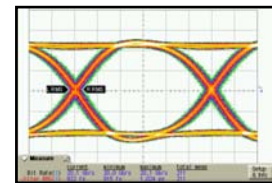


Features:

- Programmable data rate, amplitude, offset, and crossing point
- Differential data, pattern trigger, clock/n, and full rate clock outputs
- Integrated low jitter programmable clock source
- PRBS and user defined patterns
- Single bit error injection for testing error measurement setups
- Front panel touch screen GUI or USB computer control

PatternPro™ Line of
Serial Data Test Instruments



Output Performance:

- 25ps typical 10% to 90% rise and fall times
- 250mV to 2.0V output amplitude
- -2.0V to 3.0V offset window
- 35% to 65% programmable crossing point

Applications:

- High-speed serial data testing to 20Gb/s
- 14Gb/s Fibre Channel Testing
- Semiconductor device and component testing
- R&D design verification

The Picosecond Pulse Labs' **Model 12060** is a fully integrated bench-top pattern generator instrument. The 12060 combines high-quality output with **programmable** data rate, amplitude, offset, crossing point, and patterns. The Model 12060 features high-performance DC coupled limiting amplifiers that result in programmable, accurate, fast risetime data signals. In addition, the 12060 provides many useful test features such as single bit error injection.

This generator provides leading performance and features at an economical price making it a compelling choice for high speed serial data testing.

Ordering Information	
Model 12060	20Gb/s Programmable Pattern Generator

Contact Information

Picosecond Pulse Labs
P.O. Box 44
Boulder, Colorado 80306, USA

Telephone: 303.209.8100
Fax: 303.447.2236
Email: info@picosecond.com
Website: www.picosecond.com

Specifications:

Description:	Value/Details	Notes
Data Outputs:		<i>Differential/complimentary output.</i>
Amplitude Single ended Differential	250mV to 2.0V 500mV to 4.0V	<i>Positive and negative differential outputs are independently programmable.</i>
Offset	-2.0V to +3.0V window	<i>Programmable/adjustable</i>
Termination Voltage	-2.0V to +3.3V	<i>Programmable/adjustable</i>
Crossing point adjust range	35% to 65% typ.	<i>Programmable/adjustable</i>
Risetime 20% to 80% 10% to 90%	17 ps typ. 25 ps typ.	<i>Measured with 70GHz bandwidth sampling head directly attached to Model 12060 output connector [1]</i>
Total Jitter	1.0 ps RMS typ.	<i>Measured with 2⁷-1 PRBS.</i>
Output impedance	50 Ω single ended	100 Ω differential
Other Outputs:		
Trigger/Divided Clk	Swings from -600mV to 0V	<i>User selectable as pattern trigger (one trigger at start of pattern) or clock/n (user selected n). DC coupled.</i>
Clock signal Amplitude Jitter	400mVpp typ. <1 ps RMS typ.	<i>AC coupled</i>
Inputs:		
External clock input	400mVpp typ. 1Vpp max	<i>AC coupled. Operates over range of 10GHz to 20GHz.</i>
Pattern Generator:		
Data rate	1.25 Gb/s to 20 Gb/s	<i>Data rate is programmable from front panel or computer control.</i>
Frequency resolution	10kHz	
Built-in PRBS patterns	2 ⁿ -1	<i>n = 7, 15, 23, 31</i>
User defined pattern depth	4 Mbit	
Single bit error injection	Yes	
User Interface:		
Front panel touch screen GUI	Yes	<i>Edit output characteristics, patterns, and instrument setup.</i>
Computer programmable Interface	Yes USB	<i>USB HID interface. Windows DLL provided for communicating with instrument.</i>

[1] Measured risetime is the result of the combination of the risetime of the pattern generator, cables, attenuators, adapters, and the measurement device (e.g. a sampling oscilloscope).