

Tellabs® 1000 Multi-Service Access Series External Timing Interface Plug-in Card (ETI)

Overview

The External Timing Interface (ETI) plug-in card is a universal common control unit used for LET and RST operation. ETI plug-in card delivers advanced timing functions in the Tellabs 1000 Multi-Service Access Series. It meets GR-1244-CORE timing requirements and provides timing through the following sources:

- Primary and secondary external timing references, for example, BITS as composite clock inputs: CC-A and CC-B
- Internal Stratum 3E holdover in a controlled environment if both CC-A and CC-B signals degrade
- Internal Stratum 3 oscillator in freerun mode

Note: In an RST, the ETI requires an external composite clock. The ETI must reside in the primary shelf of the terminal, but can be located in any general purpose slot. Deploy the ETI card redundantly for hot standby capability. External interface inputs/outputs are available via backplane wire-wrap posts of the slot where the ETI card is located.

LED indicators on the ETI faceplate indicate the following conditions:

- A red FAIL — plug-in card failure
 - A green ACTV/STBY — the unit is in active mode
 - A yellow ACTV/STBY — the unit is in standby mode
 - A green SYNC — the ETI is synchronized with a valid timing source
 - A red ALARM — the ETI card has a major alarm or a critical alarm
- Jacks on the faceplate are reserved for future use.

Features and Benefits

- Synchronizes to an external composite clock timing source
- In controlled environments, if the composite clock signal degrades, ETI provides Stratum 3E holdover using historical timing data
- Provisionable Stratum levels: 3, 3 with 3E holdover, 4, and SONET
- LET or RST operation (primary shelf)
- Up to Stratum 3/3E free run accuracy
- Jitter and wander reduction of external timing source
- A second ETI can be installed for standby operation

Specifications

Requirements

- CPU 1.6 or later

Timing Modes

- Stratum 3 with Stratum 3E holdover
 - Acceptance range: $\pm 4.6 \times 10^{-6}$
 - Pull-in range: ± 8.583 ppm
 - Rejection range: ± 9.536 ppm
 - Meets GR-1244-CORE filter
 - Requirements: Yes
- Stratum 3
 - Acceptance range: $\pm 4.6 \times 10^{-6}$
 - Pull-in range: ± 8.583 ppm
 - Rejection range: ± 9.536 ppm
 - Meets GR-1244-CORE filter
 - Requirements: Yes
- SONET
 - Acceptance range: $\pm 20 \times 10^{-6}$
 - Pull-in range: ± 23.84 ppm
 - Rejection range: ± 25.74 ppm
 - Meets GR-1244-CORE filter
 - Requirements: Yes
- Stratum 4
 - Acceptance range: $\pm 32 \times 10^{-6}$
 - Pull-in range: ± 36.24 ppm
 - Rejection range: ± 38.24 ppm
 - Meets GR-1244-CORE filter
 - Requirements: Yes



Environmental

- Operating temperature: -40 to +149° F (-40 to +65° C)
- Humidity: 5–95% non-condensing
- Average power consumption: 3.0 W

Dimensions

- Height: 5.125 in (13.018 cm)
- Width: 0.563 in (1.429 cm)
- Depth: 10.5 in (26.67 cm)
- Weight: 0.5 lb (0.23 kg)

Compliance

- Meets GR-1244-CORE filter requirements

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