

Description

The CDR-40G/CDR-43G module is a Clock and Data Recovery Module. This module extracts a clock component from 39~43 Gb/s NRZ signals, and stabilizes the signal using a phase-locked loop (PLL) with a dielectric resonator oscillator (DRO). In addition, this module contains phase shifters, and optionally retimes the input data with a decision circuit.

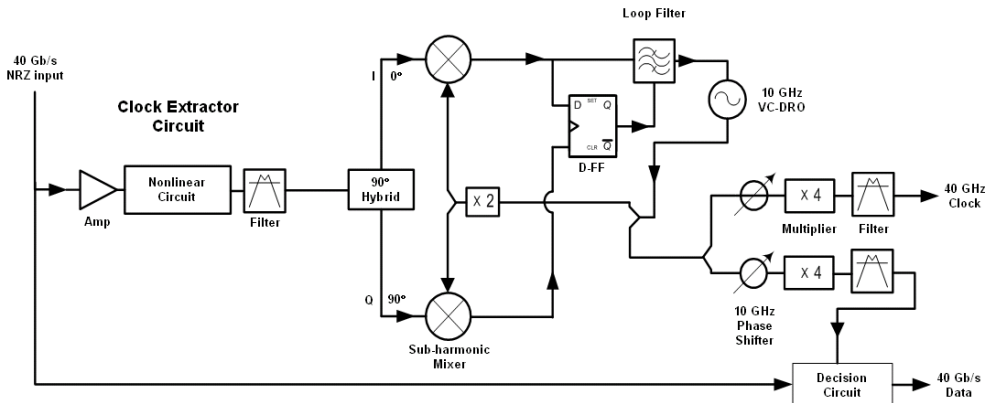
Features

- ✓ Low cost.
- ✓ Low jitter in the recovered clock.
- ✓ High-Q oscillator (DRO) is used.
- ✓ Phase shifters at 40/43 GHz.
- ✓ Minimum 130 mV single ended input signal is required.

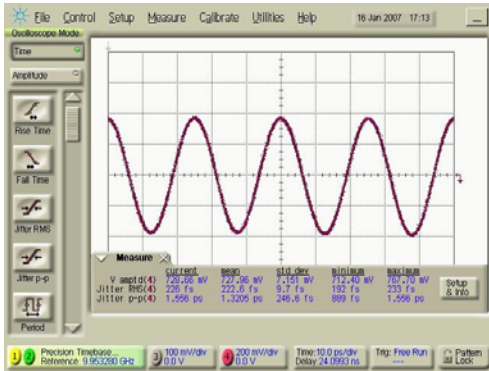
CDR series

Part Number	Operating Frequency	Note
CDR-40G-01	38.5 GHz ~ 41 GHz	Clock and Data Recovery
CDR-40G-02	38.5 GHz ~ 41 GHz	Clock Recovery Only
CDR-43G-01	41.5 GHz ~ 43 GHz	Clock and Data Recovery
CDR-43G-02	41.5 GHz ~ 43 GHz	Clock Recovery Only

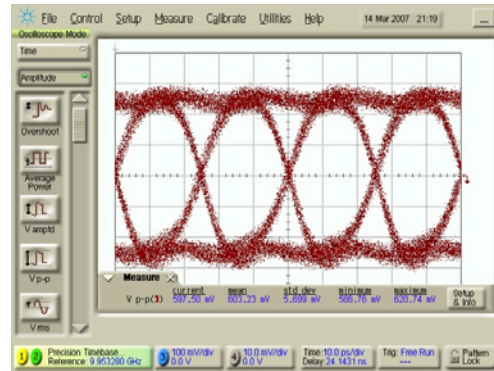
Block Diagram



Output Waveforms



Recovered 40 GHz clock



Retimed 40 Gb/s data



CDR-40G/CDR-43G

Clock and Data Recovery (CDR) Module

Specifications

Parameter	Unit	Min.	Typ.	Max.	Condition
Data Input					
Connecting Type					2.4mm-female & V-female
Operating bit rate	Gb/s		39.81		CDR-40G
			43.01		CDR-43G
Input Voltage	mVp-p	130			
40/43 GHz Clock Output					
Connecting Type					2.4mm-female
Output Voltage	mVp-p		730		
RMS Jitter	fs	210	220	240	
10/10.75 GHz Clock Output					
Connecting Type					SMA-female
Output Voltage	mVp-p		700		
40/43 Gb/s Data Output (EMW-CR series only)					
Connecting Type					V-female
Output Voltage	mVp-p		600		
Phase Shifter					
Insertion Phase	degree	360			
General					
Dimension	mm				59 x 137 x 34
Power Supply	V				9, 6, -3.3
Supply Current	mA				110(@9 V)
					560(@6 V)
					220(@-3.3 V)
Power Consumption	W		5		