

+SMART CUBE

Control and Automation

CARRIER BOARD FOR INDUSTRIAL APPLICATIONS

The architecture of **+SMART Cube** allows to integrate the **different I/O modules** available on the main board, providing a solution that can reduce the overall dimensions and adapt to all needs.

The **scalable CPU** allows you to upgrade/downgrade performance and can be perfectly adapted to the respective application.



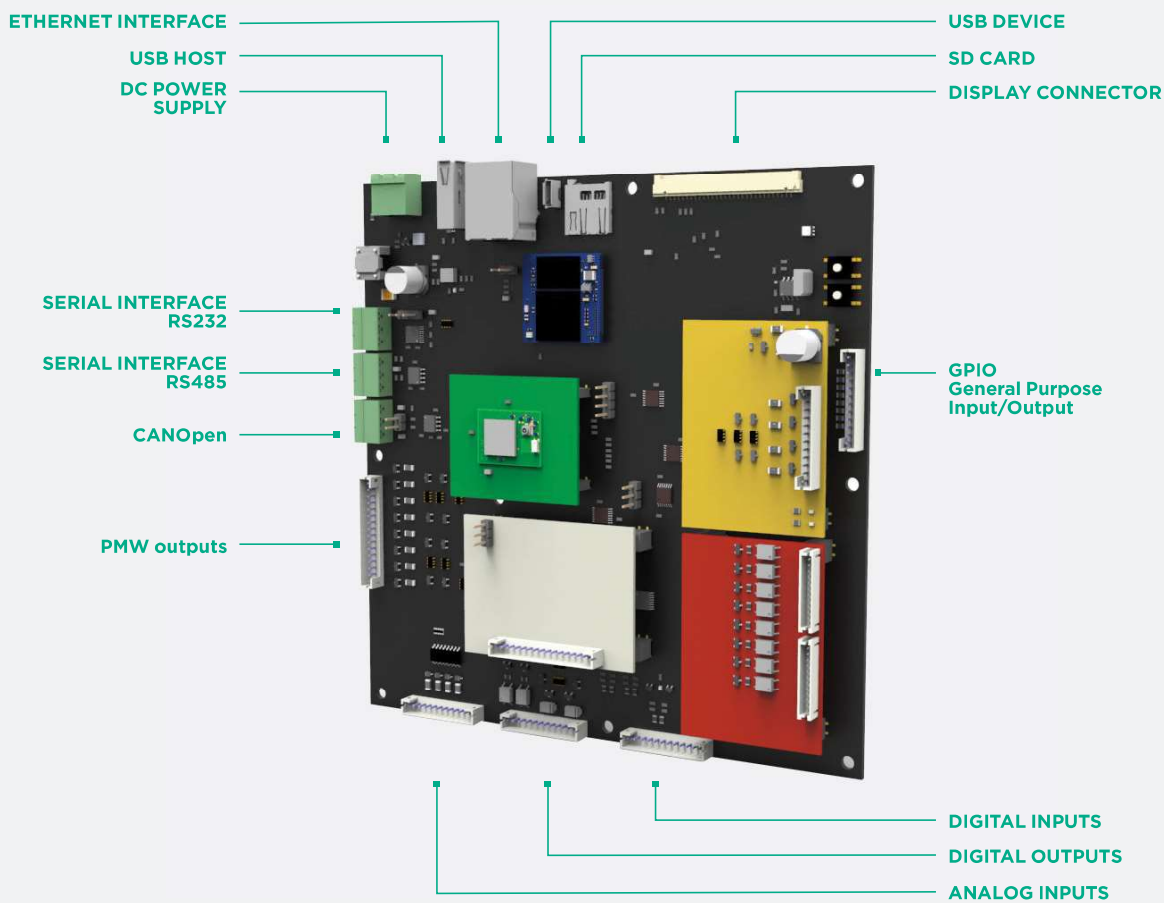
GENERAL FEATURES

+modular architecture (up to 8 add-on modules)
+high performance and scalable CPU
+touch display with high resolution graphics
+power PWM outputs for actuator control
+multiple PID controls
+digital I/O
+analog I/O
+programmable by customer (IEC 61131-3)
+ethernet interface for communication protocols
+CANOpen, I2C, RS232, RS485
+high performance digital bus for communication with modules

CARRIER BOARD FEATURES

+1 x 10/100 Ethernet interface
+1 x microSD
+1 x USB host (type A connector)
+1 x USB device (type micro B connector)
+1 x CANopen (Master mode - CiA 301)
+1 x LCD connector from 7" to 10,1" for high resolution capacitive touchscreen
+real time clock
+24 VDC single power supply
+8 x solenoid valve PWM drivers
+8 x digital opto-isolated inputs (PNP)
+4 x open collector digital outputs
+4 x digital opto-isolated outputs
+4 x 0-10V analog inputs
+2 x 4-20mA analog inputs

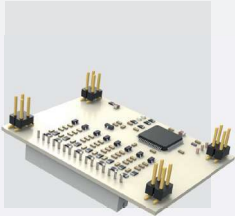
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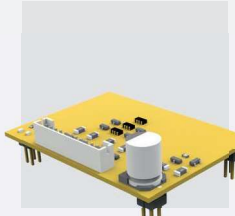
OPTIONAL MODULES

Additional option available (up to 8 modules) thanks to dedicated sockets.

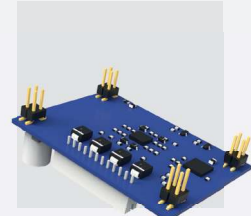
- + n.8 x digital opto-isolated inputs and outputs
- + n.4 x solenoid valve PWM drivers (with power optimization and current control)
- + n.4 x 0-10 V DC, n. 4x4-20 mA analog inputs 12 bit
- + n.1 stepper motor driver
- + communication modules (Wi-Fi; 4G; NB-IoT; Bluetooth)



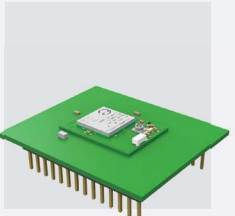
ANALOG I/O



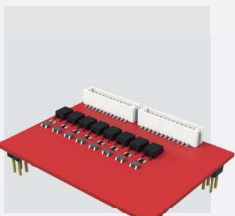
PWM POWER OUTPUTS



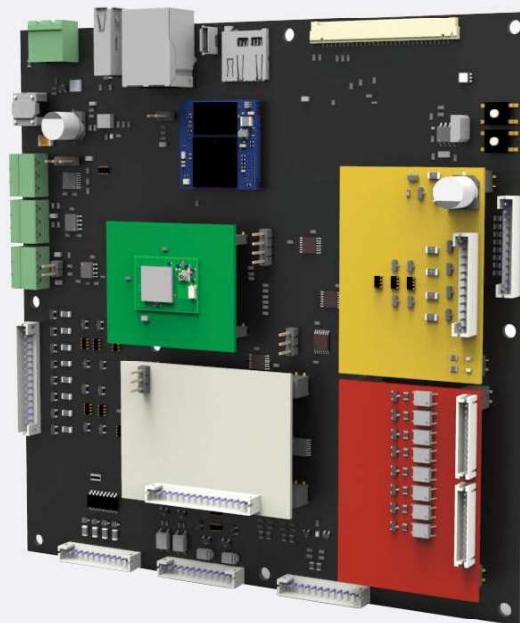
STEPPER MOTOR DRIVER



COMMUNICATION



DIGITAL I/O



I	II	III	IV	V	VI	VII	VIII	IX	X		
PC	A	O	A N D S O A O	O	O	C	0000	F	O	CARRIER BOARD	
I. TYPE PC - +SMART CUBE II. SUPPLY VOLTAGE A - 24 V DC B - 12 V DC III. DISPLAY O - No display A - Display 7.0" B - Display 10.1" IV. EXPANSION MODULE SLOT O - Empty A - Analog Input			V. ADDITIONAL MEMORY O - None F - F-RAM VI. COMMUNICATION MODULE O - None W - Wi-Fi + Bluetooth 4 - 4G N - NB-IoT VII. HOUSING C - No H - Yes* VIII. PROGRESSIVE NUMBER IX. SOFTWARE/LICENCE F - Firmware P - PLC T - PLC+TV W - PLC+WV Z - PLC+WV+TV X. BRAND								
I	II	III	IV	V	VI						
PC	A	04	04	0000000000						O	ANALOG INPUT MODULE
I. TYPE PC - +SMART CUBE II. ADDITIONAL MODULE TYPE A - Analog Input			III. NUMBER OF 0-10 V INPUT IV. NUMBER OF 4-20 mA INPUT			V. PROGRESSIVE NUMBER VI. BRAND					
I	II	III	IV	V	VI						
PC	D	08	08	0000000000						O	DIGITAL I/O MODULE
I. TYPE PC - +SMART CUBE II. ADDITIONAL MODULE TYPE D - Digital I/O			III. NUMBER OF DIGITAL INPUT IV. NUMBER OF DIGITAL OUTPUT			V. PROGRESSIVE NUMBER VI. BRAND					
I	II	III	IV	V	VI						
PC	S	00	04	0000000000						O	PWM SOV DRIVER MODULE
I. TYPE PC - +SMART CUBE II. ADDITIONAL MODULE TYPE S - PWM SOV Driver			III. NUMBER OF INPUT IV. NUMBER OF PWM OUTPUT			V. PROGRESSIVE NUMBER VI. BRAND					
I	II	III	IV	V							
PC	C	W	00000000000000							O	COMMUNICATION MODULE
I. TYPE PC - +SMART CUBE II. ADDITIONAL MODULE TYPE C - Communication			III. COMMUNICATION MODULE W - Wi-Fi + Bluetooth 4 - 4G* N - NB-IoT*			IV. PROGRESSIVE NUMBER V. BRAND					

* Available on request.