

CD15

15 GHz Versatile Clock Distribution Module

MICRAM

Type: Module	Technology: SiGe	f_T / f_{max} : 170/250 GHz	Metallization: 4	Ref.-No.: R1025
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Brief description

The CD15 is a versatile clock distribution module for clocks up to 15 GHz. Key features are:

- single-ended and differential IO operation,
- programmable reference clock divider,
- synchronous clock start/stop,
- broadband operation,
- adjustable main clock output swing and delay,
- single supply voltage,
- PLL, crystal oscillator and 15 GHz VCO.

Main purpose of the CD15 is driving and synchronizing multiple multiplexers, ADCs or DACs.

The symmetrical clock input buffer allows for single ended as well as differential drive. Additional pins aim for offset measurement and adjustment.

Two main clock output buffers can be adjusted from 0.3 to 1.2V single-ended swing and can be used either single-ended or differential. The phase of the main clock can be controlled in a 95 ps range.

For synchronizing multiple chips, the main clock can be switched to static low and restarted synchronously.

To provide clocks for FPGAs, a programmable reference divider (ratio 1:2 up to 1:896) with two differential output buffers is included.

Finally, for using either the built in LC-tank 15 GHz VCO or controlling external VCO, a PLL with a fixed divide-by-512 ratio and a crystal oscillator buffer is built-in.

Main fields of application are:

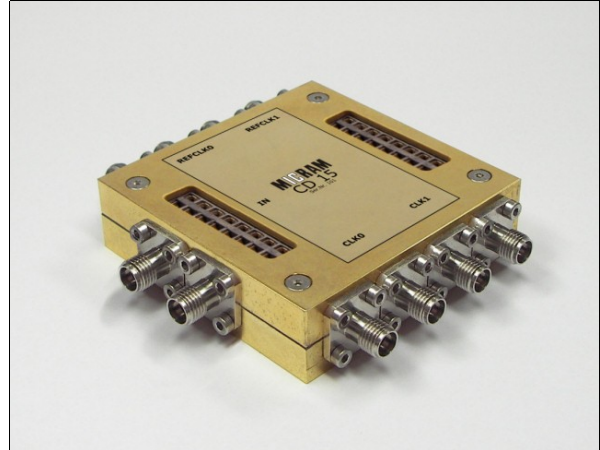
- Clock distribution,
- Synchronization of multiple ADCs, DACs, MUX.

Package

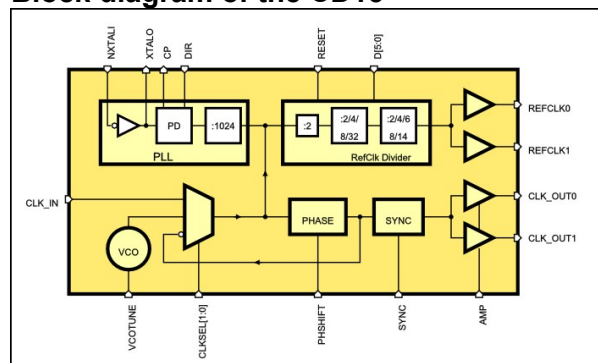
The CD15 will be available as ruggedized module with SMA connectors.

For further information on the CD15 please contact your MICRAM sales representative.

CD15 Module



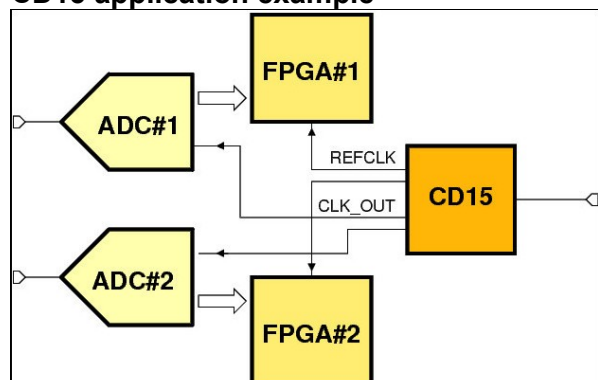
Block diagram of the CD15



CD15 electrical data

Power supply (V_{ee})	-3.3 V
Current consumption	~460 mA
Clockrate	1 ... 15 GHz
VCO tuning range	14.5 ... 17 GHz
max. Output amplitude	1.2 V _{se} / 2.4 V _{diff}

CD15 application example



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