

Tellabs® 8100 Managed Access System

Tellabs® 8150 Basic Node

Flexible digital cross-connect node for multiple service types and network technologies

Overview

The Tellabs® 8100 Managed Access System is a flexible and fully managed access solution for service providers. It is primarily used for providing fixed line services as well as building reliable mobile transport solutions. The Tellabs 8100 system consists of various modular cross-connect elements, a number of Network Terminating Units (NTU) and an intelligent network management system, the Tellabs® 8000 Network Manager.

The Tellabs® 8150 Basic Node is a flexible digital cross-connect device for delivering multiple services over a single access infrastructure. Depending on the service and scalability requirements, the Tellabs 8150 node can be deployed as either a single or double sub-rack version. Different service and network interfaces of the Tellabs 8150 node can be installed to meet the operator's requirements. Element and service management operations can be easily executed through the Tellabs 8000 manager GUI-based tools.

Features and Benefits

Carrier-class operations

The Tellabs 8150 node, like all the other Tellabs 8100 system elements, is designed for operator use and with high availability criteria. All the common functionality, including power and cross-connections, can be duplicated. In addition the system offers 1+1 link and SDH protections as well as the Tellabs 8000 manager assisted network level protections.

Support for a broad range of services

The Tellabs 8150 can efficiently integrate delivery of multiple service types simultaneously. Despite the TDM traffic grooming, the Tellabs 8150 node can be equipped with Ethernet switching functionality for Ethernet service delivery as well as statistically multiplex the traffic in the access. The Tellabs 8000 manager still provides an end-to-end service level visibility to the network.

Flexible equipping

The Tellabs 8150 node can be equipped with a broad range of interface and service units including voice, voice compression, various data, DSL, PDH and SDH network interfaces. The operator can freely choose the configuration of the node for each site and upgrade it easily with new interfaces when required.

nx64 Kbps and nx8 Kbps level grooming

Traffic grooming at 64 Kbps or even at the 8 Kbps level minimizes the total required transport capacity towards the network. Bandwidth optimization has a great impact on the transport OpEx in the access, especially with multiple nx64 Kbps services.



Figure 1. Tellabs® 8150 Basic Node

End-to-end network and service management

With the help of Tellabs 8000 manager tools, remote configurations, semi-automated service provisioning, testing, service level fault reporting and performance reporting are enabled. This gives significant savings in operational expenses and shortens the response times throughout the network and service lifecycle.

Applications

Due to the high element flexibility and the two sub-rack type options, the Tellabs 8150 node can be applied to various network locations and topologies. Typically the Tellabs 8150 node is placed in a hub site, where it can consolidate traffic from various customers connected with DSL or traditional E1 links and do data service grooming. The Tellabs 8150 node can also be used at operator data centres where traffic is terminated to different services such as IP, Ethernet, FR and PSTN. In the network 2M, 8M, 34M or STM-1 can be used for traffic transport.

Network Management

As part of the Tellabs 8100 system, the Tellabs 8150 node is fully managed with the Tellabs 8000 manager. All interface, service and connection level parameters are configured remotely via the Tellabs 8000 manager's GUI-based tools. The same management processes used with any Tellabs 8100 system element apply to the Tellabs 8150 node as well.

Specifications

Basic

- Physical dimensions
 - Single sub-rack: 451 mm x 310 mm x 255 mm (W x H x D)
 - Double sub-rack: 451 mm x 620 mm x 255 mm (W x H x D)
 - 9–13 / 23–28 slots for interface units modules (single / double)
- Power
 - Power feed: -48 VDC / +24 VDC or 100–240 VAC

Common Units and Functionality

- Cross-connection units
 - Maximum of 64 Mbps cross-connection capacity
 - SXU-A: 5T wide 64 Kbps and limited 8 Kbps cross-connection unit (can be protected)
 - SXU-B: 10T wide 64 Kbps and 8 Kbps cross-connection unit (can be protected)
- Power feed units
 - PFU-A and PFU-B: 5T wide primary and protecting -48VDC power feed units
 - PFU-A-24V and PFU-B-24V: 5T wide primary and protecting +24VDC power feed units
 - PAU-10T: 10T wide 100–240 VAC power feed unit
- Control units
 - SCU-H: 5T wide control unit with management and external alarm ports

Equipping and Interfaces

- Interface units
 - CAE: VF unit (5T)
 - CCO-UNI: POTS unit for LE end (10T)
 - CCS-UNI: POTS unit for subscriber end (10T)
 - E3C: Framed E3 unit (5T)
 - ESU: Ethernet switching and interface unit w/o DSL interfaces (10T)
 - GMH: G.704 framed interface unit for E1 or DSL (5T)
 - GMM: T1 interface unit (5T)
 - GMU-A: STM-1 interface unit (15T)
 - OMH-A: G.704 framed interface unit for DSL interfaces (5T)
 - QMH: G.704 framed interface unit for E1 (5T)
 - VCM-5T: Data interface unit for V.35, V.24, X.21 and 10Base-T interfaces and PMP server (5T)
 - VCM-10T: Data interface unit for V.35, V.24, X.21 and 10Base-T interfaces and PMP server (10T)
- Service cards
 - EAE: ADPCM voice compression server card
 - ESU: Ethernet/VLAN switching card
- Other interfaces
 - External synchronization input and output at SXU
 - V.24 and optional 10Base-T management interfaces at SCU-H
 - External alarm interfaces at SCU-H (2 outputs and 10 inputs)

Environment

- Storage
 - ETS 300 019-1-1: V2.1.4 (2003-04) Class 1.1
- Transportation
 - ETS 300 019-1-2: V2.1.4 (2003-04) Class 2.3
- Operating conditions
 - ETS 300 019-1-3: V2.2.2 (2004-07) Class 3.2

Regulatory

- Safety
 - EN60950-1:2001
- EMC
 - EN 300 386: 2003

Management

Tellabs® 8000 Network Manager.

Ordering and Availability

This is a general availability product. For more information, please contact your local Tellabs sales representative, local Tellabs sales office or see www.tellabs.com.

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