

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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