

Stand-alone or integrable in an existing CAN network

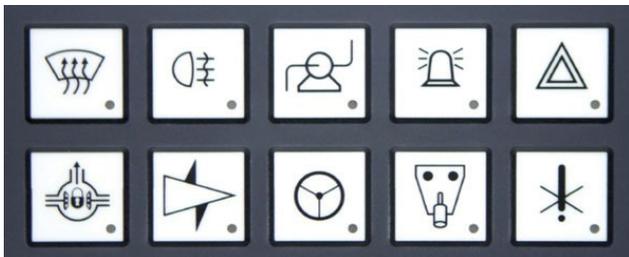
Wuerth Elektronik ICS offers the ICCS (Intelligent Command and Control Systems) CAN modules. The series comprise also products with local I/O.

The core piece of each controller module is the 8-bit microprocessor (Freescale HCS08 with 60-kbit/s flash memory). Additionally, the 8-bit [EEPROM](#) for data backup is integrated in all modules. Depending on the complexity of the control tasks or the number of required inputs and outputs, the customer has a choice between the following products:



From left to right: The CAN I/O, the CAN Controller 64P, the PropCAN, and the Micro CAN modules (Photo: Wuerth Elektronik)

- ICCS Micro CAN is a module with up to three possible analog inputs and either a 10A/15A relay output or two high side outputs with up to 5 A each. It can be connected to the circuit board over the 9-pin relay socket.
- ICCS PropCAN is a module for controlling the flow rate of a proportional valve. It is specially developed for controlling hydraulic applications. Controlling and reading/writing of all values by CAN is possible. Fluctuations in supply voltage and temperature are compensated, so that a constant flow rate is ensured.
- The ICCS CAN I/O measures 95 mm x 77,3 mm x 34,6 mm and comes in a plastic housing with sealed connector to achieve ingress protection class IP68. Digital information, analog voltages, and currents can be detected as input signals for processing. Two proportional valves can be controlled by pulse width modulated outputs (PWM). The valve current is detected by an integrated current measurement and can be accurately controlled. Four more proportional outputs are available with a PWM control signal. Above the high side current sensing the output current is feedback. The controller is SAE J1939-capable and suitable for the use in mobile machines. It is able to connect binary and analog sensors via the CAN network.
- ICCS CAN Controller 64P is a module with more than 30 inputs and 16 high side outputs, which is J1939 and CANopen compatible. Binary switching information, analog voltages, currents, and signal frequencies can be detected and processed. The two integrated CAN interfaces allow the data exchange between two independent buses or enable gateway/filter functions. The controller can be used as a CAN-to-CAN gateway.
- ICCS SSP10 is a CAN- and J1939-able switch panel with ten keys and ten high side outputs. It is based on a similar concept like the ICCS CAN I/O, but also comes with a human-machine-interface. The foil of the switch panel can be customized.



The SSP10 switch panel (Photo: Wuerth Elektronik)

All modules can be programmed and adjusted individually. For this purpose, the ICCS SDK Plus software development kit is offered. It contains a graphic development surface. According to the supplier, no dedicated programming language knowledge is necessary.

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