

# 4340A

## Fiberoptic Distribution Amplifier

### KEY FEATURES

- Cost-Effective Upgrade Path
- Ability to Expand System Outputs as Needed (Add Outputs One at a Time)
- Capacity at the High End is Extensive
- Dual Redundant Power Supplies Can Be Hot-Swapped to Maintain Continuous Operation
- 1U Rack Mount Chassis
- SFP Transceiver Sockets Enable Easy Reconfiguration

The Universal Time & Frequency System (UTFS) distributes precise time and frequency signals via optical fiber to local and remote locations. At the front end of the UTFS is the Universal Time Code Generator (UTC), a state-of-the-art multiplexer that links to frequency, 1PPS and IRIG-B references. In turn, the UTC simultaneously outputs all timing signals—RF signals, serial time codes and pulsed outputs—on a single fiber to as many as four Time Code Translators (TCTs) at remote locations.

The Fiberoptic Distribution Amplifier provides a means to expand beyond the four fiberoptic outputs from the UTC. Customers starting out with a minimal configuration system can readily add functionality—in the form of additional Time Code Translators with accompanying output modules—as organizational needs and budgets increase.

### EXPANSIVE CAPABILITY

For example, a Fiberoptic Distribution Amplifier with one input transceiver and 8 output transceivers can multiply one UTC output to 8. In this scenario, the customer can add 32 fiberoptic outputs to the system by adding four expansion chassis. By adding one more distribution level, the number of fiberoptic outputs and potential TCTs in the system can increase to at least 256. And upgrading is as easy as adding hardware. No configuration is necessary. Hot swap SFP sockets for fiber optic transceivers provides easy expansion or transceiver replacement for different networks. An AC or DC hot swap redundant supply can be ordered with the unit.



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## OPERATION

The Fiberoptic Distribution Amplifier receives a single optical input and transmits from 2 to 8 identical optical outputs. The input transceiver performs an optical-to-electrical conversion and puts the electrical serial time code on the chassis motherboard. Each output transceiver performs an electrical-to-optical conversion and forwards the time code without modification. All modules, including the redundant power supplies, are hot swappable.

The unit also decodes the input signal and validates the serial time code. Each output transceiver receives the optical 1PPS, which is optionally returned from each TCT, and produces an alarm when the 1PPS is missing. These alarms, along with power supply alarms, are aggregated with the CRC and loss-of signal alarms and then transmitted to the upstream device, such as the UTCG.

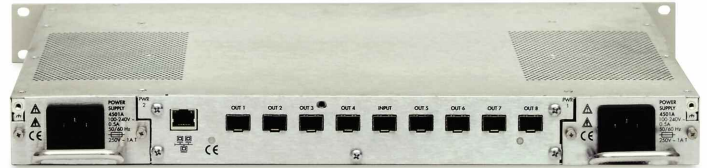
## TSC 4340A SPECIFICATIONS

### GENERAL SPECIFICATIONS

- Input module
  - Fiberoptic input and output: 8
  - Connectors: LC SFP Socket
  - Optical fiber transceivers: Multi-mode up to 2 km  
Single-mode up to 30 km
  - Chassis alarm LEDs: Power, Input, Outputs (8)
- Output module
  - Quantity: 2-8 per chassis
  - Connectors: Fiberoptic: LC SFP Socket
  - Optical fiber transceivers: Multi-mode up to 2 km  
Single-mode up to 30 km

### ENVIRONMENTAL & PHYSICAL SPECIFICATIONS

- Temperature range: 0°C-50°C (operating)
- Humidity: 0-90% Non-condensing (operating)
- Input power
  - Voltage range: AC: 90-240 V-  
DC: 18-32 V
  - Frequency: 45-65 Hz
  - Power (max): 18 W
- Size: 19-inch EIA rack-mount chassis, 1U high x 9"  
(22.9 cm) deep
- Weight: 10.5 lbs (4.8 kg)



Rear View



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