

CMX7164

Multi-mode Wireless Data Modem IC

GMSK/GFSK · 2/4/8/16 FSK · 4/16/32/64 QAM · V.23

The CMX7164 is a Multi-mode Wireless Data Modem that supports multiple modulation schemes and coding systems, all configurable under host control. Adaptive Coded Modulation (ACM) features allow modulation type and block format to be changed on the fly to dynamically select data block size, coding rate and CRC size.

Features

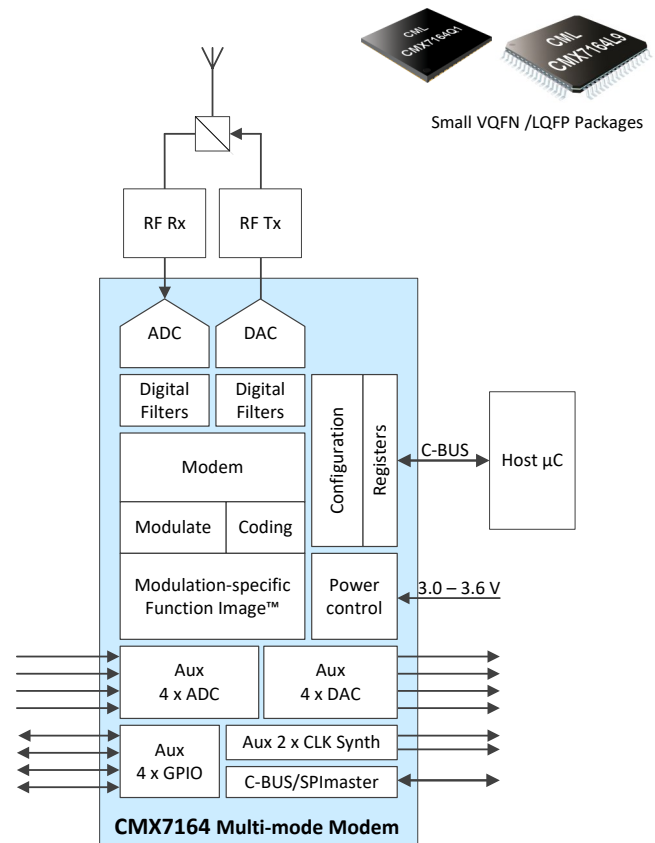
- Supports multiple modulation schemes
 - GMSK/GFSK
 - 2/4/8/16-FSK
 - 4/16/32/64-QAM
 - V.23
- Adaptive Coded Modulation (ACM)
- High-performance I/Q radio interface
- Direct connection to zero IF receiver/transceiver
- Reconfigurable digital IF filters
- Supports multiple RF channel spacings
- Deviation control without manual trim (Tx)
- I/Q trimming
- Serial bus (C-BUS) controlled
- Read/write 128-byte FIFOs and data buffers streamline transfers and relax host service latency

Applications

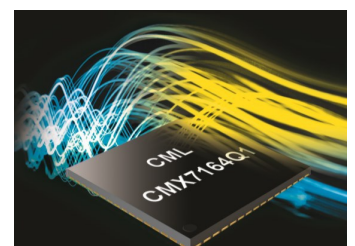
- High-performance narrowband data radio
 - Telemetry/SCADA/M2M data modems
 - Satellite communications
 - 6.25kHz to 25kHz channels
 - ETSI, FCC, ARIB compliant
 - FCC part 90 spectral efficiency requirements
- Software Defined Radio (SDR)
- High-speed wireless data

CMX7164 Advantage

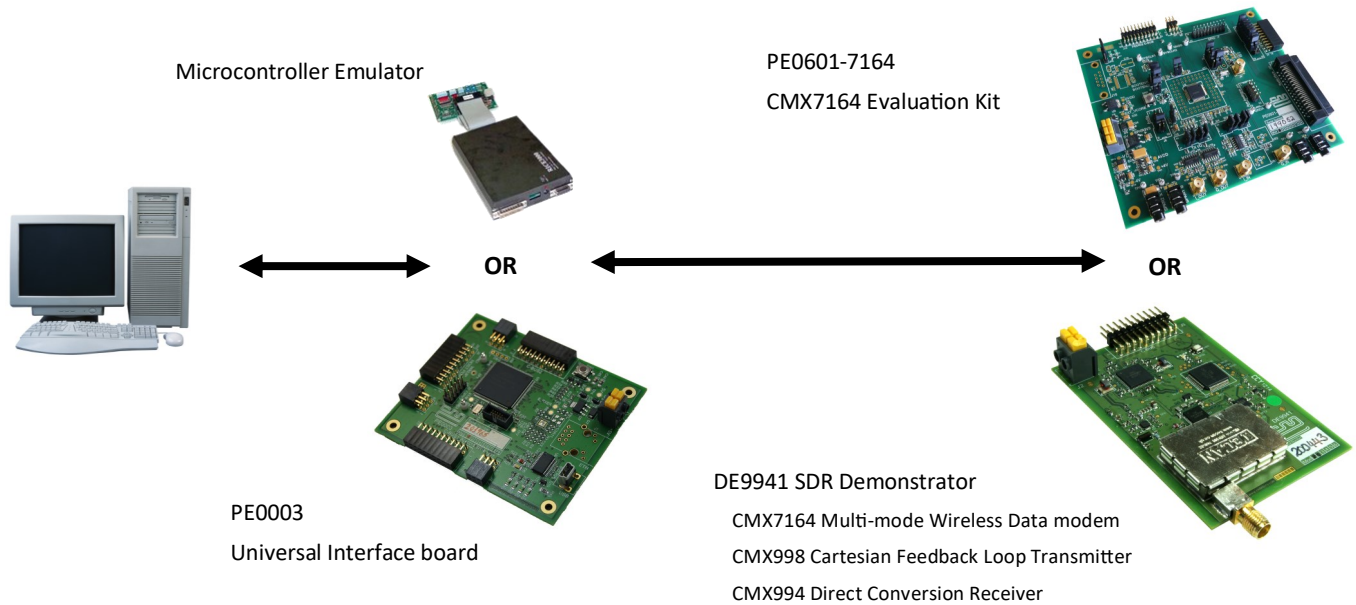
- No external codecs or DSP processing required
- Provides a complete modem function, data to modulated signal and analogue signal to data
- Ensures the highest performance and multi-modulation operation
- Combining the CMX7164 with CML's RF devices ensures the highest integration solution
- ACM features support an efficient, flexible and robust over-air protocol/coding system
- FirmASIC® component technology provides maximum flexibility and a platform for custom modulation schemes



| Function Image™ | Modulation | Bits/Symbol | Symbol Rate (symbols/s) |
|-----------------|-------------------------------|--------------|-------------------------|
| 7164FI-1.x | GMSK/GFSK | 1 | 2,000 to 20,000 |
| 7164FI-2.x | 2-FSK, 4-FSK, 8-FSK, 16-FSK | 1, 2, 3 or 4 | 2,000 to 10,000 |
| 7164FI-4.x | 4-QAM, 16-QAM, 32-QAM, 64-QAM | 2, 4, 5 or 6 | 2,000 to 20,000 |
| 7164FI-6.x | V.23 Modem | 1 | 1,200 |



Evaluation / Demonstration



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

CML's product enjoys a long lifespan. Designing with CML, 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.

WHAT TO DO NEXT

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