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Data Sheet

August 13, 2026

TEKTRONIX

Tektronix CR286A 28.6 Gb/s Clock Recovery Instrument

Tektronix CR286A BERTScope Clock Recovery Instrument, 28.6 Gb/s The Tektronix BERTScope CR286A is an instrumentation-quality clock recovery instrument covering 150 Mb/s to 28.6 Gb/s continuous data rates for compliance and jitter testing of next-generation I/Os including PCIe 3.0, 10GBASE-KR, 16xFC, OIF-CEI 28G, and 100GBASE-LR-4/ER-4. It provides adjustable PLL loop bandwidth and peaking with self-measured "golden PLL" response, DC-coupled data through-path, and full-/half-rate clock outputs. The Tektronix BERTScope CR286A is an instrumentation-quality clock recovery instrument covering 150 Mb/s to 28.6 Gb/s continuous data rates for compliance and jitter testing of next-generation I/Os including PCIe 3.0, 10GBASE-KR, 16xFC, OIF-CEI 28G, and 100GBASE-LR-4/ER-4. It provides adjustable PLL loop bandwidth and peaking with self-measured "golden PLL" response, DC-coupled data through-path, and full-/half-rate clock outputs.



MODEL

Tektronix CR286A

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

CR286A

LISTING

<https://aumictechlabs.com/products/cr286a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Tektronix CR286A is a 28.6 Gb/s clock recovery instrument that extracts precise clock signals from high-speed serial data streams for advanced communication system testing and characterization. It delivers continuous data rate coverage from 150 Mb/s to 28.6 Gb/s, supporting

I/Os including PCIe 3.0, 10GBASE-KR, 16xFC, 25/28 G CEI, 100GBASE-LR-4/ER-4, and OIF-CEI 28G standards. The instrument features variable loop bandwidth (100 kHz to 12 MHz, optional 24 MHz), programmable peaking with first- and second-order roll-off, and a built-in equalizer for high-ISI input conditions. Dual clock outputs support full-rate operation up to 14.3 Gb/s and half-rate outputs for higher data rates. Data interfaces are 50 Ω differential or single-ended, DC-coupled, with input sensitivity at 100 mV single-ended (standard) or 40 mV single-ended / 20 mV differential with Option HS. Integrated jitter analysis capabilities include spectral analysis, frequency gated integrated jitter measurements, and spread spectrum clock waveform viewing with dF/dt analysis. The instrument tracks SSC with frequency excursions up to 5000 ppm and measures edge density and PLL parameters with self-measurement and display of loop bandwidth, peaking, and JTF for standards compliance. Control is via USB interface, integrated into BERTScope or operating standalone with included PC software.

Features & description

From manufacturer datasheet

Features

- Continuous data rate coverage to 28.6 Gb/s
- Variable loop bandwidth 100 kHz to 12 MHz (to 24 MHz with Opt. XLBW)
- Programmable peaking; first- and second-order roll-off
- Built-in equalizer for high-ISI inputs
- Optional HS higher-sensitivity inputs (no DC through-path)
- USB control via BERTScope View / included PC software

Applications

- Receiver CDR emulation for jitter tolerance / transfer
- 100 GbE and OIF-CEI 28G clock recovery
- BERTScope and stand-alone high-speed serial test
- Optical and electrical links requiring programmable loop BW

CR286A Characteristics / Specifications

PARAMETER	VALUE
Model	CR286A
Manufacturer	Tektronix
Instrument Type	BERTScope Clock Recovery Instrument
Data Rate Coverage	150 Mb/s to 28.6 Gb/s
Data Interfaces	50 Ω differential or single-ended, DC coupled
Connector Adapters	APC 3.5 Planar Crown, user-replaceable
Data Insertion Loss	2 dB min; 2.6 dB typical; 3 dB max (input to output)
Data Input Voltage Range	–5 V min to +5 V max
Input Sensitivity Standard SE Typical	100 mV
Input Sensitivity Standard Diff Typical	50 mV
Input Sensitivity Opt HS SE Typical	40 mV
Input Sensitivity Opt HS Diff Typical	20 mV
Equalization Range	0 to 10 dB
Clock Interfaces	50 Ω single-ended, AC coupled
Loop Bandwidth	100 kHz to 12 MHz (200 kHz–12 MHz above 14.3 GHz)
Loop Bandwidth Option XLBW	up to 24 MHz
Loop Bandwidth Accuracy	$\pm 10\%$ (1100 pattern)
Peaking	0–6 dB from 500 kHz–12 MHz; 0 dB from 100–500 kHz
Peaking Accuracy	greater of $\pm 10\%$ of setting or 0.5 dB
Intrinsic Jitter Typical	70 fs; 250 fs RMS max (specified conditions)
Locking Range	50 MHz default; adjustable 10–500 MHz
Control Interface	USB Notes Specs from Tektronix BERTScope Clock Recovery (CR125A/CR175A/CR286A) datasheet and quick-start. Confirm HS / XLBW options on the unit.
Bandwidth	and peaking with self-measured “golden PLL” response, DC-coupled data through-path, and full-/half-rate clock outputs.

PARAMETER	VALUE
Data Rate	coverage to 28.6 Gb/s - Variable loop bandwidth 100 kHz to 12 MHz (to 24 MHz with Opt. XLBW) - Programmable peaking; first- and second-order roll-off - Built-in equalizer for high-ISI inputs - Optional HS higher-sensitivity inputs (no DC through-path)

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
Specifications	
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Input Sensitivity Standard SE Typical	100 mV
Input Sensitivity Standard Diff Typical	50 mV
Input Sensitivity Opt HS SE Typical	40 mV
Input Sensitivity Opt HS Diff Typical	20 mV
Equalization Range	0 to 10 dB
Clock Interfaces	50 Ω single-ended, AC coupled
Full-Rate Clock Output: up to 14.3 Gb/s	
Half-Rate Clock Output: for input rates >14.3 Gb/s to 28.6 Gb/s	
Specifications	
PARAMETER	VALUE
Loop Bandwidth	100 kHz to 12 MHz (200 kHz-12 MHz above 14.3 GHz)
Loop Bandwidth Option XLBW	up to 24 MHz
Loop Bandwidth Accuracy	$\pm 10\%$ (1100 pattern)
Peaking	0-6 dB from 500 kHz-12 MHz; 0 dB from 100-500 kHz
Peaking Accuracy	greater of $\pm 10\%$ of setting or 0.5 dB
Frequency Response Roll-Off: -20 to -40 dB/decade	
Specifications	

PARAMETER	VALUE
Intrinsic Jitter Typical	70 fs; 250 fs RMS max (specified conditions)
Locking Range	50 MHz default; adjustable 10-500 MHz
Control Interface	USB

Notes

Specs from Tektronix BERTScope Clock Recovery (CR125A/CR175A/CR286A) datasheet and quick-start. Confirm HS / XLBW options on the unit.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.