

TEL3304 T1 Clock Distribution Chassis

2x10 Autoswitch Distribution Amplifier

The TEL3304 is a dual-input, ten-output distribution amplifier in a 1U rackmount chassis. The TEL3304 provides ten isolated copies of an input signal and is ideal for distributing T1 reference clock signals to telecom equipment. Fault sensing of signal levels is provided on all inputs and outputs, status is easily visible via front-panel LED indicators, and monitoring via an RS-232 port is a standard feature. In addition, remote control and status monitoring via a network port is available as an option. The TEL3304 is unique in the industry - no other low-cost system offers this combination of capabilities and performance in a single product.



Autoswitching

The TEL3304 can be configured for single or dual input operation. If two inputs are available then the TEL3304 will monitor the input signals. If an input is removed or the amplitude is greatly reduced it will automatically switch to the other input. This feature ensures that your critical signals are always present.

Alarm Input

The TEL3304 is compatible with the alarm output signal from the Meridian Precision GPS TimeBase and the Tycho Frequency Reference. If one of these units is sourcing the TEL3304 and its alarm output goes active, then the TEL3304 will automatically switch to the backup source. Since this alarm input may be cascaded to multiple TEL3304 units simply, using BNC T-adapters and coaxial cable, multiple TEL3304 units can be bank switched.

Status Indicators

Front panel LEDs provide you at-a-glance status of the distribution chassis. The TEL3304 provides LED indicators for the power supply(ies), the two inputs, all output signals and a summary alarm indicator. The summary alarm is also available as an open-collector output on a rear-panel BNC.

Control and Status Monitoring

The TEL3304 can be configured and monitored by means of an RS-232 serial port. Both switch status and output status can be monitored in this way. For remote control and monitoring, a network port is available as an optional upgrade.

Options

The TEL3304 T1 Distribution Chassis can be configured for one input or two inputs with autoswitch. Two inputs is the factory default. An additional option is the capability of having dual redundant, AC or DC power supplies. The two power supplies can be any combination of AC/AC, AC/DC, or DC/DC. A network port that can be used for remote control and status monitoring is also available with a full suite of network protocols.

Two-Year Warranty

The TEL3304 T1 Clock Distribution Chassis is backed by a full two-year warranty against defects in material and workmanship.

Money-Back Guarantee

If your TEL3304 does not meet your time and frequency distribution needs for any reason, simply return it within 60 days for a full refund. Refer to www.endruntechnologies.com/guarantee.htm for more details.

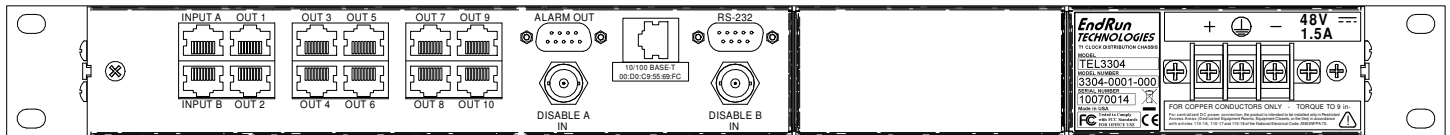
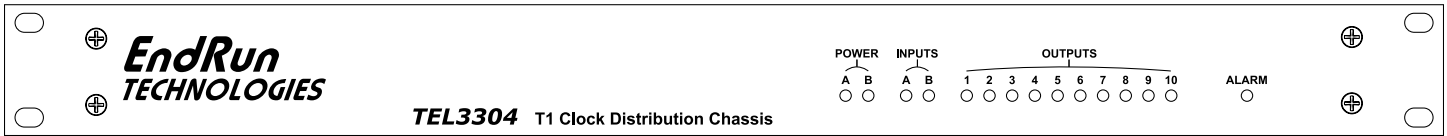
FEATURES

- Ideal for T1 Clock Distribution
- Single Input or Autoswitching Between Dual Inputs
- 10-Channel, T1 (1.544 MHz) AMI Signal Distribution
- High Port-to-Port Isolation
- RS-232 Port for Control and Monitoring
- -48 VDC Input
- Dual-Redundant AC or DC Power Supply Options
- Ethernet Port Option for Remote Control and Monitoring



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Specifications



INPUTS (A and B):

- Type: Transformer-coupled complementary-pair.
- Frequency: 1.544 MHz.
- Signal Compliance: Bipolar, Return to Zero Alternating Mark Inversion (AMI) per ITU-T G.703.
- Impedance: 100Ω.
- Amplitude: 0.7V peak-to-peak to 6V peak-to-peak.
- Protection: Protected to 24V peak-to-peak.
- Connector: Rear-panel RJ45-style modular jack (RJ48C-compatible).

OUTPUTS (1 through 10):

- Impedance: 100Ω.
- Unity Gain: 0 dB, ±1dB.
- Protection: Outputs may be shorted to ground with no damage.
- Connector: Rear-panel RJ45-style modular jack (RJ48C-compatible).

EXTERNAL ALARM INPUTS (A and B):

- Normal State: TTL low.
- Alarm State: TTL high or high Z (internal 10KΩ pull-up).
- Connector: Rear-panel female BNC.

ALARM OUTPUT:

- All fault indicators are summed together providing this common alarm output.
- Open Collector, 40VDC Max, 100 mA Max Saturation Current.
- High impedance when fault condition exists.
- Connector: Rear-panel female BNC.

MAINTENANCE PORT:

- RS-232 serial I/O on DB9M jack for local terminal access. Used for control and status information.
- User-Selectable Port Settings: 9600 to 57600 baud; 7 or 8 data bits; odd, even or no parity; 1 or 2 stop bits.
- Factory default settings are: 19200,8,n,1.

SYSTEM STATUS INDICATORS:

- Input LEDs: Green when a signal is detected on the input channel and red when the signal is absent. The TDC3303 can be configured for two input signals with autoswitch or for only one input signal.
- Output LEDs: Green when the output signal is OK and red when a short is detected.
- Power LEDs: Green when the power supply is OK, and red when a fault condition exists.
- Alarm LED: Red when any fault condition exists. All fault indicators are summed together to provide this one common fault.

POWER:

- 48 VDC, 1.5A Max.
- 3-position terminal block on rear panel: +DC IN, SAFETY GROUND, -DC IN.
- Floating power input: Either "+DC IN" or "-DC IN" can be connected to "SAFETY GROUND".

SIZE:

- Chassis: 1.75"H x 17"W x 10.75"D.
- Weight: < 5 pounds.

ENVIRONMENTAL:

- Temperature: 0° to +50° C.
- Humidity: 0 to 95%, non-condensing.

COMPLIANCE:

- CE, FCC.

OPTIONS:

- Can be configured for one or two inputs. Factory default is two inputs with autoswitch.
- Universal AC or +12, +24/28 VDC input.
- Dual-redundant AC or DC power supplies. Combinations can be AC/AC, AC/DC, or DC/DC.
- Network Port: Ethernet 10Base-T or 100Base-TX; RJ-45 connector; Protocols include: TCP/IP, SSH, DHCP, Telnet and SNMP MIB-II.

