

DESCRIPTION

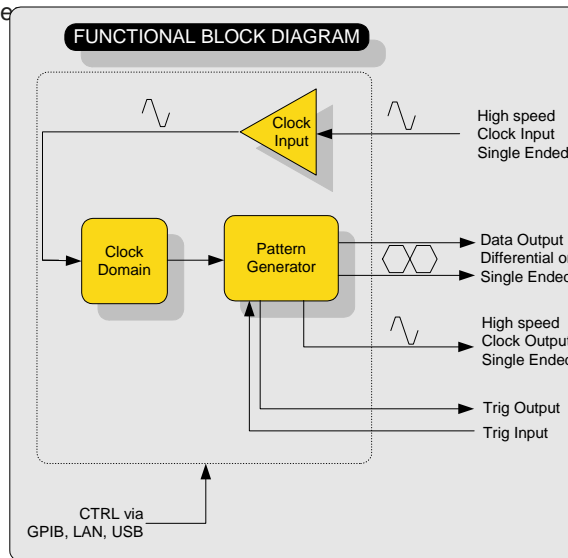
EPG10-6 is an Electrical Pattern Generator module that plugs into the *XBERT* and *ParalleX™* Chassis. EPG10-6 can generate electrical data from 2 Gb/s up to 13 Gb/s, optionally up to 14.5Gb/s. User programmable PRBS patterns can be changed via an easy to use GUI. A pattern trigger output provides an electrical trigger synchronous with the pattern for use with an oscilloscope or other test equipment. Front panel indicators give immediate status for Tx Data.

KEY FEATURES

- Data Rates 2 to 13 Gbps
- Optional operation up to 14.5Gbps.
- Differential Electrical Pattern Generator (SMA Connector)
- Output voltage adjustable from 0.5V to 1.0V in 0.1V steps
- PRBS: 7, 9, 10, 11, 15, 21, 23, 31
User-Pattern: 8Bit - 8Kbyte
Clock-Pattern: $\frac{1}{1}$, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$
Additional: K28.0-K28.7, CJPAT, SSPS-64 and other
- Data input & output polarity swap
- Single error and error rate injection: 1E-3 to 1E-15
- Data log Gating-time: up to 5000h
- High speed Clock Input and Output
- Trig in and Trig out
- LabView™ drivers available
- GPIB/LAN/USB Interface via *XBERT* Chassis.
- Small size: width 25.4mm (1")



PATTERN GENERATOR MODULE PN L-6001-EPG10-6



EPG10-6
Module
Product
Overview

XBERT PLATFORM: LETS YOU START SMALL AND GROW



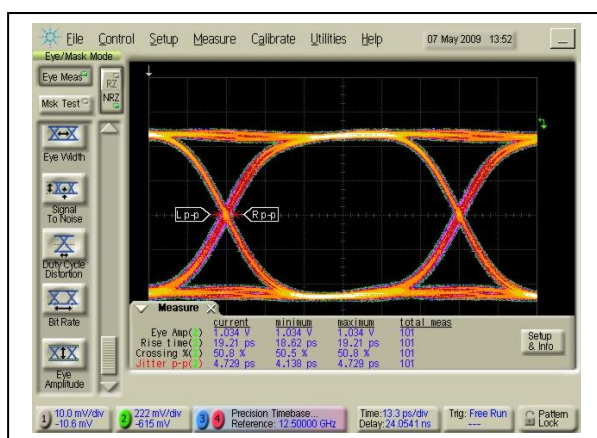
XBERT is a low-cost, modular Bit Error Rate Test Platform used for verification and test of up to 14.4 Gbps optical and electrical chip, sub assembly and system designs. *ParalleX®* allows users to perform several BER tests at once using a single clock source. The system is ideal for developers desiring to run simultaneous BER tests on parallel interfaces or multiple independent interfaces. *XBERT* and *ParalleX®* are scalable so users can start off with a single channel and add modules to grow the system. Manufacturers can realize great savings by taking advantage of the *XBERT* and *ParalleX®* system's scalability to perform parallel testing in volume production environments.

PRELIMINARY

Pattern Generator Module PN L-6001-EPG10-6

KEY PERFORMANCE PARAMETERS

PARAMETER	SYMBOL	Min	Max	UNIT	NOTE
Data Rate	DR	2	13	Gbps	Option 145 for Max 14.4Gbps
Data Formats				NRZ	
PRBS Pattern		7, 9, 10, 11, 15, 21, 23, 31			
User-Defined Pattern length		8	65536	Bit	
Single ended Data Output Amplitude	D _{OutP/N}	500	1000	mV _{pp}	adjustable
Output Voltage Step Size			100	mV	
Dout on/off	D on/off	400	1100	mV _{pp}	SMA input to switch on/off the Dout signal
Data Output Rise and Fall time	t _r / t _f	12	22	ps	20% - 80%
Output Jitter (RMS)	J _{rms}		1	ps	
Output Jitter (DJ)	J _{dj}		5	ps	
Single ended Data Output Impedance	Z _{Ose}	45	55	Ω	
Data Output Termination				AC - coupled	
Clock Input Amplitude		300	1000	mV _{pp}	
Clock Output Amplitude		300	1000	mV _{pp}	Not adjustable
Clock Input / Output Frequency	F _{Clk}	1	13	GHz	
Clock Input / Output Impedance	Z _{Clk}	45	55	Ω	
Clock Input / Output Termination				AC - coupled	
Pattern Output Trigger	Pout	550	1100	mV	Sync signal for pattern start
Pattern Input Trigger	Pin	400	1100	mV	Signal to start the pattern
Operating Temperature	T _{OP}	0	40	°C	Ambient temp.



ELECTRICAL EYE-DIAGRAM
PRBS31, Data Rate = 12.5Gbps, output voltage = 1.0V

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TECHNOLOGIES

EPG10-6
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Product
Overview