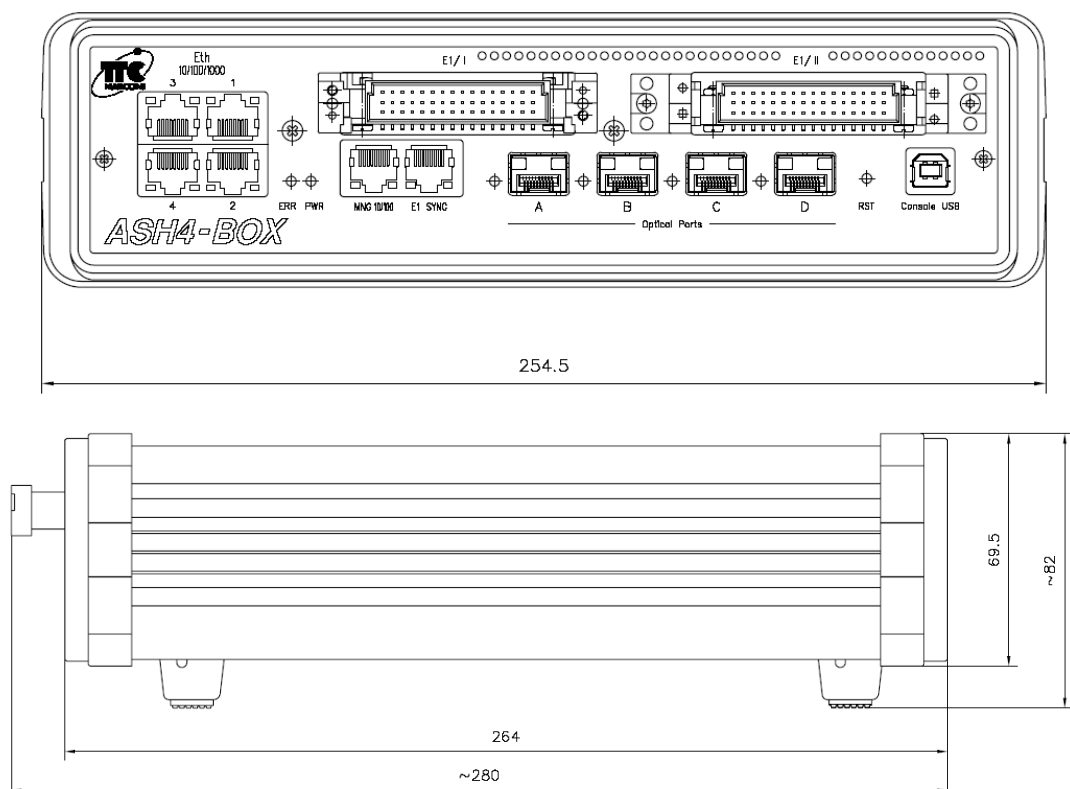
ASH4-BOX can be installed on any level surface, i.e. on the shelf mounted in the 19" rack.

When mounting ASH4-BOX in a rack, the following conditions should be met:

- The ambient temperature inside the rack should not exceed +50°C.
- 200mm free space is needed in front of and behind the unit for free air circulation and for cable attachment.
- The power must be sufficient for all units installed in the rack.
- To ensure proper grounding, the cable needs to be protected by its own grounding cable.

Dimensions (h x w x d)

- 69,5 × 254,5 × 264 mm (basic)
- ~82 × 254,5 × 264 mm (basic + legs)
- ~82 × 254,5 × ~280 mm (basic + legs + connector holders)



Technical parameters

Line Interface

- Topology Ring, Terminal, Protected Linear Midspan
- SDH Multiplexing AU3 or AU4 Mode: VC12, VC3, VC4
- SONET Multiplexing VT2, VT1.5, STS1
- Protection MSP 1+1 (point-to-point); SNCP/UPSR
- Trunk Speed/Type STM-1/OC3 & STM-4/OC-12

Port Capacity

- 24 × E1/T1
- 2×STM-4/OC-12 or STM-1/OC-3 multi line rate interface
- 2×STM-1/OC3 fixed rate tributary interface
- 4×10/100/1000 Ethernet (RJ45)

Features

- Physical H = 69,5 × 254,5 × 264 mm (for more see dimensions)
- Temperature 0°C to 50°C
- Non-operating ambient temperature and storage temperature -20°C to 65°C
- Operating and non-operating altitude above sea level up to 2,000 m
- Operating vibration level 5 to 200 Hz, 0.5 g (1 oct/min)
- Non-operating vibration level up to 5 to 200 Hz, 0.5 g (1 oct/min)
- Humidity 0% to 95% non-condensing
- Management HPXView EMS: front panel USB
- Centralized Software Update
- SNMP
- Digital Access Cross-Connect Up to 4×Gigabit Ethernet (10/100/100) and 24×T1/E1 tributary interfaces
- SDH-block synchronization options Autonomous; with STM-1/4; with E1
- 2 x -48V DC Power Supply -40V to -60V; Complies with ETS-300 (132-2)
- Power Consumption 25 Watts maximum
- Applicable Safety Compliances EN 60950, UL 60950, AS-NZS 60950:2000, EMC GR-1089 CORE, FCC 68, AS 3548, CISPR-22, EN 55022, AS-NZS 3548
- Other Compliances ITU-T K.11
- Compliance Marks CE, CB, FCC15b, “A” Tick (incorporates “C” Tick)