

Tellabs® 8100 Managed Access System

Tellabs® 8110 Network Terminating Unit (CTE-S)

Compact network terminating unit for fast and easy deployment of managed high-speed services over copper pairs.

Overview

The Tellabs® 8110 Network Terminating Unit (CTE-S) is a compact Network Terminating Unit (NTU) and fully managed network element part of the Tellabs® 8100 Managed Access System that can offer high quality and flexible bandwidth over copper lines. The Tellabs 8110 NTU (CTE-S) makes use of ITU G.SHDSL-based technology. The Tellabs 8110 NTU (CTE-S) has a maximum symmetrical data rate of 4,544 Kbps and it has AC, DC and remote power feed options.

In the network, the Tellabs 8110 NTU (CTE-S) is connected to the Tellabs 8100 system with the SCO modules of the OMH, OMH-A or ESU unit. These units can be installed into the Tellabs® 8140 Midi Node, the Tellabs® 8150 Basic Node, the Tellabs® 8160 Accelerator Node A111 or the Tellabs® 8170 Cluster Node.

The Tellabs 8110 NTU (CTE-S) is configured and monitored with the Tellabs® 8000 Network Manager, the network management system. It does not require any configuration at the installation site. However, a handheld VT100 terminal can be connected into the Tellabs 8110 NTU (CTE-S) to obtain the monitoring and status information.

Features and Benefits

■ End-to-end managed services

With the help of the Tellabs 8110 NTU (CTE-S), the service provider can offer managed and high quality services for demanding customers. End-to-end service management capabilities make the network operations extremely efficient and lead to short service response times.

■ High data speed over copper

Business service applications prefer symmetrical bandwidth of relatively high bandwidth. The Tellabs 8110 NTU (CTE-S) enables even 4 Mbps connectivity over 2 copper pairs. Depending on the required distance and bandwidth either 1 or 2 pairs can be used.

■ Remote configuration

All element and service configurations are managed with the Tellabs 8000 manager. For instance, the service capacity is easy and quick to upgrade at 64 Kbps granularity without touching the hardware.

■ Automatic element discovery

The installation is plug and play. When the line and DTE are connected, the Tellabs 8110 NTU (CTE-S) will automatically create a connection to the Tellabs 8100 system. One integrated DTE interface is included in the Tellabs 8110 NTU (CTE-S).



Figure 1. Tellabs® 8110 Network Terminating Unit (CTE-S)

■ Compact and practical in size

The Tellabs 8110 NTU (CTE-S) is housed in a compact plastic case suitable for tabletop use. LEDs on the front indicate the powering, line and DTE status. The V.35, G.703, X.21 and V.36 DTE interfaces are integrated as well as the RS-232 interface suitable for VT100 terminal.

Product versions

Tellabs 8110 NTU (CTE-S) V.35 — Tellabs 8110 NTU (CTE-S) element with 100-240 VAC power supply and V.35 (ISO 2593 34-pin female) DTE interface.

Tellabs 8110 NTU (CTE-S) G.703 — Tellabs 8110 NTU (CTE-S) element with DC or remote power feed power supply and AC power supply with adapter. E1 interface, both 75 ohms and 120 ohms variants provided as DTE interface for user connectivity.

Tellabs 8110 NTU (CTE-S) X.21 — Tellabs 8110 NTU (CTE-S) element with 100-240 VAC power supply and X.21 DTE interface towards the user.

Tellabs 8110 NTU (CTE-S) V.36 — Tellabs 8110 NTU (CTE-S) element with 100-240 VAC and V.36 (ISO 4902, 37-pin D-connector) DTE interface.

Specifications:

General

Dimensions

- 195 mm x 180 mm x 45 mm (d x w x h)
- Weight 560 g

Power

- Tellabs 8110 NTU (CTE-S) V.35/X.21/V.36: 90..264 VAC
- Tellabs 8110 NTU (CTE-S) G.703: -48 V DC, 50..110 VDC remote power or AC with adapter
- Power consumption < 9 W, with G.703 version < 6 W

Standards

- Performance: G.991.2 (2001)
- Safety: EN60950-1:2001
- EMC: EN 300 386 V1.3.3:2005

Environmental compliance

- 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, temperature -5° C to +45° C, relative humidity 5% to 95%

Ordering and availability

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

Line Interface Features

Connector type

- RJ-45

Signal encoding and impedance

- TC-PAM, 135 ohms

Operating modes

- 1-pair mode (1 x 2,320 Kbps, 1 x 1,168 Kbps, 1 x 592 Kbps, 1 x 208 Kbps)
- 2-pair mode (2 x 2,320 Kbps, 2 x 1,168 Kbps, 2 x 592 Kbps, 2 x 208 Kbps, data split between the pairs)

Transmit level

- 14.5 dBm (2320 Kbps)
- 13.5 dBm (208, 592, 1168 Kbps)

Estimated cable

(0.4mm, no noise) length

- 4.1 km @ 2,320 Kbps line rate
- 4.6 km @ 1,168 Kbps line rate
- 6.2 km @ 592 Kbps line rate
- 7.7 km @ 208 Kbps line rate

Line monitoring

- Carrier detection, signal level indication, CRC monitoring on line, noise margin. End-to-end CRC with 8 kbps external channel.
- Power off indication (“dying gasp”)

Test Interface

- Terminal rate: 9600 bps
- 6-pin RJ-connector
- Circuit level: V.28 (RS-232)
- Interface circuits: 102, 103, 104
- Transmit timing: Asynchronous

DTE Interface Features

V.35 DTE Interface

- n x 64 Kbps (64-4,544 Kbps), Tellabs 8100 system mode.
- 34-pin female connector, ISO 2593
- Data and clock signals: V.35 Control signals: V.28
- Interface circuits: 102, 103, 104, 105, 106, 107, 108, 109, 113, 114, 115, 140, 141, 142
- Transmit timing: 115nw, 113/115 meso

G.703 DTE Interface

- 2,048 kbps
- Selectable with Tellabs 8000 manager SMB coaxial 75 ohms, 9-pin female D-connector 120 ohms
- Signal coding: HDB3
- Transmit timing: Co-directional
- Output pulse amplitude: 2.37 V @ 75 ohms and 3.0 V @ 120 ohms

X.21 DTE Interface

- n x 64 kbps (64-4,544 Kbps), Tellabs 8100 system mode
- 15-pin D-connector, ISO 4903
- Circuit levels: X.27
- Interface circuits: T, C, R, I, G, S, X
- Transmit timing: S, X

V.36 DTE Interface

- n x 64 kbps (64-4,544 Kbps), Tellabs 8100 system mode
- 37-pin D-connector, ISO 4902
- Data, clock and control signals: V.11 Test signals: V.28
- Interface circuits: 102, 103, 104, 105, 106, 107, 108, 109, 113, 114, 115, 140, 141, 142
- Transmit timing: 115nw, 113/115 meso

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