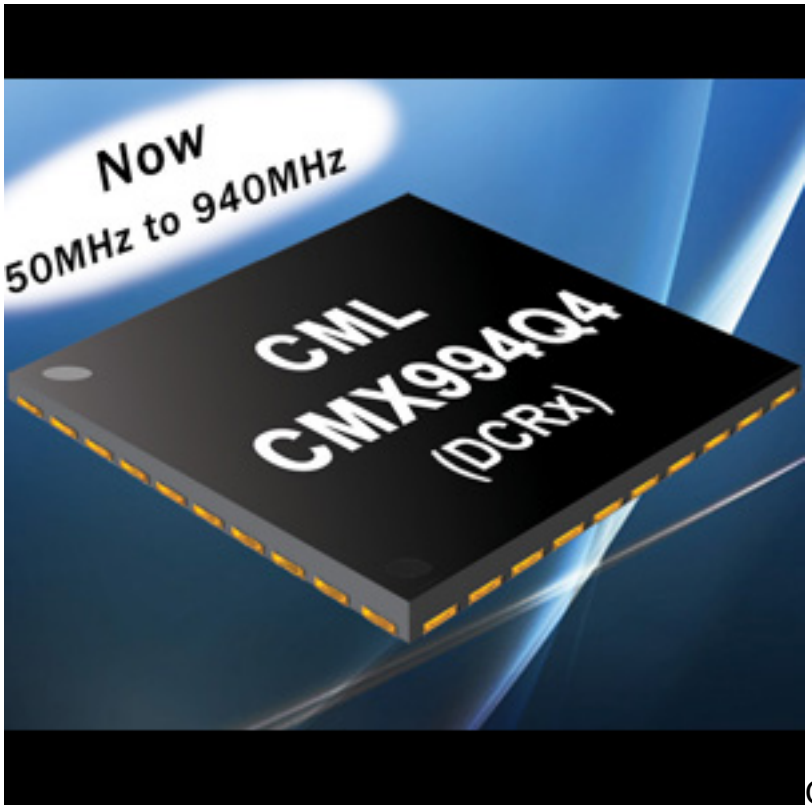
Direct conversion receiver operates over an RF range of 50MHz to 940MHz



CML Microcircuits (www.cmlmicro.com [1]) has increased the operating range of its CMX994 Direct Conversion Receiver.

Through an on-going research and development programme, CML has extended the operating range of the CMX994 Direct Conversion Receiver (DCRx) IC. Now operating over an RF range of 50MHz to 940MHz, the CMX994 now addresses a wider range of Software Defined Radio (SDR) demands.

The CMX994 is a receiver Integrated Circuit (IC) featuring I/Q demodulators intended for use as a direct conversion receiver. The device targets the next generation of multi-mode Software Defined Radios (SDR) for wireless data and two-way radio applications. Its design provides the optimum route for on-board integration, allowing a small RF receiver to be realised with a minimum of external components in both zero IF and low IF systems.

A DCRx mixes the wanted RF signal down to 0Hz in a single quadrature mixing process using a local oscillator (LO) tuned to the wanted RF channel frequency. Selectivity filtering and gain can now take place at baseband with practical, low power, analogue and digital circuits. DCRx also eliminates the need for an image-reject filter.

The CMX994 DCRx IC offers excellent RF performance, exceptional IP2 from I/Q

mixers and is suitable for modulation schemes including: QAM, 4FSK, GMSK and pi/4-DQPSK. Key features of the device include on-chip VCO for VHF applications, on-chip LNA, precision baseband filtering with selectable bandwidths and the smallest PCB area, typically less than 50% of a dual superhet.

The CMX994 is available now, operates at 3.0 - 3.6 V, and comes in a Q4 40-pin VQFN package.

For the Function Image, datasheet, application notes and product support information, visit CML: www.cmlmicro.com [1].

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http://www.ecnmag.com/products/2012/05/direct-conversion-receiver-operates-over-rf-range-50mhz-940mhz

Links:
[1] http://www.cmlmicro.com/