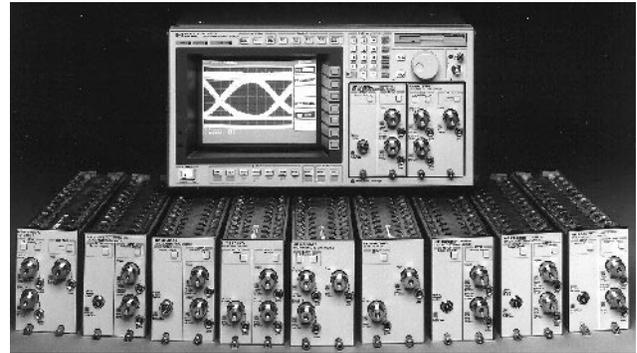


- Automated mask measurements
- Integrated optical channels for accuracy and ease of use
- High-measurement throughput
- Filtered measurements for compliance test or full bandwidth for waveform analysis
- Fast statistical waveform analysis
- Wide range of standard telecom and datacom masks



HP 83480A with plug-in modules

- HP 11898A
- HP 83480A
- HP 83481A
- HP 83482A
- HP 83483A
- HP 83484A
- HP 83485A
- HP 83485B
- HP 83486A
- HP 83487A
- HP 83491A
- HP 83492A
- HP 83493A



HP 83480A Digital Communications Analyzer



The HP 83480A represents a significant advancement in the instrumentation used to view waveforms in high-speed digital communications. Industry-standard tests including mask tests as well as eye-diagram analysis including extinction ratio are made using easy-to-use, built-in measurements. For measuring optical signals, lightwave receivers are integrated into the instruments to provide highest accuracy and waveform fidelity.

With up to 50 GHz of bandwidth, the HP 83480A can be used on low-rate tributary signals through 10 Gb/s optical waveforms.

Industry Standard Masks

Achieve high-throughput waveform testing with both optical and electrical masks and templates including SDH, SONET, Gigabit Ethernet, and Fibre Channel standards. For guardband testing, use mask margins. Custom/user-defined masks can also be generated. Masks are automatically aligned and scaled.

Integrated Optical Receivers

The HP 83480A is a modular platform with a family of optical receivers with very high-speed internal photodiodes (2.5 GHz, 20 GHz, or 30 GHz bandwidths). For filtered measurements, filters are switched in with a simple keystroke to produce a calibrated reference receiver, or switched out for full bandwidth waveform analysis.

The HP 83480A can accept one or two plug-in modules for up to four measurement channels. Modules have two electrical channels or one optical channel and one electrical channel. The following optical/electrical plug-ins have 9/125 μm single-mode optical interfaces for 1310 and 1550 nm applications. The HP 83481A has a 20 GHz electrical channel and a 2.5 GHz optical channel with 155 and 622 Mb/s switchable filters. The HP 83482A provides a 40 GHz electrical channel and a 30 GHz optical channel. The HP 83485A provides a 20 GHz electrical channel and a 20 GHz optical channel with a 622 or 2488 Mb/s switchable filter. The HP 83485B provides a 40 GHz electrical channel and a 10 Gb/s filtered channel.

Two optical/electrical plug-ins have 62.5/125 μm optical interfaces for both single-mode and multimode measurement applications. For 1310 and 1550 nm applications, the HP 83486A has a 2.5 GHz optical channel with 155 and 622 Mb/s switchable filters for SDH/SONET/ATM applications or 1063 and 1250 Mb/s switchable filters for Fibre Channel and Gigabit Ethernet. For 850 nm applications, the HP 83487A has a 2.5 GHz optical channel with 1063 and 1250 Mb/s switchable filters (Fibre Channel and Gigabit Ethernet). Both modules also have a 20 GHz electrical channel.

Accurate Eye-Diagram Analysis

Integrated optical receivers are the key to accurate eye-diagram analysis of lightwave signals. Internal photodiodes have well-behaved frequency responses which are not degraded by external cabling and adapters. This yields the highest in waveform fidelity and measurement accuracy. Extinction-ratio measurements are accurate and repeatable.

General-Purpose Oscilloscopes

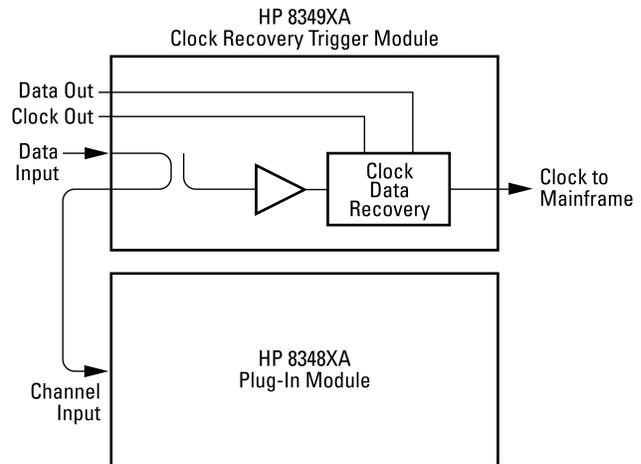
In addition to digital communications analysis, the HP 83480A can be used as a general-purpose, high-speed, sampling oscilloscope. The HP 83483A electrical plug-in provides two 20 GHz electrical channels, the HP 83484A has two 50 GHz electrical channels. Add TDR capability to the HP 83480A with the HP 54755A software and TDR module HP 54753A or HP 54754A (see page 116). The HP 11898A module extender provides a 1.5 meter extension cable for placing the electrical module adjacent to the high-speed circuit-under-test.

HP 83491/92/93A Clock Recovery/Trigger Modules



The HP 83480A/54750A DCA series now offers single connection measurements—no external trigger is required. With the addition of the HP 83491/92/93A series of clock recovery receiver modules, reliable parametric testing becomes easy even when you do not have access to a clock signal trigger.

The HP 8349X series of plug-in receiver modules cover the three most popular transmission media in use today—electrical lines, multimode fiber and single-mode fiber. A built-in coupler/splitter reduces external hardware required for triggering. No more need for awkward cables just to get a trigger—simply plug in your test signal, select your data rate, and make your measurements.



Time-domain measurements are only as accurate as the clock source that you are triggering on. All three modules have exceptional jitter performance to ensure an accurate display of jitter on the incoming data. The high sensitivity/wide bandwidth receivers also provide electrical recovered clock and electrical data regeneration for simultaneous testing with other instruments, such as the HP 71603B or 71612B error performance analyzers.

For more complete information, order the Lightwave Test and Measurement catalog. See detailed description on page 603.