DE9941
SDR Demonstrator for Linear Radio Systems

The DE9941 is a small demonstration platform for the CMX994 Direct Conversion Receiver, the CMX998 Cartesian Feedback Loop Transmitter and the CMX7164 Multi-mode Wireless Data Modem.

Features

- Direct Conversion Receiver
- Cartesian Feedback Loop Transmitter
- 1W Power Amplifier
- VCO and Fractional-N PLL
- Operation from 452MHz to 467MHz
- Nominal +3.6V Supply

Supply Requirement

- Nominal 3.6V dc regulated power supply

Applications

- SDR Wireless Data Modem Demonstration
- Direct Conversion Receiver (CMX994) and Cartesian Feedback Loop Transmitter (CMX998)
- Demonstration platform for the CMX7164 Multi-mode Modem

The DE9941 can be used to demonstrate Tx and Rx performance with QAM modulation, FSK and GMSK type modulation. Together with the PE0003 host controller, a full transceiver can be demonstrated using a Function Image and control scripts.

The DE9941 provides a Fractional-N PLL and VCO plus associated circuits to provide local oscillator signals for the CMX994/E and CMX998. The PE0003, together with the control scripts, gives the user the ability to program the RF synthesiser to the correct operating frequencies.

The design also includes a 1W power amplifier, harmonic filter and Tx/Rx switch. The RF performance is designed to be compliant with EN 302 561 and EN 300 113. All the circuits are provided with power-down capability to allow standby functionality.


For further information, please refer to the ‘Design Resources’ section on the CMX994/CMX998/CMX7164 product page at cmlmicro.com
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**
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**Low Power**
Being at the forefront of low power chip technology, manufacturers can develop smaller equipment with extended battery life.

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