

# Clock Recovery Units



## MC19R26M: 25G Clock Recovery Unit

The MC19R26M can be used to extract low jitter clock for 100GE applications operating at transmission speeds of 25.8Gb/s. Broadband test systems will benefit from the low power dissipation, precision, precision connectors and excellent signal quality.

### FEATURES

- 19 - 26 Gb/s Data Rates
- High Input Sensitivity
- Low Jitter Output Clock
- Low Power Consumption
- Single -3.6V Power Supply



## MC28R36M: 28G Clock Recovery Unit

The MC28R36M can be used to extract low jitter clock for 100GE applications operating at transmission speeds of 27.95 Gb/s. Broadband test systems will benefit from the low power dissipation, precision connectors and excellent signal quality. The MC28R36M also locks to halfrate data to cover 16 Gb/s Fibre Channel (16 GFC).

### FEATURES

- 27.9 - 36 Gb/s Data Rates
- High Input Sensitivity
- Low Jitter Output Clock
- Low Power Consumption
- Single -3.3V Power Supply



## MC25R32M: 25.8|28|31G Clock Recovery Unit

The MC25R32M can be used to extract low jitter clock for 100GE applications with and without FEC operating at transmission speeds of 25.78125, 27.95, and 30.9375 Gb/s. Broadband test systems will benefit from the low power dissipation, precision connectors and excellent signal quality.

### FEATURES

- 25.3 - 32 Gb/s Data Rates
- High Input Sensitivity
- Low Jitter Output Clock
- Low Power Consumption
- Single -3.3V Power Supply



## MC39R46M: 40G Clock Recovery Unit

The MC39R46M is a SiGe Clock Recovery Unit (CRU) designed for use in 43Gbps SONET OC768 / SDH STM256 applications. The module has a very wide input range, high input sensitivity, and excellent output waveform characteristics for use in 40G or 43G applications.

### FEATURES

- 39.8 - 44 Gb/s Data Rates
- High Input Sensitivity
- Low Jitter Output Clocks (10 and 20 GHz)
- Low Power Consumption
- Single -3.3V Power Supply



## Centellax CRU Selection Guide

| Data Rate (Gb/s) | P/N       | Ref Freq (GHz) | CKO Freq (GHz) |
|------------------|-----------|----------------|----------------|
| 12.65 - 16.0     | MC25R32M* | 6.325 - 8.0    | 12.65 - 16.0   |
| 14.0 - 19.0      | MC28R36M* | 7.0 - 9.5      | 14.0 - 19.0    |
| 19.0 - 25.0      | MC19R25M  | 9.5 - 12.5     | 19.0 - 25.0    |
| 19.9 - 22.0      | MC39R46M* | 2.4875 - 2.75  | 19.9 - 22.0    |
| 25.3 - 32.0      | MC25R32M  | 6.325 - 8.0    | 12.65 - 16.0   |
| 28.0 - 38.0      | MC28R36M  | 7.0 - 9.5      | 14.0 - 19.0    |
| 38.0 - 50.0      | MC19R25M+ | 9.5 - 12.5     | 19.0 - 25.0    |
| 39.8 - 44.0      | MC39R46M  | 2.4875 - 2.75  | 19.9 - 22.0    |

\* Specified usage is at 1/2 of normal operating rates.

+ Specified usage is at 2x of normal operating rates.

## MS4S1V1M: 40G 4:1 Multiplexer Module

The MS4S1V1M is a SiGe 4-to-1 multiplexer (without integrated clock multiplying unit) designed for use in 40 or 43 Gbps SONET OC768 / SDH STM256 applications. The module accepts input data rates from 0.5-10Gbps with an input sensitivity better than 200mV.

### FEATURES

- Half Rate Clock
- High Input Sensitivity
- Wide Operating Range
- Very Low Output Jitter
- Low Power Consumption
- Fast Output Rise/Fall Times



## MD1S4V1M: 40G 1:4 Demultiplexer Module

The MD1S4V1M accepts input data rates from 2.6 to 40Gbps with an input sensitivity greater than 150mV. Differential data inputs are AC coupled and terminated with 50 ohm resistors to minimize reflections. The single-ended, half rate clock input is AC coupled and operated with low input power.

### FEATURES

- Half rate clock
- High Input Sensitivity
- Wide Operating Range
- Very Low Output Jitter
- Low Power Consumption
- Fast Output Rise/Fall Times



## MS4S1V2M: 56G 4:1 Multiplexer Module

The MS4S1V2M is a SiGe 4-to-1 multiplexer (without integrated clock multiplying unit) designed for use in telecom applications up to 56Gb/s. The module accepts input data rates from 0.5-14Gb/s with an input sensitivity better than 100mV.

### FEATURES

- Half rate clock
- High Input Sensitivity
- Wide Operating Range, 2-56 Gb/s
- Low Output Jitter
- Low Power Consumption
- Fast Output Rise/Fall Times



## MD1S4V2M: 56G 1:4 Demultiplexer Module

The MD1S4V2M is a SiGe 1-to-4 demultiplexer (without integrated clock data recovery) designed for use in SONET/SDGH applications operating at transmission speeds within the demultiplexer's 2.6-56Gb/s input rate. The module has a very wide input range, high input sensitivity, and excellent 56G output waveform characteristics.

### FEATURES

- Half rate clock
- High Input Sensitivity
- Wide Operating Range, 2.6-56 Gb/s
- Low Output Jitter
- Low Power Consumption
- Fast Output Rise/Fall Times

