

# CDR14112

## 112 Gb/s CDR with 1:4 Demultiplexer

MICRAM

Type: Module

Technology: SiGe

$f_T / f_{max}$ : 170/250 GHz

Metallization: 4

Ref.-No.: R1024

### Brief description

The CDR14112 is a Ultrahigh-Speed CDR with integrated 1:4 Demultiplexer for data rates of 112 Gb/s and above. Key features are:

- single-ended and differential IO operation,
- broadband operation,
- clock and clock/2 outputs available,
- adjustable output swing,
- single supply voltage,
- integrated VCO and PLL (only external capacitance needed)

The CDR 14112 is a clock and data recovery circuitry with integrated 1:4 DEMUX, VCO and the opportunity to drive the module with an external clock signal. It is designed to fit for 107 to 112 Gb/s signal systems. The input amplifier is optimized for high input sensitivity (30mV<sub>pp</sub> min. input voltage swing) The module can selectively be used with an external clock signal or the internal VCO. To choose between both possibilities a clock selector is included. The default setting is the internal VCO drive.

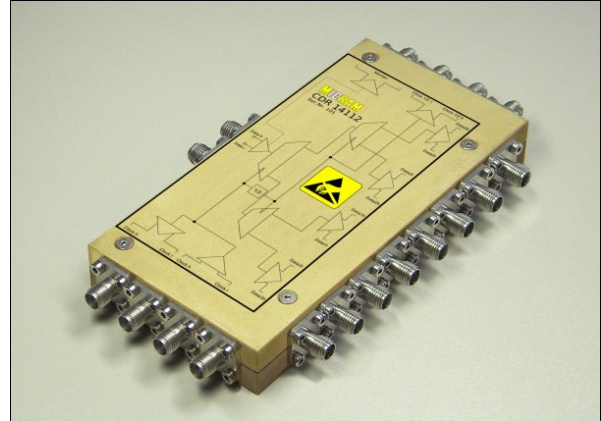
If an external clock is fed to the CDR the module can also be used at other data rates. With the up/down information controls and the external clock signal a PLL can be realized.

The module has two clock outputs. One output provides the clock signal and the other output the half rated clock signal. The half rate clock output may be used for ongoing demultiplexing or for drive of following frequency dividers to generate a signal to synchronize other modules or measurement equipments. The CDR includes the possibility to shift the phase of the clock signal at the clock output to align for the phase of the data output. A monitor output is included for the observation of the performance of the amplified input data signal.

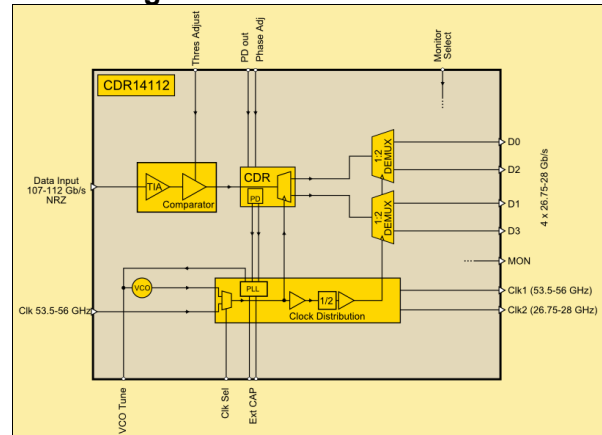
### Package

The CDR14112 is available as ruggedized K and/or V connectors Module.

### CDR14112 Module



### Block diagram of the CDR14112



### CDR14112 electrical data

Power supply ( $V_{ee}$ )	-4.5 V
Current consumption	~2 A
max. Datarate	112 GB/s
Input data amplitude se	+30...300 mV
Input clock (typical)	250 mV

For further information on the CDR14112 please contact your MICRAM sales representative.

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