

Model 594



4-Ch, 1pS Digital Delay Generator



Features

- Four Independent Delay Channels
- <1 ps delay resolution
- <15 ps rms jitter
- Maximum Delay of 10 Seconds
- Rack 19", 1U, scaleable to 100's of Channels
- Remote or Local Programming Options

Applications

- Components Test
- ATE Application
- Laser Timing application
- Precision Pulse Application
- Synchronous Multi-channel
- Triggering

The Model 594 rackmount Digital Delay Generator provides four independent delay channels from a single trigger input or internal clock. The delay resolution on all channels is a remarkable <1ps and channel to channel jitter is less than 15ps. BNC outputs on the rear panel deliver up to 10V levels into 50 Ohm. One Trigger Input channel (To, zero delay) is used to reference the four output channels in a variety of different operation modes.

The input connector, also on the rear panel, allows you to use an external trigger and still keep trigger jitter to a minimum. Electrical or Optical inputs are accommodated using a variety of operating modes. Delay parameters and operation modes may be programmed using the front panel interface, or using remote programming over Ethernet.

Specifications

Delays

Channels	4 independent delay outputs
Range	0 to 10 s
Resolution	1 ps
RMS jitter	15 ps (T0 to any output) < 50 ps + 10^{-7} x delay (External trigger to any output)
Trigger Delay	< 100 ns (insertion delay)
Accuracy	< 250 ps + delay x 10^{-7}
Time base	155.52 MHz internal clock 0.05 ppm

External Trigger

Rate	Up to 10 kHz
Input	Threshold +1V, positive slope, 50Ω impedance

Internal Trigger

Frequency	2 independents
Rate	1 Hz to 50 kHz

Outputs

Amplitude	2.5 V to 10 V
Load	50 Ω
Rise time, fall time	< 2 ns, < 5 ns
Width	100 ns to 10 μs
Connector	BNC

General

Size	Rack 19", 1U, P= 300 mm
Interface	Local PAV, Ethernet / Internet (Web page)
Power	90 to 220V / 1A

Software

Free Drivers for Win2000/XP

Options

Option 1	Optical input for timing system
Option 2	Extension to 8 channels
Option 3	Clock output