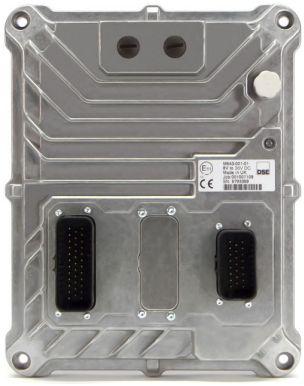
CAN Newsletter Online

CONTROLLER

With four independent CAN interfaces for system design

The DSEM643 from DSE (Deep Sea PLC) is a controller that can be used on mobile applications across many varied industries including construction, municipal, agricultural, transport, and military.

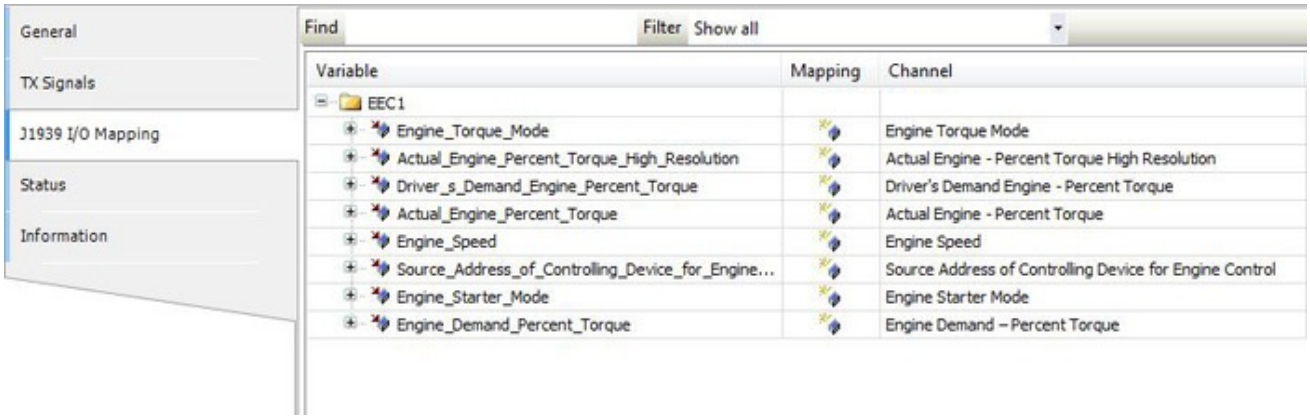
The product comes with four independent CAN interfaces, each one configurable for different CAN protocols including CANopen, J1939, and CAN. Each of the CAN protocols offers their own unique properties which can make them favorable for different uses. Having multiple CAN connections also optimizes the amount of data on each bus, minimizing bus load and enabling the design engineer to produce a efficient system, said the company.



The DSEM643 controller (Photo: DSE)

As J1939 is the common protocol used to communicate with industrial engines and chassis, DSE have incorporated the built-in GUI (Graphical User Interface) offered by the Codesys 3.5-application software. This provides a simplified solution to programming by allowing the software engineer to pick functions from a list as in the example in Figure 2.

By selecting the group of required PGN's (Parameter Group Number) from the pull down list, the signals are automatically converted to the correct units and any offset applied. This results in time saved during software development.



The software allows the software engineer to pick functions from a list (Photo: DSE)

Programming using the open platform Codesys 3.5 is still available in the traditional way but the above has provided a very useful, time saving resource for many J1939 users, said the company.

DSE M-Series controllers provide a number of other features which make the products suitable for a range of applications such as:

- Configurable I/Os with inputs offering digital and analog capability and outputs offering digital, PWM, and PWMi capability
- Current monitoring on all channels
- 32 bit microprocessor with a 220 MHz clock speed and 4 MiB of application memory, for performance and operating response times
- E11-R10 type approval
- Operating temperature of -40 °C to + 85 °C
- IP67 rating for superior protection against ingress of dust, water, and other contaminants
- EN, ECE and ISO testing for shocks and bumps, vibration, salt spray, EMC, and electrical safety

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