

Tellabs® 8600 Managed Edge System

2+6-Port Ethernet 10/100/1000BASE-COMBO IFM

The Combo Ethernet Interface Module provides increased interface flexibility for small aggregation and cell sites

Overview

The Tellabs® 8600 Managed Edge System consists of a range of modular IP/MPLS-based network elements and an integrated network and service management system.

The 2+6-Port Ethernet 10/100/1000BASE-COMBO Interface Module (IFM) is used with Tellabs 8600 system elements, including the Tellabs® 8660 Edge Switch, Tellabs® 8630 Access Switch and Tellabs® 8620 Access Switch. The module is mounted on the Interface Module Concentrator (IFC) of the Tellabs 8660/8630 switches or in the Tellabs 8620 switch's chassis.

The module provides great flexibility for sites requiring a small number of Ethernet interface types.

Applications

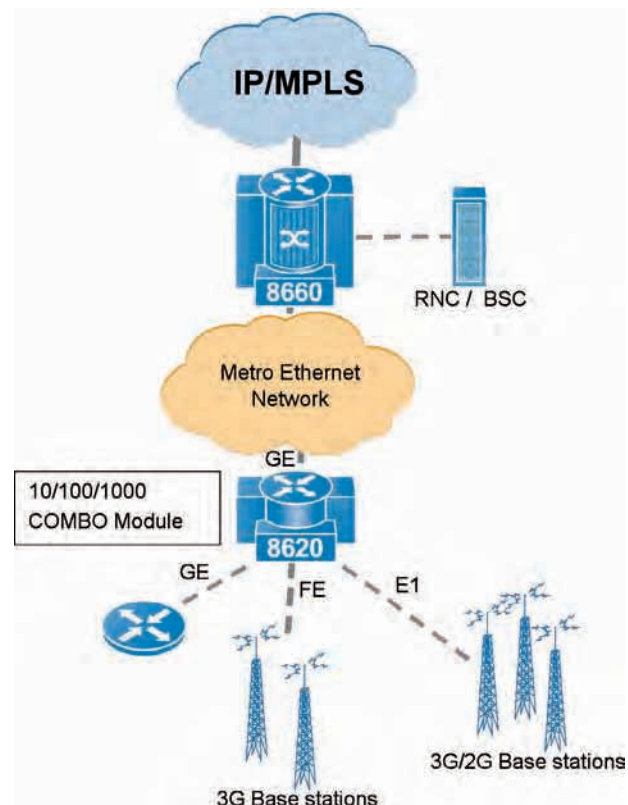
Ethernet interfaces are widely used in today's networks in very diverse applications. Even in mobile transport applications, where TDM interfaces have traditionally been used to connect the base stations to the transport network, Ethernet is seen as being the most cost-efficient and flexible option for the future. Even more, Ethernet is seen as a very attractive alternative for backhauling the mobile network traffic to the RNC and BSC sites. The present situation creates a demand for various types of interfaces to the cell sites and small aggregation sites in the transport network. On the one hand, the aggregation devices need to support E1 interfaces for the present mode of operation, yet the devices also need to support Gigabit Ethernet for the uplinks and Fast Ethernet for the connection to the base stations. Additionally, this interface flexibility has to be provided cost-efficiently enough for the small sites, of which there are typically thousands in a single mobile network.

The 2+6-Port Ethernet 10/100/1000BASE-COMBO IFM is cost optimized solution for sites with diverse interface requirements for TDM and Ethernet but where the number of required interfaces is limited.

Product description

The 2+6-Port Ethernet 10/100/1000BASE-COMBO IFM provides the Tellabs 8600 system element with both Gigabit Ethernet and Fast Ethernet interfaces, with both electrical and optical physical media. Two of the eight interfaces are 1000BASE-X interfaces with Small Form-Factor Pluggable (SFP) transceivers. The remaining six interfaces are electrical 10/100/1000BASE-X combo interfaces with RJ-45 connectors.

The module is mounted to the IFC or the Tellabs® 8620 Access Switch. An IFC can be equipped with any two modules and then placed in any free slot in the Tellabs® 8660 Edge Switch or Tellabs 8630® Access Switch.



The Tellabs 8600 system 2+6-Port Ethernet 10/100/1000BASE-COMBO IFM provides 2.5-Gbps throughput, which is shared among the eight ports. The capacity can be allocated among the eight interfaces with a granularity of 20 Mbps. The capacity allocation changes can be performed in service and no card reload is required. If excessive traffic is coming in from the line, PAUSE frames can be generated, depending on the configuration.

The module supports DiffServ-based traffic management and per-VLAN shaping.

Network management

As part of the Tellabs 8600 system, the 2+6-port Ethernet 10/100/1000BASE-COMBO IFM is fully managed with the Tellabs® 8000 Network Manager. All interface and service/connection-level configuration can be done remotely through the Tellabs 8000 manager GUI-based tools. This is the primary and easiest way to configure the unit and the network.

The Tellabs 8000 manager also provides centralized fault and performance monitoring, as well as in-built testing capabilities.

Alternatively, CLI can be used for setting up the parameters for the module. SNMP is supported for monitoring purposes (e.g., for fault and performance management for other systems).

The Tellabs 8000 manager takes care of maintaining full consistency between the network elements and the database.

Specifications

Physical Interface

- Two 1000BASE-X interfaces with replaceable SFP modules with multiple reaches and types including electrical interface
- Six 10/100/1000BASE-TX electrical interfaces with RJ-45 connectors

Encapsulations

- IPv4/VLAN/Ethernet (RFC 894)
- IPv4/LLC_SNAP/VLAN/Ethernet (RFC 1042)
- IPv6/VLAN/Ethernet (RFC 2464)*
- IPv6/LLC_SNAP/VLAN/Ethernet (RFC 1042)*
- MPLS/VLAN/Ethernet (RFC 3032)

Functionality

- IEEE 802.3-compliant MAC functionality with PAUSE frame support
- 802.1Q VLAN support (4096 VLAN IDs per module)
- IP VPN (RFC 2547bis)
- RFC 4448 Encapsulation Methods for Transport of Ethernet over MPLS Networks
- Port-based and VLAN-based Pseudo Wires
- Maximum frame size of 12000 bytes

QoS

- Strict Priority and Weighted Fair Queuing (WFQ) scheduling
- DiffServ traffic policing with two-rate three-color marker (RFC 2698)
- RED and WRED queue management
- Traffic shaping per VLAN
- DiffServ Aware MPLS traffic engineering (E-LSP and L-LSP)
- Traffic classification based on ingress port, 802.1Q (VLAN), 802.1P (PRI) MPLS EXP, L-LSP, DSCP or L3/L4 header fields
- RSVP-TE CAC with overbooking option

Power Consumption

- Typical: 13 W
- Maximum: 17 W

Environment

- Storage: ETS 300 019-1-1:2003-04 Class 1.1, temperature: -5° C to 45° C
- Transportation: ETS 300 019 1 2:2003-04 Class 2.3, temperature: -40° C to 70° C
- Normal operating conditions: ETS 300 019-1-3:2003-04 Class 3.2 (non condensing), temperature: -5° C to 45° C, relative humidity: 5% to 95%

Regulations/standards

- Safety: EN 60950-1:2001
- EMC: EN 300 386:2000 and EN 300 386:2001
- Telecoms: RTTE Directive 1999/5/EC
- NEBS Level 3

Ordering and availability

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

*) For future release

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