

# Programmable Error Detector

## PED3200 Series Datasheet



PED3202 Programmable Error Detector

### Features & Benefits

- Available with 1 or 2 input channels (independent data on each channel)
- PRBS and user defined patterns
- DC coupled differential data inputs (may also be used single ended or AC Coupled)
- Full rate AC coupled clock input (may also be used single ended)
- Auto adjustment or manual adjustment of data to clock phase
- Auto synchronization to input pattern
- Front panel touch screen GUI or USB TMC computer control

### Applications

- 25 Gb/s testing for 100G Ethernet
- 32 Gb/s DPQPSK testing
- Semiconductor and component testing
- Design validation and production testing

### Product Description

The Tektronix PED line of high-performance error detectors offer single and two-channel standalone configurations capable of BER measurement at data rates up to 32 Gb/s. The PED products support either PRBS or user-defined data patterns, with simple to use automatic or manual alignment of input clock and data, and pattern synchronization. The PED product makes an ideal companion for the Tektronix PPG pattern generator product family.

### Characteristics

| Characteristic                 | Description                                |
|--------------------------------|--------------------------------------------|
| Data Input                     | Ground-referenced, CML-like input          |
| Differential Use Amplitude     | 100 mV to 1.0 V                            |
| Single-Ended Use Amplitude     | 100 mV to 0.75 V                           |
| Input Window Voltage           | −0.6 V to +0.2 V                           |
| Termination Voltage            | 0 V                                        |
| Clock Input                    | AC Coupled. Full rate                      |
| Differential Amplitude         | 300 mV to 1.0 V                            |
| Single-Ended Amplitude         | 300 mV to 1.0 V                            |
| Clock to Data Phase Adjustment | 100 ps (−50 ps to +50 ps)                  |
| Built-in PRBS Patterns         | 2 <sup>n</sup> −1 n = 7, 9, 11, 15, 23, 31 |
| User-Defined Pattern Depth     | 2 Mbit, Single bit pattern resolution      |

Ordering Information

Models

| Item    | Description                                    |
|---------|------------------------------------------------|
| PED3201 | 32 Gb/s Programmable Error Detector, 1-channel |
| PED3202 | 32 Gb/s Programmable Error Detector, 2-channel |

Options

Power Plug Options

| Item     | Description                          |
|----------|--------------------------------------|
| Opt. A0  | US plug, 115V,60 Hz                  |
| Opt. A1  | Euro plug, 220V, 50 Hz               |
| Opt. A2  | UK plug, 240V, 50 Hz                 |
| Opt. A6  | Japanese plug, 100V, 110/120V, 60 Hz |
| Opt. A10 | China plug, 50 Hz                    |
| Opt. A11 | India plug, 50 Hz                    |
| Opt. A99 | No power cord                        |

User Manual Options

| Option  | Description    |
|---------|----------------|
| Opt. L0 | English Manual |



Tektronix is registered to ISO 9001 and ISO 14001 by SRI Quality System Registrar.



Product(s) complies with IEEE Standard 488.1-1987, RS-232-C, and with Tektronix Standard Codes and Formats.

**For Further Information.** Tektronix maintains a comprehensive, constantly expanding collection of application notes, technical briefs and other resources to help engineers working on the cutting edge of technology. Please visit [www.tektronix.com](http://www.tektronix.com)



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