

## CMX148

### PMR Audio and Data Processor

The CMX148 is a half-duplex, audio, signalling and data processing IC for use in leisure and professional PMR systems, including CTCSS/DCS encoding/decoding.

Comprehensive audio processing facilities include complete audio processing, filtering, companding, pre or de-emphasis and frequency inversion scrambling. The CMX148 features an FFSK/MSK data modem for packetised or free-format data operations.

#### Features

- Concurrent Audio/ Signalling/Data Operations
- Complete Audio-band Processing
  - Selectable Audio Processing Order
  - Pre and De-emphasis
  - Selectable 2.55/3.0 kHz Filtering
  - Selectable Audio Highpass Filter Cut-off
  - Compander
  - Limiter
- Programmable Voice Scrambler
- MSK/FFSK Data Modem with Packet or Freeformat Modes with FEC, CRC, Interleaving and Scrambling
- DTMF and Audio Tone Encoder/Decoder
- Sub-audio Signalling Filters for CTCSS and DCS
- Routing for Host  $\mu$ C Signalling
- Dual Auxiliary ADC with Four Multiplexed Inputs
- Four Auxiliary DACs
- Dual Programmable System-Clock Outputs
- Tx Outputs for Single, Two-point or I/Q Modulation
- Microphone and Discriminator Analogue Inputs
- Digital Gain Adjustments
- C-BUS Serial Interface to Host  $\mu$ C
- Flexible Powersave Modes

Signal routing and filtering is included to assist host  $\mu$ C based signal encoding/decoding applications.

A DTMF encoder/decoder, a full complement of auxiliary ADCs and DACs and dual synthesised clock outputs are included.

#### Evaluation kit:

EV1480 is the evaluation kit for the CMX148.



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#### Applications

- Professional PMR
- Leisure Radio Systems:
  - PMR, FRS, MURS, PMR446 and GMRS

#### Supply Requirement

- 3.0 to 3.6V



## WHAT TO DO NEXT

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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*<sup>®</sup> 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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