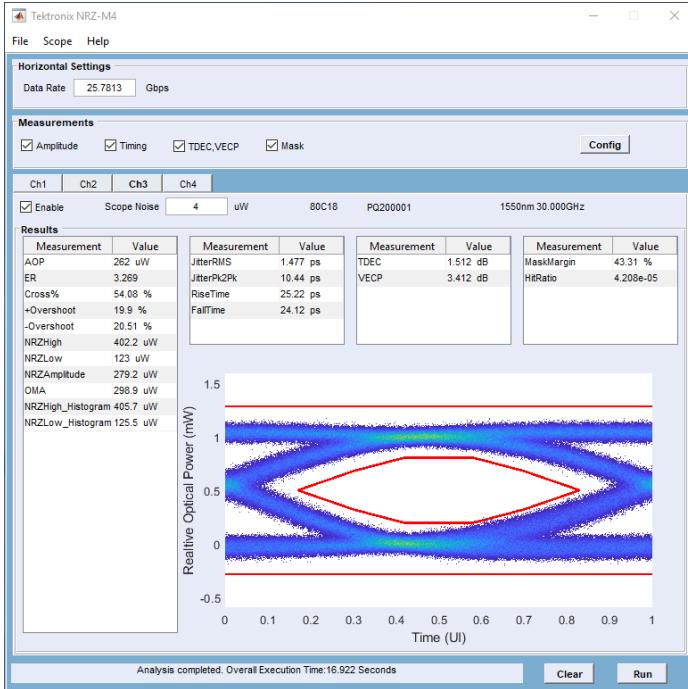


NRZ-M4 Optical Manufacturing TDEC Analysis Software

DSA8300 NRZ-M4 optical analysis software



- Signal characterization measurements such as Amplitude and Timing measurements
- Support for Phase reference characterization clock for more accurate results.
- Support for measurements at various population limits.
- Show results as numeric and graphical display.
- Display 2D eye diagrams with embedded mask
- Save the analysis results to a file.
- Run multiple instances of the application and connect each of them to different DSA8300s' and perform parallel analysis of multiple channels.

Measurement capability

Category	Measurements
Amplitude measurements	<ul style="list-style-type: none"> • AOP • ER • Cross% • +Overshoot • -Overshoot • NRZHigh • NRZLow • NRZAmplitude • OMA • NRZHigh_Histogram • NRZLow_Histogram
Timing measurements	<ul style="list-style-type: none"> • JitterRMS • JitterPk2Pk • RiseTime • Falltime
TDEC,VECP Measurement	<ul style="list-style-type: none"> • Transmission dispersion eye closure (TDEC) ¹ • Vertical eye closure penalty (VECP)
Mask Measurement	Mask Margin @ target hit ratio

The Tektronix NRZ-M4 application provides NRZ signaling analysis, including TDEC (Transmitter and Dispersion Eye Closure) measurement. The application brings together NRZ optical measurements in a simple and easy to use application. This application is designed to minimize the waveform analysis time which suits the manufacturing environment.

This application is intended to be installed on a PC and works by connecting to the sampling scope. Application allows you to acquire signal directly from the connected DSA8300 sampling oscilloscope and analyze the acquired waveform data.

Key features

- Simultaneously analyze up to 4 optical channels
- Characterization of 100Gbps Optical transceivers (SR4, LR4) devices with Mask margin measurements. Perform optimal mask fitting for better margin.
- Support for Transmitter dispersion eye closure (TDEC) and Vertical eye closure penalty (VECP) measurements.
- Support for 80C10C, 80C17, 80C18, 80C20 and 80C21 optical modules.

¹ IEEE 802.3bm, Section 95.8.5

Ordering information

Models

DSA8300 400G-M4	NRZ-M4 Optical Manufacturing Analysis Software, 4 channel TDECQ
DSA83UP 400G-M4	NRZ-M4 Upgrade for customers who already have a DSA8300

Computer requirements

The NRZ-M4 application is designed to run on a PC running Windows operating system. A high performance PC is recommended to minimize the computation time of waveform analysis.

- Operating system: Microsoft Windows 10 (64 bit) operating system.
- Screen resolution: 1920 x 1080 with scaling factor set to 100%.

Software requirements

The NRZ-M4 application requires the following software to be installed on the PC.

- TekVISA: TekVISA version 4.2.0.10 is recommended. Installation is available during NRZ-M4 installation.
- Matlab runtime: Matlab 2017b version 9.3 is required.
- Scope Noise Characterization: Install the Scope Noise Characterization software on the DSA8300. This software is bundled with the NRZ-M4 application package.

CE Marking Not Applicable.



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.



Product Area Assessed: The planning, design/development and manufacture of electronic Test and Measurement instruments.

NRZ-M4 Optical Analysis Software Datasheet

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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.tek.com.

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