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The CML 'SuperChip' Pushes The Boundaries

The recent endorsement granted to CML's CMX990 GMSK packet-data modem IC, places the 'SuperChip' in a position as unique as the chip itself.

Offering a versatile baseband modem, IF and RF processing functions, programmable synthesizers, signal level-setting functions and comprehensive on-chip and peripheral control, monitoring and interfacing, the **CMX990** pushes the **M2M** industry further forward, by reducing manufacturing BOM costs, end-product weight and power consumption, all due to its clever design integration, developed in a joint partnership with Mobitex Technology AB (formerly Ericsson).

As a single-chip GMSK packet-data modem with integrated RF transceiver, the innovative half-duplex **CMX990**, has been **evaluated and approved by Mobitex Technology AB**, Sweden, who call the **CMX990** the CML 'SuperChip'.

To top this prestigious accolade, The **CMX990** has just been picked by the panel at ELEKTRA, the highly recognized European electronic industry awards, as a finalist for '**Semiconductor Product Of The Year**' .

The time, space and component-saving wireless data IC, has achieved much critical acclaim since its launch at Electronica 2004. Suited to a variety of **M2M** applications, from vending machines to utility meters and alarm panels, The **CMX990** easily replaces CML's existing GMSK packet-data modem, the CMX909B IC, to give unparalleled performance in next generation products operating on both Mobitex and non-Mobitex networks.

The **CMX990** offers a data range of 4 to 16 kb/s with selectable BT values, at **RF frequencies of 400MHz to 1GHz**. The **CMX990** is configurable to both freeformat and packet data schemes, is fully Mobitex compatible and can be set to comply with EN 300 113 and FCC CFR 47 Part 90 standards, employing simple task-command configuration to provide simplicity and efficiency to the control and operation of the modem.

FEC, CRC, data scrambling and interleaving functions are available on the **CMX990**. Automatic Rx clock extraction and signal level measurement/compensation allows the unit to operate in all signal conditions. By employing external VCO inputs, the two programmable on-chip synthesizers provide all the frequencies necessary for wireless data operation. Addressable on-chip DACs and ADCs are provided for control and

monitoring of a wide range of external functions, including system levels and the VCO loops, with separate dedicated functions for RF PA stage and TCXO control.

With low operational power of 3.0 volts and availability in a 'no-leads' 64 VQFN package, optimum power consumption can be assured at all times by the separate dynamic power saving of unused functions.

Three separate PCB-based kits are available for the CMX990, for evaluation and speedy design-in:

- EV9900 -** The universal **CMX990** evaluation kit, to demonstrate general data operation; this board comes complete with a parallel interface to connect to an external host, and is loaded with components for use in the 800-900MHz band, with support for 400MHz operation.
- EV9902 -** A Hyperstone microcontroller development card with embedded firmware, supplied with a PC based GUI, to allow easy evaluation of the **CMX990**, in general purpose non-Mobitex applications.
- DE9901 -** A total 'plug-and-play' **Mobitex** evaluation kit, complete with embedded **Mobitex Technology AB** object code.

Assistance is available from CML's help-desks for implementation of the CMX990 into wireless data applications: techsupport@cmlmicro.com.

Further product information can be found at www.cmlmicro.com or by calling +44 (0) 1621 875500.