

CML removes barriers to wider use of AIS, increasing maritime safety for more sea vessels

Maldon, Essex – 9 October 2019 - CML Microcircuits is pleased to introduce the SCT7033, the industry's first AIS Class B processor to include the full protocol stack already embedded within the device. This removes the OEM's burden of sourcing or developing a protocol stack, making it easier to develop an AIS Class B transponder and enabling faster time to market.

AIS, or Automatic Identification System, is used universally by the maritime industry to provide safety at sea and aids to navigation. Class B devices are intended to be used by non-SOLAS (Safety to Life at Sea) vessels, to provide identification and location data to vessels in the receiving area. Class B devices implement the CSTDMA, or Carrier Sense Time-Division-Multiple-Access modulation scheme, which involves 'listening' for an available time slot before transmitting.

The AIS Class B CSTDMA protocol is complex, forming a major part of the device's design and its ability to conform to the applicable EN/IEC standards. Most notably, all Class B transponders must meet the requirements of the IEC 62287-1 standard, which governs Spectrum Usage and Access to Emergency Services. The SCT7033 is IEC 62287-1 compatible and ITU-R M.1371-5 compliant, which covers the technical characteristics for an AIS system using TDMA in the VHF maritime mobile frequency band.

By embedding the protocol stack alongside the processor, engineers have instant access to a fully compliant platform for AIS Class B transponder development. Using the SCT7033 as the basis for new product development enables significantly easier design and certification processes.

"The SCT7033 delivers a faster time to market, particularly for engineering teams with no previous experience of developing devices aimed at AIS," commented David Brooke, Product Manager, CML Microcircuits. "As the protocol is provided with the device, embedded with the processor, engineers can focus on the system level features and adding their own differentiation, rather than developing a standard protocol."

CML is a leading supplier to the marine industry, having a wide product portfolio aimed at AIS and other forms of communication systems. The SCT7033 is fully supported by CML's engineering team and by the complementary products CML offers, such as baseband processors, frequency synthesisers and VCOs. The SCT7033 features all necessary interfaces for system design, including a C-BUS interface, SPI port, USB and UART interfaces and LED driver, as well as GPIO.

The SCT7033 is compatible with the CML DE70322TC AIS Class B Reference Design. A GUI is provided to enable production line configuration, such as parameter set-up and adjustment, the Mobile Maritime Service Indicator (MMSI) of other parameters specific to the device or its vessel.

About CML Microcircuits

CML Microcircuits is a world-leader in the design, development and supply of low-power analogue, digital and mixed-signal semiconductors for telecommunications systems globally.

The company's wide and varied portfolio means that CML devices are used in an extensive range of industrial and commercial products for licensed and unlicensed wireless voice and data systems.

Focusing on narrowband communications, CML's ICs are found in digital/analogue PMR/LMR, wireless data, satellite communications and marine radio applications, such as TETRA, DMR, dPMR, SCADA systems and Marine communications. The CML portfolio provides components supporting both RF and baseband functionality, encompassing both leading edge digital and legacy analogue systems.

In addition to our established range of devices, we are able to offer bespoke solutions to customers. This service includes design assistance, advice and first class technical support.

Our *FirmASIC*[®] approach enables us to produce the optimum solution to a given design requirement. The outcome is a product offering that embraces a number of key technologies and delivers the result cost-effectively with fast time to market, ultimate flexibility and low risk.

CML Microcircuits is a member of the CML Microsystems Plc. Group of companies.

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