

Clock Recovery

CR4201

 [Datasheet](#) V3.8

Adjustable loop bandwidth: 500 kHz to 3.5 MHz

Supports 1.25 Gbps to 10.3125 Gbps rate adaptation

Supports both single-mode and multi-mode optical signals

High sensitivity: > -20 dBm



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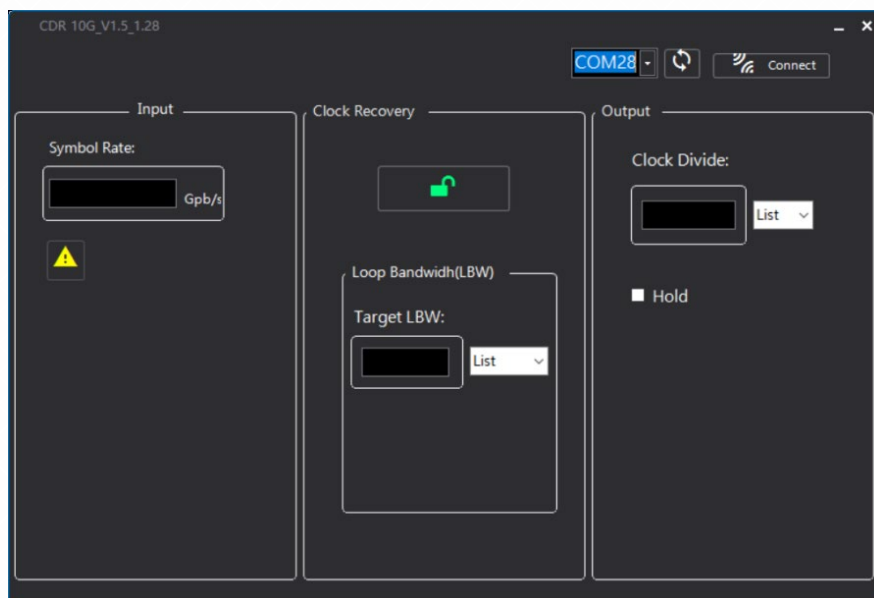
1 Product Description

Semight CR4201 is a clock recovery unit used in conjunction with the optical sampling oscilloscopes. Sampling oscilloscopes need a clock to trigger it for eye-diagram testing. When a clock or trigger signal is not provided by the device under test, such as ONT (Optical Network Terminal) or other line-card, CR4201 is the best choice to derive a clock from the data being measured.

CR4201 supports flexible & adaptive data rate range of 1.25 to 10.3125 Gbps clock recovery.

2 Key Features and Advantages

- Data rate: 1.25 to 10.3125 Gbps;
- Adaptive clock recovery: auto-locking;
- High sensitivity: > -20 dBm;
- Clock division ratio: 1/2, 1/4, 1/8, 1/16;
- Intuitive, concise GUI for easy system configuration;



3 Technical Specifications

Technical Specifications

Item	Description
Data Rate Range	1.25 to 10.3125 Gbps (self-adaptive)
Channel	Optical Channel
Optical Interface	FC/UPC
Input Power Range	> -20 dBm (@1310 nm) > -8 dBm (@850 nm)
Output Clock Division	1/2, 1/4, 1/8, 1/16
Output Clock Amplitude	200 to 600 mV
Impedance	50 Ω
Output Clock Rise/Fall Time (20% to 80%)	< 100 ps
PLL Bandwidth	500 kHz / 1 MHz / 1.5 MHz / 2.0 MHz / 2.5 MHz / 3.0 MHz / 3.5 MHz
Jitter Peak to Peak	0.01 dB@OC-3/OC-12 0.014 dB@OC-48/8GFC/OC-192
Jitter Tolerance	Compliant with applicable standards
Output Jitter	< 4.5 mUI@OC-192 < 5 mUI@8GFC < 2.5 mUI@OC-48, 12 kHz to 20 MHz < 0.7 mUI@OC-12, 12 kHz to 5 MHz < 0.2 mUI@OC-3, 12 kHz to 1.3 MHz

General Specifications

Item	Description
Usage	Indoor
Operating	Temperature: 0 °C to +40 °C Humidity: 30% to 80% non-condensing
Storage	Temperature: -10 °C to 70 °C Humidity: 10% to 90% non-condensing
Altitude	Operation: 0 m to 2000 m, Storage: 0 m to 4600 m
Power	LINE: 100 to 240 VAC, 50/60 Hz, 250 W FUSE: T3.15AL 250 VAC
Warm-Up Time	After 10 minutes warm-up, ambient temperature changes less than ± 3 °C
Calibration Period	2 years
Dimensions (W x H x D)	212 x 105 x 450 mm (with foot pad/handle)
Weight	Net Weight: 4.3 kg

4 Ordering Information

Option Type	Code	Description
Signal Type	MM	Single Mode and Multi-Mode in one unit

5 Warranty Terms

Number	Item	Description	Period
1	Mainframe Warranty Period	Free of Charge during the warranty period (excluding static electricity or human damage)	12 months
2	Calibration Period	Return to the factory for calibration or bring the calibration system for on-site calibration	24 months



Contact us

Semight Instruments Co. Ltd.

Mail

sales@semight.com

Address

No. 315 TaiShan Road, Suzhou, China

Web

Visit www.semight.com for more information.

* This information is subject to change without notice.