



SKU: 0101-0083

Category:

# External Timing Interface (ETI) Plug-in Card

The External Timing Interface (ETI) plug-in card is a universal common control unit used for LET and RST operation. The ETI plug-in card delivers advanced timing functions in the Tellabs 1000 MSAP. It meets GR-1244-CORE timing requirements and provides ti

## Features

- 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

## Highlights

### Timing Options

There can be a 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 can be used if both CC-A and CC-B signals degrade. And, internal Stratum 3 oscillator in free-run mode is supported.

### Special 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.

## Specifications

### Physical

- 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)

### Interfaces

- External interface inputs/outputs are available via backplane wire-wrap posts of the slot where the ETI card is located.

### Power Consumption

- Average power consumption: 3.0 W

### Timing Modes

- Stratum 3 with Stratum 3E holdover – Acceptance range:  $3 \times 4.6 \times 10^{-6}$
- Stratum 3 with Stratum 3E holdover – Pull-in range:  $3 \times 8.583$  ppm
- Stratum 3 with Stratum 3E holdover – Rejection range:  $3 \times 9.536$  ppm
- Stratum 3 – Acceptance range:  $3 \times 4.6 \times 10^{-6}$
- Stratum 3 – Pull-in range:  $3 \times 8.583$  ppm
- Stratum 3 – Rejection range:  $3 \times 9.536$  ppm
- SONET – Acceptance range:  $3 \times 20 \times 10^{-6}$

- SONET - Pull-in range: 3 23.84 ppm
- SONET - Rejection range: 3 25.74 ppm
- Stratum 4 - Acceptance range: 3 32 x 10<sup>-6</sup>
- Stratum 4 - Pull-in range: 3 36.24 ppm
- Stratum 4 - Rejection range: 3 38.24 ppm

## Environmentals

- Operating temperature: -40 F to +149 F (-40 C to +65 C)
- Relative humidity: 5%-95% noncondensing

## Compliance

- Meets GR-1244-CORE filter requirements

## General

### LED Indicators

- Red FAIL - plug-in card failure
- Green ACTV/STBY - the unit is in active mode
- Yellow ACTV/STBY - the unit is in standby mode
- Green SYNC - the ETI is synchronized with a valid timing source
- Red ALARM - the ETI card has a major alarm or a critical alarm

### Management

- Tellabs Panorama Element Management System (EMS)
- Craft User Interface (CUI)

### Software Support

- Minimum base software FP15 and higher

### Installations

- Supported in Tellabs 1000 CBA