

CMX940

Low Power High Performance RF Synth with Integrated VCO

Features

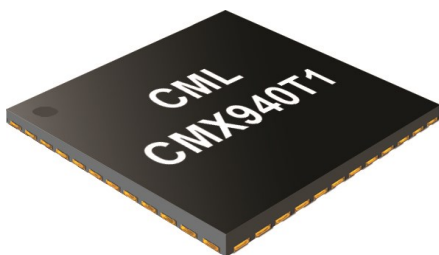
- RF output frequency 49 - 2040 MHz
- Low current consumption 23 - 64 mA
- Supply voltage 3.0 - 3.6 V
- Low 1 Hz normalised PLL noise floor of -225 dBc/Hz
- Typical phase noise -122 dBc/Hz, 10 kHz offset at 520 MHz
- Dual programmable RF outputs
- Low noise VCO -141 dBc/Hz, 1 MHz offset at 520 MHz
- Automatic VCO selection and calibration
- 16 and 24-bit fractional-N PLL modes
- Digital lock detect
- High comparison frequency up to 120 MHz
- Very fast frequency switching <50 μ s
- Low level of spurious products -75 dBc (typ.)

Applications

- PMR / LMR (including ETSI compliant radios)
- Public Safety Radio
- Wireless Data Modem
- GNSS RTK
- Wireless Microphone
- Marine Radio
- AIS
- General Purpose RF / IF

Key Values

- Low power consumption
- Fully-integrated VCO



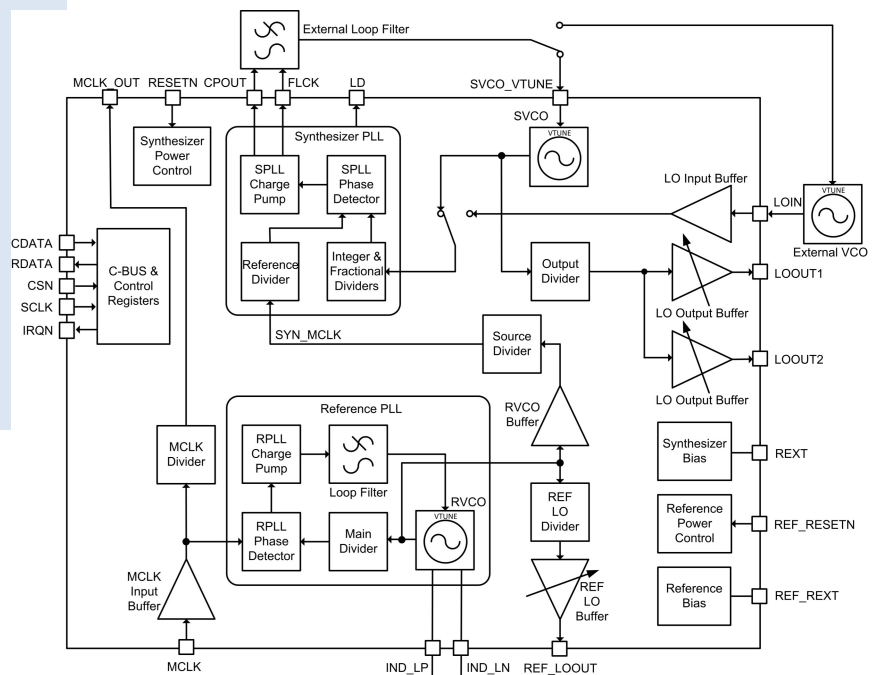
48-pin 7 x 7 mm LGA

The CMX940 is a low-power high performance Fractional-N PLL with fully-integrated wideband VCO and programmable output divider, generating RF signals over a continuous frequency range of 49 MHz to 2040 MHz.

It has two level-controlled single-ended RF outputs to support Tx and Rx sub-systems. A highly-configurable near noiseless clock multiplier can be used to minimise close-in phase noise and mitigate integer and fractional boundary spurious. The chip configuration is controlled by an SPI-compatible C-BUS serial interface.

Available in a 7 x 7 mm LGA-48 package, the CMX940 reduces component count and PCB board area, requiring only external loop filter and clock reference to provide a complete and very compact RF synthesizer solution.

Low operating voltage and low power consumption make it the perfect choice for a wide variety of portable and battery-powered wireless applications, including digital narrowband two-way radio equipment compliant with ETSI PMR co-existence standards applicable under the Radio Equipment Directive.



Functional Block Diagram

NOTE:- Some parameters listed in features section are configuration dependent.

Information Resource

Website

- Product Preview
- Datasheet

Technical Portal (Contact CML for access)

- Datasheet/User manual
- Software updates

Ordering Information

- CMX940T1

WHAT TO DO NEXT

Visit: www.cmlmicro.com

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CML Microcircuits Benefits

Faster time to market

Developing proven high performance and field tested ASSP ICs, CML is helping engineers to cope with increasing pressure in delivering shorter project design cycles.

Design flexibility

CML's *FirmASIC*® reconfigurable technology with the use of a Function Image upload enables a single hardware platform to be used for multiple communications systems.

High Quality

With 100% of products being tested before shipping, customers are assured of the highest reliability.

Product Longevity

Designing with CML products, manufacturers are rewarded with longer product life cycles and a stable BOM, ensuring minimum engineering costs and maximum profit.

Low Power

Being at the forefront of low power chip technology, manufacturers can develop smaller equipment with extended battery life.

Superior Support

Internal and field based applications teams worldwide provide focused customer support to ease the development process.

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