

CGR-X110

11 GHz Clock Generator



Overview

The OPTELLENT CGR-X110 is a cost-effective, easy-to-use clock generator system for R&D and manufacturing environments. It generates differential line rate clock, divided clock, and low frequency trigger in a compact module. The CGR-X110 produces a continuously variable clock output between 9.5 to 11.5 GHz with a resolution of 2 kHz.

An intuitive Graphical User Interface enables easy point-and-click operation. The Optellent CGR-X110 software runs on Windows 98/2000/NT/XP and VISTA over USB or RS-232 serial interface via an RJ-45 Connector provided on the front panel.

Applications

- ▶ Reference source for PPG/BERT/RZ converters
- ▶ Testing of optical transceivers, transponders, linecards, and subsystems
- ▶ Testing of Gb/s ICs, electronic modules, subsystems, and systems
- ▶ Serial high-speed backplane and board design

Key Features

- ▶ Differential Clock Outputs
- ▶ Divided clock (1/2 to 1/64)
- ▶ 2 kHz resolution
- ▶ Trigger output for synchronizing other equipment

Protocol Applications

SONET / SDH	
0C-192: STS-192 / STM-64	9.95328 Gbps
G.709	10.709 Gbps
ETHERNET	
10GBASE-T	10 Gbps
10GBASE-R (LAN/PHY)	10.3125 Gbps
10GBASE-R OTU2 FEC	11.096 Gbps
FIBRE CHANNEL	
10 x FC (10GFC)	10.519 Gbps
10GFC with FEC	11.317 Gbps
INFINIBAND & HDMI	
4 x Infiniband	10 Gbps
HDMI 1.3	10.2 Gbps

Specifications

Parameter	Min	Typ	Max	Units
High frequency Output Format	Differential			
Clock frequency	9.5		11.5	GHz
Output Amplitude (single-ended)		250	500	mV
RMS Jitter		1.8		ps
Divided clock ratios	1/2, 1/4, 1/8, 1/16, 1/32, 1/64			
Trigger Output Amplitude	300			mV _{p-p}
Trigger frequency	Clock frequency/16, clock frequency/64			
Electrical terminations/connectors	AC-coupled 50Ω SMA Female			

System & General Specifications

PARAMETER	MIN	MAX	UNIT
Chassis Electrical Voltage	100	240	VAC
Current Drain at Normal Voltage		2.5	A
Operating Temperature Range	5	45	°C
Storage Temperature Range	-40	70	°C
PC Interface (optional)	RS-232		
Standard Warranty	2 years		

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