Tellabs® 8110 Network Terminating Unit (CTU-R) Managed Broadband DSL Router FP1.3

High-speed modem provides service reliability and differentiation for corporate LAN interconnection applications.

Overview

The Tellabs® 8110 Network Terminating Unit (CTU-R) is a network terminating unit (NTU) using extended ETSI HDSL-based technology. The Tellabs 8110 NTU (CTU-R) has a maximum data rate of 4,544 Kbps over 2 pairs with integrated IP routing.

The Tellabs 8110 NTU (CTU-R) is connected to the Tellabs® 8100 Managed Access System with the HCQ module of the OMH, OMH-A and the QMH units. These units support the Tellabs® 8140 Midi Node, Tellabs® 8150 Basic Node, Tellabs® 8160 Accelerator Node A111 or Tellabs® 8170 Cluster Node. The Tellabs 8110 NTU (CTU-R) is fully configured and monitored with the Tellabs® 8160 Accelerator Node A111, Tellabs® 8170 Cluster Node, Tellabs® 8184 Access Switch and the Tellabs® 8188 Access Switch. The Tellabs 8110 NTU (CTU-R) does not require any on-site configuration.

Tellabs® 8110 Network Terminating Unit

Features and Benefits

Applications

The Tellabs 8110 NTU (CTU-R) together with the Tellabs 8100 Ethernet Switching Unit (ESU) makes an efficient solution that provides service reliability and differentiation for high-speed corporate LAN interconnection applications.

The Tellabs 8110 NTU (CTU-R) is a high-speed NTU designed for managed data access with rapid deployment. With a direct 10/100-BaseT Ethernet interface, it is able to offer data access services without the need for a customer premises WAN routing infrastructure. Dedicated corporate intranet and Internet access are typical applications.

Key Benefits

- No need for an external customer premises WAN router
- Extremely simplified service deployment and maintenance
- Up to 4.5 Mbps over 2-pair copper line
- Simultaneous IP routing and multiprotocol bridging (BRouter)
- Network Address Port Translation (NAPT/NAT) and stateful packet filtering (access list) functionality for easy and secure IP access
- Service differentiation with Diffserv and VLAN 802.1p prioritization

IP Routing

- One 10/100-BaseT Ethernet interface (auto-sensitive), RJ-45 connector, half- and full-duplex operating modes
- 3 operating modes:
  - IP routing: static routing, dynamic routing RIPv1, 2, IP sub-netting and super-netting (CIDR)
  - Bridging: IEEE802.1d and spanning tree for dynamic redundancy in dual CTU-R configurations
  - Simultaneous IP routing and bridging (BRouter)
- Dynamic host configuration protocol (DHCP) relay agent with up to 2 configurable DHCP servers
- Link protocols: PPP and Frame Relay with support for both bridging (Ethernet frame included) and routing, selective un-numbered links
- PPP link protocol: IP Control Protocol (IPCP), Link Control Protocol (LCP) and Bridging Control Protocol (BCP)
- Frame Relay link protocol: bridged and routed modes (including bridged Ethernet/802.3 over LAPF in routed mode), a maximum of 32 Frame Relay DLCIs supported, LMI protocol supported

Network Management

The Tellabs® 8000 Intelligent Network Manager is an extremely powerful, field-proven, network-level management system with an easy-to-use Graphical User Interface (GUI).

- Graphical provisioning of VLAN VPN connections can be easily done with the VLAN Manager
- Easy configuration of IP parameters NAPT/NAT, packet filtering, IEEE802.1p and Diffserv functionality
- Performance monitoring at L1 and L3 as well as statistics history from the LAN/DSL interfaces at 15 minute intervals
- IP Traceroute and extensive debugging tools for troubleshooting purposes
- LMI protocol status reporting and fault notification functionality
- Powerful remote controlled DSL link testing functionality
- WAN link congestion and DSL line noise margin monitoring (which provides a warning when exceeding a defined threshold)
- SNMPv1 monitoring

Specifications

Line Interface Features

When connecting the line to Tellabs 8110 NTU (CTU-R), an automatic control channel establishment will occur for provisioning the remote Tellabs 8000 Intelligent Network Manager.

Signal Encoding and Impedance

- 2B1Q, 135 ohms

Transmit Level (dBm)

- 13.5 dBm

Line Bit Rates (Kbps)

- 592, 1,168 and 2,320 Kbps (64 Kbps reserved for control channel traffic)

Connection

- 1-pair (2-wire)
- 2-pair (4-wire)

Estimated Maximum Cable Length (cable 0.5 mm/40 nF/km, no noise)

- 4.7 km @ 2,320 Kbps line rate
- 6.2 km @ 1,168 Kbps line rate
- 7.0 km @ 592 Kbps line rate

Line Monitoring

- Carrier detection, signal level indication, CRC monitoring online, noise margin. End-to-end CRC with 8 Kbps external channel

Other Features

- 1+1 protection (backup) of the copper line, power off indication (“dying gasp”)

Operating Modes

- 1-pair mode
- 1 x 2,320 Kbps, 1 x 1,168 Kbps, 1 x 592 Kbps
- 2-pair mode
- 2 x 2,320 Kbps, 2 x 1,168 Kbps, 2 x 592 Kbps, data split between the pairs
- 1+1 backup mode
- 2 x 2,320 Kbps, 2 x 1,168 Kbps, 2 x 592 Kbps, one line redundant with the other

Connector Type

- RJ-45

Dimensions (width x depth x height)

- 195 mm x 180 mm x 45 mm, weight 550 g

Power Supply

- 100-240 VAC

Power Consumption

- 5 W

Environmental Issues and Standards

One integrated DTE interface is included in Tellabs 8110 NTU (CTU-S)

G.703 DTE Interface

Specifications

- Performance: ETS TS 101 135 V1.4.1 (1998-02)

Storage

- ETS 300 019-1-1:1992 Class 1.1
  - Temperature
    -5° C to +45° C

Transportation

- ETS 300 019-1-2:1992 Class 2.3
  - Temperature
    -40° C to +70° C

Operating Conditions

- ETS 300 019-1-7:1992 Class 7.2

Safety and EMC Standards

Safety

- EN60950:2000

EMC

- EN300 386:2000

Supported Standards

RFC791
- IP
  - RFC1850
    - OSPF v2 MIB

RFC792
- ICMP
  - RFC1389
    - RIPv2 MIB-II Extensions

RFC826
- ARP
  - RFC2096
    - IP forwarding table MIB

RFC950
- Sub-netting procedure
  - RFC1493
    - Bridge-MIB

RFC1256
- ICMP router discovery message
  - RFC1661
    - PPP

RFC1519
- CIDR
  - RFC1662
    - PPP in HDLC-like framing

RFC768
- UDP
  - RFC1332
    - IPCP

RFC2427
- Multiprotocol over Frame Relay
  - RFC1638
    - BCP

RFC1542
- DHCP relay agent
  - RFC894
    - IP over Ethernet

RFC3022
- NAPT
  - IEEE802.1D
    - MAC bridge

RFC2663
- Static NAT
  - IEEE802.1Q
    - VLAN bridging

RFC2328
- OSPF v2
  - IEEE802.1.p
    - VLAN prioritization

RFC1587
- OSPF NSSA
  - ITU-T Q.933 Annex A
    - LMI protocol

RFC1058
- RIP
  - ANSI T.617 Annex D
    - LMI protocol

RFC1388
- RIP version 2
  - RFC2474
    - Differentiated services

RFC1157
- SNMP version 1
  - RFC2475
    - Differentiated services

RFC1213
- MIB-II

Ordering and Availability

This product is currently available. Contact your local Tellabs sales representative or regional office for more information.

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