Aumictech
Test & measurement · bought, sold, repaired, calibrated

Data Sheet
July 30, 2026

TEKTRONIX

Tektronix CSA7404B Communications Signal Analyzer, 4 GHz, 4 Ch, 20 GS/s

Eye-pattern measurements including extinction ratio, Q-factor, eye height/width, jitter, and noise Serial pattern triggering for isolation of pattern-dependent effects Acquisition modes including Sample, Peak Detect, Average, Envelope, Hi-Res, Waveform Database, FastAcq, and FastFrame The CSA7404B spans both electrical oscilloscope analysis and communications compliance workflows. Integrated optical response, clock recovery, serial pattern triggering, and mask testing are intended to reduce setup complexity versus separate instruments. Tektronix CSA7404B Communications Signal Analyzer, 4 GHz, 4 Ch, 20 GS/s The Tektronix CSA7404B isahigh-performance Communications Signal Analyzer based onareal-time digital phosphor oscilloscope platform. Tektronix documentation describes it asaversatile instrument dedicated to rapid design analysis and verification of optical and electrical communications signals at rates up to 2.5 Gb/s, combining circuit development and physical-layer compliance testing in one tool. The CSA7404B is intended for design, development, and compliance testing of optical and electrical signals to 2.5 Gb/s rates (including OC-48/STM-16 and Fibre Channel FC2125). Typical uses include physical-layer characterization in backplane, midplane, and embedded designs, plus signal integrity, margin verification, jitter, and timing analysis.

No photo

MODEL **Tektronix CSA7404B**	CALIBRATION **N/A — off-catalog OEM datasheet**
CONDITION **See OEM documentation**	STATUS **Not listed on Aumictech inventory**
RFQ / SKU **CSA7404B**	LISTING **Off-catalog — OEM dat asheet only**

NIST-traceable cal · SAM registered · 30-day returns · NAICS 423690 · 811210 · 541380

Features & description

From manufacturer datasheet

Features

• 4 GHz true analog bandwidth • 4 input channels • 20 GS/s maximum real-time sample rate • Greater than 400,000 wfms/s waveform capture rate with DPX acquisition • Down to 72 ps rise time (20% to 80%, typical) • Built-in compliance mask tests for optical and electrical data streams up to 2.5 Gb/s • Integrated optical reference receiver • Integrated hardware clock recovery • Up to 64 MB record length with optional memory • 64-bit serial pattern trigger • Complete eye-pattern measurement suite • Waveform database acquisition for accurate parametric measurements • TekConnect interface and OpenChoice architecture

Built-in communications mask testing forabroad set of optical and electrical standards

Eye-pattern measurements including extinction ratio, Q-factor, eye height/width, jitter, and noise Serial pattern triggering for isolation of pattern-dependent effects Acquisition modes including Sample, Peak Detect, Average, Envelope, Hi-Res, Waveform Database, FastAcq, and FastFrame Operational Notes The CSA7404B spans both electrical oscilloscope analysis and communications compliance workflows. Integrated optical response, clock recovery, serial pattern triggering, and mask testing are intended to reduce setup complexity versus separate instruments. Notes This manual OEM source was compiled from the official Tektronix CSA7404B Communications Signal Analyzer datasheet.

CSA7404B Characteristics / Specifications

PARAMETER	VALUE
Model	CSA7404B
Instrument Type	Communications Signal Analyzer
Input Channels	4
Rise Time 10% to 90% (typical)	100 ps
Rise Time 20% to 80% (typical)	72 ps
Input Coupling	DC, GND
Input Impedance	50 Ohm
Input Sensitivity	2 mV/div to 1 V/div
Vertical Resolution	8 bits (>11 bits with averaging)
Maximum Input Voltage	Less than 1 VRMS for less than 100 mV/div; less than 5 VRMS for greater than or equal to 100 mV/div settings (also determined by TekConnect accessory)
DC Gain Accuracy	4 mV/div to 1 V/div +/- (2% + (2% x net offset/10)) Acquisition And Timebase
Equivalent Time Sample Rate (Maximum)	1 TS/s
Maximum FastAcq Waveform Capture Rate	Greater than 400,000 wfms/s
Standard Record Length	4 M (1 ch), 2 M (2 ch), 1 M (4 ch)
Maximum Duration with Opt. 5M	3.2 ms
Timebase Range	50 ps to 10 s/div
Trigger Jitter	1.5 ps RMS typical
Long Term Sample Rate and Delay Time Accuracy	+/-2.5 ppm over greater than or equal to 100 ms interval; aging less than 1 ppm per year from factory calibration Optical System
Optical Channel Unfiltered Bandwidth	2.4 GHz
Wavelength Range	700 nm to 1650 nm
Calibrated Wavelengths	780 nm, 850 nm, 1310 nm, 1550 nm
Input Connector	Rifocs universal connector

PARAMETER	VALUE
Fiber Input	62.5 um core multimode fiber
Optical Reference Receiver	Fourth-order Bessel-Thompson response supporting common SONET/SDH, Gigabit Ethernet, Fibre Channel, InfiniBand, IEEE 1394b, and related rates Clock Recovery
Input Data Rates	1.5 Mbaud to 3.125 Gbaud
Tracking/Acquisition Range	+/-2% of requested baud
Clock Recovery Jitter (typical)	Less than 0.25% bit period +5 ps RMS for PRBS data, or 4 ps RMS for repeating 011 patterns
Input Sensitivity for Clock Recovery	1 division peak-to-peak displayed signal Measurement And Analysis Capabilities Built-in communications mask testing forabroad set of optical and electrical standards Eye-pattern measurements including extinction ratio, Q-factor, eye height/width, jitter, and noise
Bandwidth	4 input channels - 20 GS/s maximum real-time sample rate - Greater than 400,000 wfms/s waveform capture rate with DPX acquisition - Down to 72 ps rise time (20% to 80%, typical) - Built-in compliance mask tests for optical and electrical data streams
Rise Time	(20% to 80%, typical) - Built-in compliance mask tests for optical and electrical data streams up to 2.5 Gb/s - Integrated optical reference receiver - Integrated hardware clock recovery - Up to 64 MB record length with optional memory - 64-bit seria

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.

performance Communications Signal Analyzer based onareal-time digital phosphor oscilloscope platform. Tektronix documentation describes it asaversatile instrument dedicated to rapid design analysis and verification of optical and electrical communications signals at rates up to 2.5 Gb/s, combining circuit development and physical-layer compliance testing in one tool.

Applications
The CSA7404B is intended for design, development, and compliance testing of optical and electrical signals to 2.5 Gb/s rates (including OC-48/STM-16 and Fibre Channel FC2125). Typical uses include physical-layer characterization in backplane, midplane, and embedded designs, plus signal integrity, margin verification, jitter, and timing analysis.

Key Features
- 4 GHz true analog bandwidth
- 4 input channels
- 20 GS/s maximum real-time sample rate
- Greater than 400,000 wfms/s waveform capture rate with DPX acquisition
- Down to 72 ps rise time (20% to 80%, typical)
- Built-in compliance mask tests for optical and electrical data streams up to 2.5 Gb/s
- Integrated optical reference receiver
- Integrated hardware clock recovery
- Up to 64 MB record length with optional memory
- 64-bit serial pattern trigger
- Complete eye-pattern measurement suite
- Waveform database acquisition for accurate parametric measurements
- TekConnect interface and OpenChoice architecture

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Model	CSA7404B
Instrument Type	Communications Signal Analyzer
Input Channels	4

Hardware Analog Bandwidth (-3 dB): 4 GHz

Specifications

PARAMETER	VALUE
Rise Time 10% to 90% (typical)	100 ps
Rise Time 20% to 80% (typical)	72 ps
Input Coupling	DC, GND
Input Impedance	50 Ohm
Input Sensitivity	2 mV/div to 1 V/div
Vertical Resolution	8 bits (>11 bits with averaging)
Maximum Input Voltage	Less than 1 VRMS for less than 100 mV/div; less than 5 VRMS for greater than or equal to 100 mV/div settings (also determined by

PARAMETER	VALUE
	TekConnect accessory)
DC Gain Accuracy	4 mV/div to 1 V/div +/- (2% + (2% x net offset/10))

Acquisition And Timebase
Maximum Real-time Sample Rate, 1 Channel: 20 GS/s
Maximum Real-time Sample Rate, 2 Channels: 10 GS/s
Maximum Real-time Sample Rate, 3 to 4 Channels: 5 GS/s
Equivalent Time Sample Rate (Maximum): 1 TS/s
Time Resolution (single-shot): 50 ps at 20 GS/s
Maximum FastAcq Waveform Capture Rate: Greater than 400,000 wfms/s
Standard Record Length: 4 M (1 ch), 2 M (2 ch), 1 M (4 ch)
Optional Record Length up to Opt. 5M: 64 M (1 ch), 32 M (2 ch), 16 M (4 ch)
Maximum Duration at Highest Real-time Resolution with Standard Memory: 200 us
Maximum Duration with Opt. 5M: 3.2 ms
Timebase Range: 50 ps to 10 s/div
Channel-to-Channel Deskew Range: +/-75 ns in 1 ps steps
Trigger Jitter: 1.5 ps RMS typical
Long Term Sample Rate and Delay Time Accuracy: +/-2.5 ppm over greater than or equal to 100 ms interval; aging less than 1 ppm per year from factory calibration

Optical System

Specifications

PARAMETER	VALUE
Optical Channel Unfiltered Bandwidth	2.4 GHz
Wavelength Range	700 nm to 1650 nm
Calibrated Wavelengths	780 nm, 850 nm, 1310 nm, 1550 nm
Input Connector	Rifocs universal connector
Fiber Input	62.5 um core multimode fiber
Optical Reference Receiver	Fourth-order Bessel-Thompson response supporting common SONET/SDH, Gigabit Ethernet, Fibre Channel, InfiniBand, IEEE 1394b, and related rates

Clock Recovery

Specifications

PARAMETER	VALUE
Input Data Rates	1.5 Mbaud to 3.125 Gbaud
Tracking/Acquisition Range	+/-2% of requested baud
Clock Recovery Jitter (typical)	Less than 0.25% bit period +5 ps RMS for PRBS data, or 4 ps RMS for repeating 011 patterns
Input Sensitivity for Clock Recovery	1 division peak-to-peak displayed signal

Measurement And Analysis Capabilities
Built-in communications mask testing forabroad set of optical and electrical standards
Eye-pattern measurements including extinction ratio, Q-factor, eye height/width, jitter, and noise
Serial pattern triggering for isolation of pattern-dependent effects
Acquisition modes including Sample, Peak Detect, Average, Envelope, Hi-Res, Waveform Database, FastAcq, and FastFrame

Operational Notes

The CSA7404B spans both electrical oscilloscope analysis and communications compliance workflows. Integrated optical response, clock recovery, serial pattern triggering, and mask testing are intended to reduce setup complexity versus separate instruments.

Notes

This manual OEM source was compiled from the official Tektronix CSA7404B Communications Signal Analyzer datasheet.

Ordering Information

OPTION	DESCRIPTION
Opt. 5M	64 M (1 ch), 32 M (2 ch), 16 M (4 ch)

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: N/A — off-catalog OEM datasheet. See OEM documentation · Not listed on Aumictech inventory.

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

Aumictech
788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
https://aumictechlabs.com

NIST-traceable calibration · SAM registered · 30-day returns
NAICS 423690 · 811210 · 541380
Generated July 30, 2026