

# SK-LRD-10-CLK-M



## 10 Gb/s Digital Receiver with Clock Recovery

The Optilab SK-LRD-10-CLK-M is a 10 Gb/s bandwidth high gain, lightwave digital receiver module with a 10 Gb/s clock recovery circuit, designed for OC-192, DWDM, and Bit Error Rate Testing (BERT) of a digital optical link. The SK-LRD-10-CLK-M is an O/E converter with post/limiting amplifier module designed for use in receivers of STM-64/OC-192 (9.953 Gb/s) and STM-64/OC-192 with Forward Error Correction (FEC) (10.664 Gb/s) optical transmission systems. This cost-effective module consists of a PIN photodiode, pre-amplifier, post-amplifier, and limiting amplifier. The built-in clock recovery circuit has a separate 10 Gb/s clock recovery output, and at the optical input level of -17 dBm it provides an output level of 1.0 Vp-p. Contact Optilab for more information.

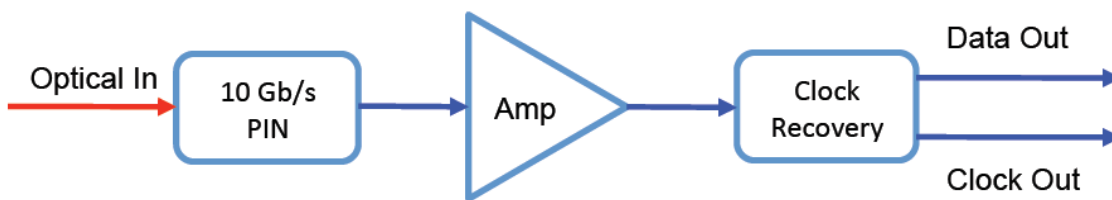
## Features

- Wide Bandwidth, 0.01 to 10 Gb/s
- Very high O/E gain of 50,000 V/W
- Pre-amplifier and post-amplifier
- Limiting Amplifier
- Excellent eye diagram at low input
- Built-in clock recovery function
- Optional 10.664 Gb/s Forward Error Correction

## Applications

- OC-192
- DWDM Systems
- Bit Error Rate Testing (BERT)
- For use with Error Detector

## Functional Diagram



# 10 Gb/s Digital Receiver w/ Clock Recovery

Optical Specifications	
Operating Wavelength	1250 nm to 1650 nm
Optical Input Level	+3 dBm max.
Responsivity	0.85 A/W @ 1550 nm typ.
O/E Conversion Gain	50,000 V/W
Optical Return Loss	-30.00 dB typ.
Optical PDL @ 1550 nm	0.05 dB typ., 0.1dB max.
Electrical Specifications	
Useful Bandwidth	0.01 to 10 Gb/s
S21 3 dB Bandwidth	10 GHz typ.
S22 Characteristics	< -10 dB to 10 Gb/s typ.
Output Coupling	AC Coupled
RF Impedance	50 $\Omega$
Ripple over Bandwidth	$\pm 1.0$ dB
Sensitivity	-18 dBm
Clock Recovery	
Standard Clock Rate	9.953 Gb/s
FEC Clock Rate	10.664 Gb/s (optional)
Data Output	DC-coupled
Clock Output	AC-coupled
Output Voltage	1.0 V typ.
Clock Voltage	1.0 V typ.
Mechanical Specifications	
Operating Temperature	0° C to +70° C
Storage Temperature	-40° C to +85° C
Power Supply Requirements	+12 V DC, 2 A max.
Optical Connector	FC/APC, SC/APC Optional
RF Output Connector	SMA Female, 50 $\Omega$
DC Connector	Molex 4-pin
Local Alarm	LED: Optional Input Power
Dimensions	210 mm x 135 mm x 28 mm
Accessories Included	110 V - 240 V AC Adaptor
Housing	Precision Machined Aluminum, Anodized

