PP/70327042/4   August 2019

CMX7032 / CMX7042

Marine AIS Processors
AIS Class-B, Dual Rx AIS and exactTrax™

The CMX7032/CMX7042 are highly integrated Baseband Signalling Processor ICs that fulfil the requirement of an SOTDMA and CSTDMA AIS transceiver, a dual AIS receive only device and exactTrax™ long range AIS Class-B tracking.
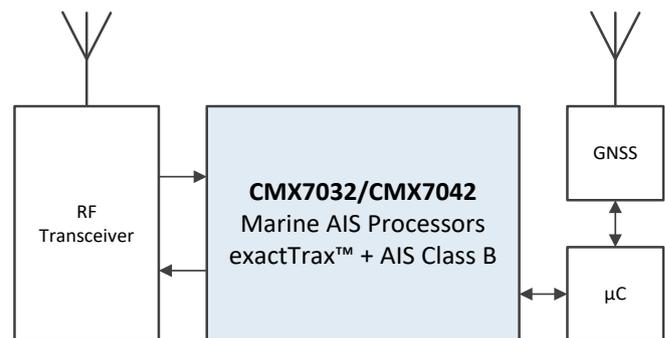
Features

- GMSK and FSK data modem
- Marine AIS data formatting (CSTDMA & SOTDMA)
- DSC data de-formatting
- exactTrax™ operation and data formatting
- Flexible channel configuration:
    - Two channel simultaneous Rx
    - One channel Tx
- Optimal co-channel performance
- Limiter-discriminator Rx interface
- Flexible Tx interface:
    - I/Q , single point or two-point modulation
- Auxiliary functions:
    - ADCs and DACs
    - System PLL clock outputs
    - Two RF Synthesisers (CMX7032 only)
- Serial interface (C-BUS)
- Flexible power saving modes
- Low power 3V - 3.6V operation
- Small VQFN and LQFP packaging
- Built on *FirmASIC*™ technology
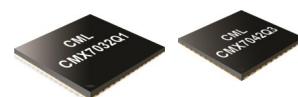
Applications

- AIS SOTDMA transceiver
- AIS CSTDMA transceiver
- Low cost dual AIS receiver
- exactTrax™ long range AIS tracking
- AtoN systems

CMX7032/CMX7042 AIS processors provide a quick route to developing an AIS based system and getting to market fast.

Embedding much of the AIS, DSC and exactTrax™ protocol ensures minimal host involvement, therefore the designer can concentrate on the overall end application.

CMX7032/CMX7042 System Diagram

CMX7032 and CMX7042 are available in Small VQFN /LQFP Packages

CMX7032/CMX7042 Advantage

- High level of performance conforming to international standards
- Single hardware supporting AIS SOTDMA/CSTDMA, DSC and exactTrax™
- Fast development time and therefore time to market
- Auxiliary features to manage RF section
- Focused technical support available
- *FirmASIC*® technology delivering future proof assurance

exactTrax™
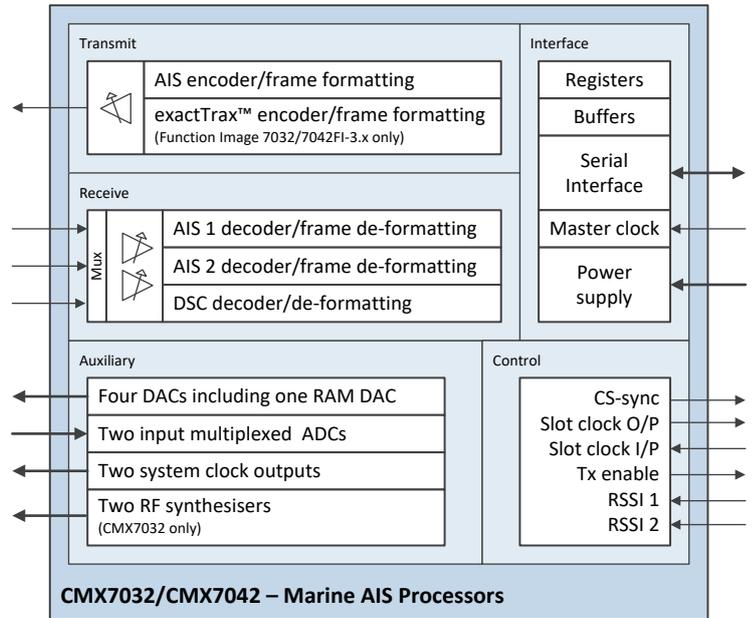CMX7032/CMX7042
Marine AIS Processors

CMX7032/CMX7042

Built on *FirmASIC®* technology, the CMX7032/CMX7042 provides the ultimate flexibility when designing Marine AIS based systems. Three function Images are available, these can be downloaded from the CML Technical Portal (contact for access):

- AIS Transceiver operation (CSTDMA/SOTDMA)
- Low cost AIS dual receiver operation
- exactTrax™ + AIS Transceiver operation

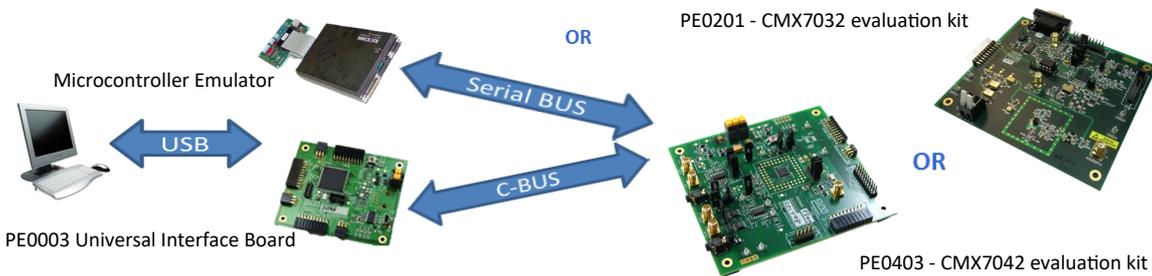| Function Image™	exactTrax™	AIS Transceiver		Autonomous
		SOTDMA	CSTDMA	Dual Rx AIS
7032/7042FI-1.x	No	Yes	Yes	No
7032/7042FI-2.x	No	No	No	Yes
7032/7042FI-3.x	Yes	Yes	Yes	No
Manufacturer specific Activation Code required				

Available Function Images™ from CML's Technical Portal

Function Block Diagram

Evaluation support

Microcontroller Emulator

PE0003 Universal Interface Board

PE0201 - CMX7032 evaluation kit

PE0403 - CMX7042 evaluation kit

WHAT TO DO NEXT

Visit: **Web page**   Find: **Distributor**

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FirmASIC® component technology reduces cost, time to market and development risk, with increased flexibility for the designer and end application. It combines Analogue, Digital, Firmware and Memory technologies in a single silicon platform that can be focused to deliver the right feature mix, performance and price for a target application family. Specific operation of a FirmASIC® device is determined by uploading its Function Image™ during device initialisation. New Function Images™ may be later provided to supplement and enhance device functions, expanding or modifying end-product features without the need for expensive and time-consuming design changes. FirmASIC® devices provide significant time to market and commercial benefits over Custom ASIC, Structured ASIC, FPGA and DSP solutions. They may also be exclusively customised where security or intellectual property issues prevent the use of Application Specific Standard Products (ASSP's).

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
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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