

RTC / backup battery / temperature measuring (not DinXF):

mCAT uses the internal realtime clock for synchronizing the system clock. For backup of the RTC and the RAM the lithium cell should be replaced regularly (< 5 years). (Might leak otherwise!)
 With the internal temperature sensor the temperature on the module can be measured.
 The supply voltage can also be measured at ALL modules (ST10).

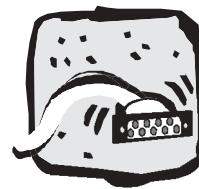


Switches (not DinXF) SW40:

The four analog inputs are configured with the switches SW40. With both switches for a particular input set to OFF, the input is configured for voltages (0..5V). By switching the oddly numbered (1,3,5,7) switches to ON a process current (0/4..20mA) can be measured, with the even numbers switched ON, Si-temperature-sensors can be connected. There is no setting with both switches set to ON.

For example:

- ai1 (1,2): 0/4..20mA
- ai2 (3,4): 0...5V
- ai3 (5,6): Si-temperature-sensors (KTY)
- ai4 (7,8): 0...5V



Com1 (Ser0) ST5:

RS232-peripherals are connected to the 9pin D-connector labeled with Com1. The DTR-signal is active as long as DinX is supplied with voltage.



- (Com2: DCD) NC - 6
- RTS - 7
- CTS - 8
- +5V - 9
- 1 - NC
- 2 - RxD
- 3 - TxD
- 4 - DTR
- 5 - ground

Com2 (Ser1) (only DinX232) ST8:

Isolated RS232-interface for linking, for example a host computer. 9pin D-connector all pins used with two handshake pairs RTS/CTS and DTR/DCD. Due to isolation the +5V cannot be made available. The yellow LED, "Activity", indicates an active DCD.



Bitbus (only DinXBIT) ST8:

Isolated Bitbus connection. 9pin D-connector. No internal termination. The yellow LED, "Activity", indicates an active RTS.

- RTS A (+) - 9
- Data A (+) - 8
- (Iso GND)* NC - 7
- NC - 6
- 5 - signal ground
- 4 - RTS B (-)
- 3 - Data B (-)
- 2 - NC
- 1 - NC

*) usually pin 5 is not used

Digital i/o ST1/2:

The module has 8 optically decoupled digital 24V inputs. The input condition is indicated by a red LED at each input. Since the inputs are isolated a ground connection is not necessary. In mCAT, the inputs i1 and i2 can be used as event counter up to ca. 1KHz. The eight digital outputs (p-switching, short circuit resistant, temperture monitored) allow to connect direct current devices with up to 0,5A. They have the same ground potential as the CPU, a yellow control LED each and are supplied by ST10. All outputs except for o2 and o4 allow PWM. (use ext. Clamp diods!)

Analog outputs (not DinXF) ST3:

Two analog outputs (ao1, ao2) 0..10V with 8bit resolution. (RLmin 4,7KOhm; CLmax. 5nF)
 The mutual ground connection is pin 3 at ST3.

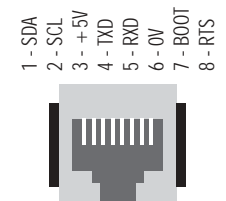


Analog inputs ST4:

The four analog 0..5V inputs (ai1, ai2, ai3, ai4) have 10bit resolution. The mutual ground connection is pin 5 at ST4. They are switchable, except for DinXF, optionally to Si-temperatur-sensors or to process current 0/4..20mA. For details see switches SW40

I2C-bus (Ser2) ST6:

Possibility of connecting inexpensive i/o-extensions (e.g. I2C-8E8A) and access to the programming interface (Ser2, TTL-level) of the TLCS900. Proper level converter module with connector for RS232: DinX < PROG. (without I2C-amplifier max. 2 extensions can be connected)

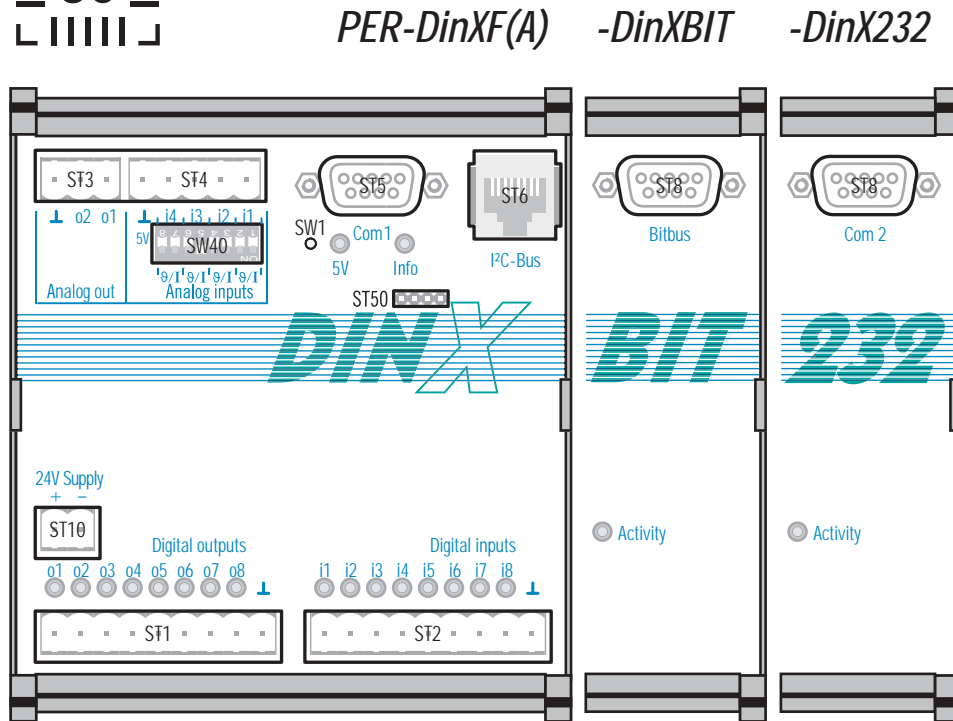


24V supply ST10:

Supply voltage connection for the CPU and outputs (< 10 A fuse!).



The module is supplied with the mCAT2 realtime core (with BITBUS driver for DinXBIT) in the flash-EPR0M. mCAT supports all analog and digital i/os on the module and the i/o extensions with the i/o-object-functions of the express-i/o (e.g. OUT[1];1000). Details for software support can be found in the mCAT documentation.



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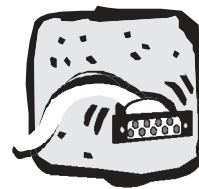


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Com2 (Ser1) (only DinX232) ST8:

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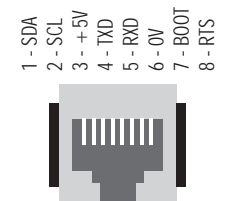


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