

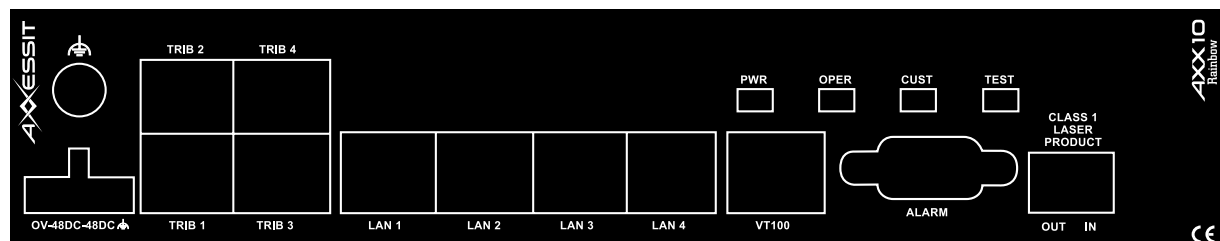
AXX10 Rainbow

Integrated Broadband Access Device with an excellent cost-benefit ratio

The AXX10 is an Integrated Access Device for use in fibre optic networks. The AXX10 combines Ethernet-/IP- and TDM-traffic, by running IP- alongside with TDM-channels inside an SDH frame structure that can be easily carried across the network. The bandwidth of the IP-channel is configurable from 2Mbit/s to 100Mbit/s true "wire-speed" in steps of 2Mbit/s, which provides the carrier with more flexibility to serve the customer needs, while the carrier only needs to transport the number of VC-12(s) actually containing traffic and being allocated to his customers.

Each E1 interface, up to 4, is mapped into a VC-12 container while the Ethernet traffic is mapped into a configurable number of VC-12 containers.

AXX10 is used in conjunction with the AXXEDGE, and is not a standalone SDH network element (NE). It provides an overall low cost connection of end users. The AXX10 is managed remotely, via AXXEDGE, by a management system that supervises both the IP-and TDM-parts of the unit. However, the AXX10 is provided with a RS232 interface for local supervision.



Interface view

Main benefits

Price/performance:

AXX10 is a compact and flexible IAD, and together with AXXEDGE it provides a powerful and low cost concept for end user connections.

Flexibility:

AXX10 offers great flexibility by combining Ethernet/ IP and TDM. All customer interfaces are based on open standards. And existing infrastructure is utilized optimally by the flexible VC-12 allocation. AXX10 will aid the process to obtain a simple, powerful and cost-efficient network.

Granularity:

Provisioning of IP bandwidth is obtained by using a number of VC-12 containers (1 to 50) in an inverse multiplexing scheme.

Density:

AXX10 is a compact device, providing high port density per unit, which means four times FastEthernet and four times E1.

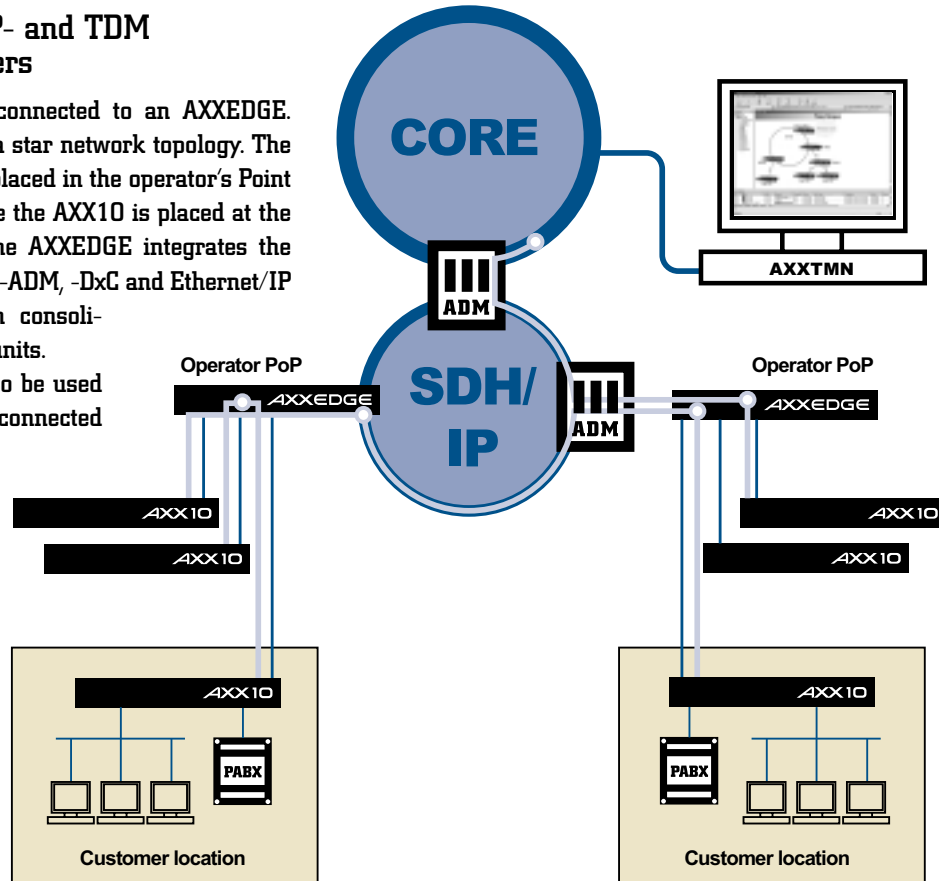
SYSTEM ARCHITECTURE

Application

Provisioning of IP- and TDM traffic for end users

The AXX10 must be connected to an AXXEDGE. Connection is done in a star network topology. The AXXEDGE is typically placed in the operator's Point of Presence (PoP), while the AXX10 is placed at the end user premises. The AXXEDGE integrates the functionality of an SDH-ADM, -DxC and Ethernet/IP switch/router and can consolidate up to 24 AXX10 units. The AXXEDGE may also be used as a drop-shelf that is connected to an external ADM.

Some possible traffic connectivity's are indicated with light blue lines.



Interfaces

Aggregate	TDM	Ethernet/IP	Miscellaneous
<p>One optical STM-1 interfaces</p> <p>Short haul two fiber or single fiber interface</p> <p>G.826 performance monitoring at RS, MS, VC-4 and VC-12 level</p>	<p>4x2Mbit/s interfaces</p> <p>G.703 Transparent leased line or ISDN PRA mode supported</p> <p>Two test loops provided (towards customer or towards network)</p>	<p>4x10/100 BaseT Ethernet interfaces</p> <p>Both 10Mbit/s and 100Mbit/s are supported with auto-negotiation</p> <p>COS based on IEEE 802.1p priority and DiffServ TOS bits</p> <p>Rate limiting</p> <p>Auto crossover</p> <p>Support of up to 1024 MAC addresses</p>	<p>4xAuxiliary alarm inputs - configurable alarm activation, open or closed contact</p> <p>4xLED - Power, customer, operator, test - and LAN indicators</p>

