

FOX615 EPSI1

Efficient aggregation of TDM-transported Ethernet traffic



With its advanced architecture, FOX615/612 Multiservice Platform fulfills the growing demands on Ethernet services across dedicated TDM and packet-switched networks

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01 EPSI Unit

Ethernet traffic aggregation over TDM networks

EPSI1 provides the FOX615/612 Multiservice platform with the ability to aggregate and transport of Ethernet data, serviced from any of the FOX615 units or front ports, via SDH/PDH networks. EPSI1 interworks with all FOX615 PDH units providing Ethernet services, including remote devices like the LineRunner CPEs. Naturally, its front Ethernet ports can also be used in conjunction with Ethernet ports of any of the FOX615 cards.

Switching functionality

EPSI1 allows the creation of several VLAN-enabled and independent switch instances, therefore supporting independent Ethernet networks and the separation of traffic into different TDM channels. Rapid Spanning Tree Protocol (RSTP) is supported on each of the switch instances.

Routing functionality

EPSI1 provides routing functionality with support of the Open Shortest Path First (OSPF) protocol. This feature allows the EPSI1 to be used to separate Layer 2 networks as well as to provide an IP interface towards the network. Virtual Router Redundancy Protocol (VRRP) is implemented to increase network availability of the default gateway servicing hosts on the same subnet.

TDM protection mechanisms

Protection mechanisms, like 1+1 path protection and Sub-Network Connection Protection (SNCP), are supported in the unit in order to provide reliable services and connections as expected for TDM services.

Key features

- PPP and HDLC termination/encapsulation
- Aggregation of n x 2 Mbps channels using MLPPP
- Layer 2 and Layer 3 based packet forwarding
- Multiple VLAN aware switch instances
- Designed for indoor and outdoor deployment
- All functions under one network management system

PPP and HDLC termination

EPSI1 terminates PPP and HDLC encapsulated Ethernet traffic from FOX615 interface units. The traffic terminated from these units can then be switched or routed towards the network. Several 2-Mbps channels of Ethernet traffic can also be bundled on a single logical channel using Multi-Link Point-to-Point Protocol (MLPPP). MLPPP can be used for spreading traffic of multiple PPP connection, hence balancing the load of the transport network. EPSI also provides direct connection to Ethernet networks or devices via its front ports.

Management

All services are managed centrally via the management system FOXMAN or via local management access (SNMP). Thus, network operators can serve SDH and PDH networks under one management system.

Technical data

General	
Number of ports	4 x 10/100BaseT
Backplane access	access to the GbE-star 16 x P12 (2 Mbps)
Protection	
Protection mechanisms	1:1 equipment protection 1+1 path protection, SNCP
Layer 2 Features	
PPP	RFC 3518
HDLC	LineRunner SHDSL DTM/DTU compatible
VLAN support	VLAN tagging (IEEE 802.1Q), port based VLAN
Spanning tree	RSTP (IEEE 802.1w)
MLPPP	RFC 1990
QoS	Packet classification and marking Forwarding service fairness
Layer 3 Features	
Routing	OSPF v2 (RFC 2328), Static routing, Unnumbered links, VRRP (RFC 2338)
Management	
FOXCST	For local management
FOXMAN	For central management
Power Supply	
Input voltage nominal (min/max)	-48/-60 V DC (-40.5 V DC ... -72 V DC)
Operation Environment	
Temperature range and humidity	According to XMC20 environmental specifications

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