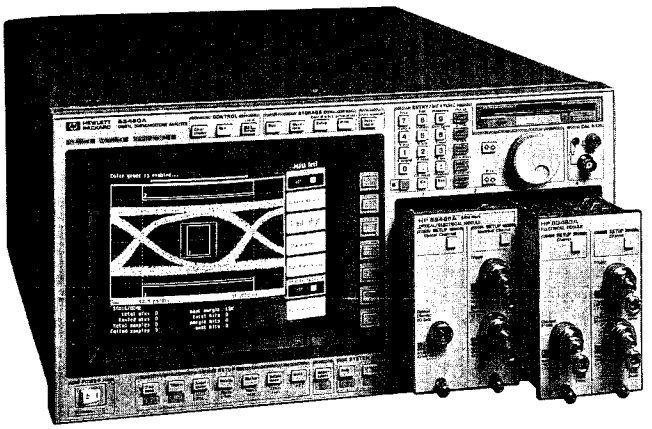
TIME-DOMAIN/COMMUNICATION ANALYZERS

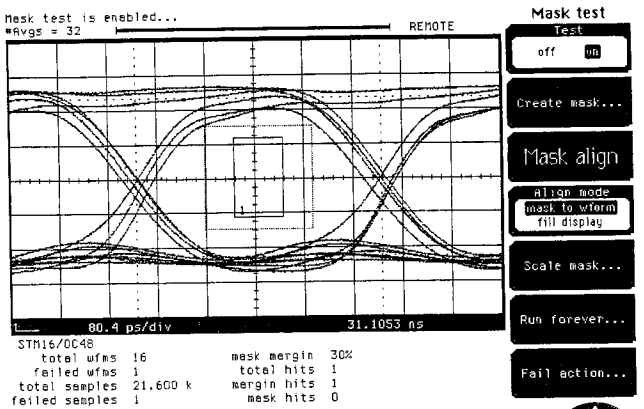
Digital Communications Analyzer

HP 83480A, 83483A, 83484A/B, 83485A/B

- Modular platform with optical and electrical measurement channels
- Full range of standard telecom and datacom masks and templates
- Statistical waveform analysis with color graded histograms
- High measurement throughput
- TDR measurements
- High bandwidth integrated optical channel for accurate parametric measurements, SDH/SONET compliance testing, and power measurements
- HP Eyeline mode for continuous traces, increased sensitivity, and viewing pattern-dependent performance



HP 83480A



HP 83480A Digital Communications Analyzer

The HP 83480A digital communications analyzer is a powerful and versatile instrument designed for use in research, development, production, and evaluation testing of components and products for the telecommunications and datacommunications industries. Data acquisition and measurement analysis are performed in parallel, enabling the HP 83480A to achieve outstanding measurement throughput. The digital communications analyzer provides fast, repeatable communications waveform performance analysis with automated pulse and eye-diagram statistical measurements. Both user defined and industry standard mask and template tests are quickly and easily executed. The HP 83480A is a modular platform which accepts up to two dual-channel electrical or optical measurement modules and is evolving with the changing needs of the communications industry as new measurement modules are introduced.

Industry Standard Masks and Templates

The HP 83480A provides efficient, high-throughput waveform testing with both optical and electrical masks and templates. Execute SDH/SONET and Fibre Channel eye-diagram tests with efficient self-aligning and self-scaling masks that adjust to the displayed waveform. Utilize convenient user-definable test conditions that include mask margins for guard-band testing, mask and margin hit thresholds, and number of samples. Perform automated testing with a full range of industry standard masks and templates including: STM-16/OC-48, STM-4/OC-12, STM-1/OC-3, OC-1, STS-1, 3, E1, 2, 3, and 4, DS-1, 2, and 3, Fibre Channel 133, 266, 532, and 1063, and FDDI. Use the built-in mask editor to create and store user-defined masks and templates.

Waveform Analysis

Eye-diagram and pulse waveforms are quickly and conveniently analyzed with a full range of automated statistical measurements such as mean rise and mean fall time, jitter, eye-width, eye-height, overshoot, and duty-cycle distortion. Extinction-ratio measurements are automated with a histogram-based algorithm providing repeatable results.

Create a stimulus/response measurement system with additional display and analysis capability by combining the HP 83480A with an HP 71603B or 71612A error performance analyzer. Simply load the Option 001 disk on the HP 83480A's integrated disk drive to go into HP Eyeline mode operation. HP Eyeline mode provides continuous traces instead of sampled dot display of eye-diagram waveforms for clear viewing of pattern-dependent effects. In addition, in this unique operational mode unlike with conventional eye-diagrams, waveform averaging may be used to increase measurement sensitivity. Mask tests performed in HP Eyeline mode allow traces violating the mask to be captured and displayed. Pattern-dependent effects can be investigated by examining the bit sequence leading to a mask violation.

HP 83485A/B Optical/Electrical Modules

NEW

Both the HP 83485A and the 83485B feature two measurement channels, one optical, the second electrical. Both channels have selectable bandwidth settings for selecting between lowest oscilloscope noise and highest bandwidth (20 GHz with the HP 83485A, over 30 GHz for the 83485B) for greater measurement fidelity on high-speed signals. The integrated optical channel eliminates distortion caused by cables and connectors associated with the use of external receivers in order to accurately characterize optical waveforms. The optical channels are calibrated at 1310 nm and 1550 nm to provide both a built-in power meter and accurate display of the received optical waveform in microwatts.

Both receivers provide highly accurate pulse and eye-diagram measurements with their low distortion and wide bandwidth. The HP 83485A is an SDH/SONET reference receiver measured to conform to ITU-TS and Bellcore frequency response requirements for transmitter compliance testing on rates up through STM-16/OC-48 (2.488 Gb/s). The HP 83485B provides the same functionality for 9.953 Gb/s (proposed STM-64/OC-192) signals. By either pressing a front-panel button or by HP-IB command, a Bessel-Thomson filter is inserted into or removed from the measurement channel.

The electrical channel may be used to perform measurements on tributary signals, transmitter modulation signals, to evaluate receiver performance in transceiver testing, for measurements with an external optical receiver, or for general-purpose measurements.

HP 83483A, 83484A Two-Channel and 83484B Single-Channel Electrical Modules

NEW

The HP 83483A provides two channels with user selectable bandwidths of 12.4 or 20 GHz; the 83484A's two channels and the 83484B's single channel offer selectable bandwidths of 26.5 or 50 GHz. All three modules offer an excellent combination of low noise and wide bandwidth for high-fidelity display and measurement of very high-speed waveforms.