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ESS launches CANgine COP for CANopen networks

CANgine

CANgine is a family of protocol converters invented in late 2002 by ESS. Until now two basically different converters exist. CANgine No.1 is a generic converter which translates CAN frames in ASCII hex characters and vice versa. With CANgine No.1 one can read and write data frames on the CAN. The second one is CANgine FMS which is a read-only device and reads FMS data frames from a CAN bus. FMS is a newer standard defined by the European truck manufacturers to allow reading of vehicle data for third party companies. FMS is a subset of J1939 which is the standard CAN protocol in trucks and busses.

CANopen

CANopen is an industry proven well known higher layer protocol based on the CAN bus. Until today there is no CANopen device profile for serial devices as it exists for generic I/O sensor / actor devices.

Often manufacturer of serial driven peripheral devices such as bar code or RF ID scanner and other are requested to connect their equipment via a CAN or CANopen network.

CANgine COP

With CANgine COP such serial driven peripheral devices can easily be integrated in CAN or CANopen networks. Two main possibilities exist to connect such devices via CAN.

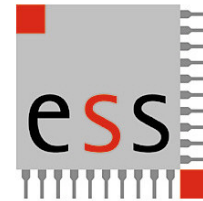
The "device's master" is a CAN or CANopen device. In this case the master device has to drive the lean protocol to transmit and receive characters.

The CAN bus is only the "cable" to connect the serial device to a serial master. In this case two CANgine COP are needed to pack and unpack the serial data stream.

In both cases CAN or CANopen compliance is archived by configuring the CANgine COP to the appropriate protocol. As all members of the CANgine family CANgine COP is highly configurable.

In particular the timeout between two serial characters that lead to a CAN transmission is programmable.

More detailed information is available in the manual which can be found in the download area of CANgine's web site.



Commands in Configuration Mode

? show parameters
An switch autostart feature in CANopen mode off or on
Hn set heartbeat time in CANopen mode
ITn set the identifier used for transmit messages
IRn set the identifier used for receive messages
Mn set operating mode to CAN or CANopen
Nn set node number in CANopen mode
Pn set CAN protocol standard to 11 Bit ID or 29 Bit ID in CAN mode
R start operating mode
Sn set CAN baud rate
Tn set the timeout value for sending UART receive buffer
Un set the RS232 baud rate
V show firmware version information

CANopen features

- 1 server SDO expedited and non-expedited
- 1 TPDO, static mapping
- 1 RPDO, static mapping
- Heartbeat producer
- NMT slave

Further information is available at www.CANgine.com, which is regularly updated with the latest information.

Pictures and Drawings:

CANgine COP high res (jpg)
CANgine Logo (jpg)

Embedded Systems Solutions

ESS Embedded Systems Solutions is a privately owned company. ESS specializes in the development of microcontroller based applications for industrial communication, industrial automation and automotive applications.

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