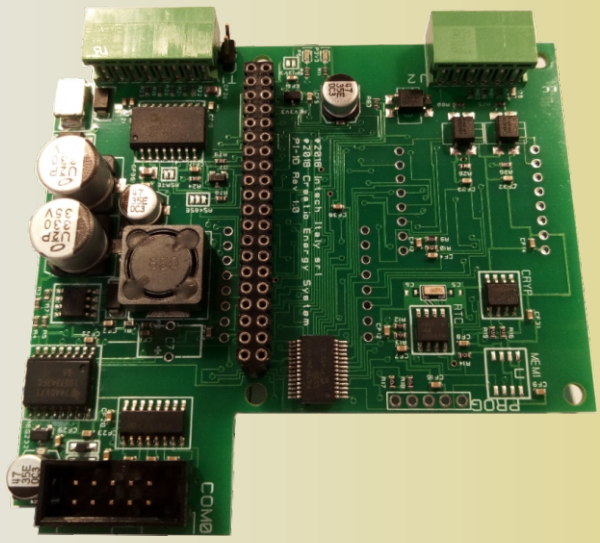
Raspberry PI power I/O



PI I/O

Description:

Creatio PI I/O is a board that compiles a large number of functionalities and peripherals that allows to use Raspberry PI 3 and 3 B+ in industrial environments and domotics applications.

Creatio PI I/O is designed to assemble in a small place with Raspberry PI and to be inserted into Italtronic DIN rail serie 10.0012225.RMB height 22.5 mm box, or, 10.0052450.RMB height 45mm.

PI I/O has all components for IoT applications:

· DC/DC 15-32V power supply for all electornic and Raspberry PI, 5V output 2A continuous current.

· Microprocessor PIC18F26K42 interfaced with Raspberry PI through I2C and SPI ports, programmable from user depending on the requeriments.

· RTC clock with BQ32000 and super capacitor 0.22F.

· Crypto engine ATECC508A for transmission encryption, key management, high security password for IoT applications

· 2 Slots for MicroE Click modules with M and L sizes.

· 1 Opto-isolated RS485 port.

· 2 Opto-isolated RS232 port.

· 2 Digital opto-isolated 12-24V inputs

· 1 Opto-isolated DC 12V 20mA output.

· Measure through PIC ADC of input voltage, 5V and 3.3V

A large number of jumper on the board are used to setup the interfaces with different peripherals and various chips.

Creatio PI I/O is ready to use, just docking in Raspberry 3 or 3 B+ and a box.

It helps to the user to transform ideas into real applications and render IoT solutions.

Creatio makes available all PIC source code to customize PI I/O to the maximum.

Features:

· Power supply 12-28V 1.5A

· Microprocessor PIC18F26K42

· RTC clock

· Crypto engine ATECC508A

· EEprom 24LC256 32Kx8bit

· 2 x Slot per modules MircroE Click

· 1 x RS485

· 2 x RS232

· 2 x On/Off 12-24V Inputs

· 1 x Opto-isolated output

· Open software and hardware, development kit MPLab xIDE

· Source code download from www.creatio-control.com

· Italtronic Box with DIN rail ready to use

· Customizable logo for big quantities.

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Creatio Energy Systems S.L.

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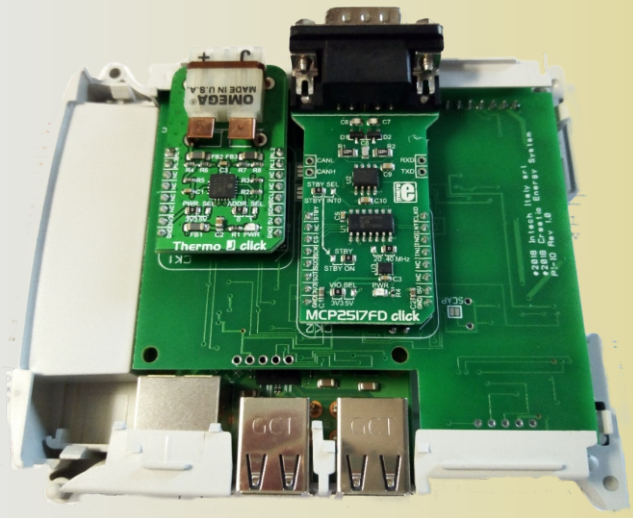
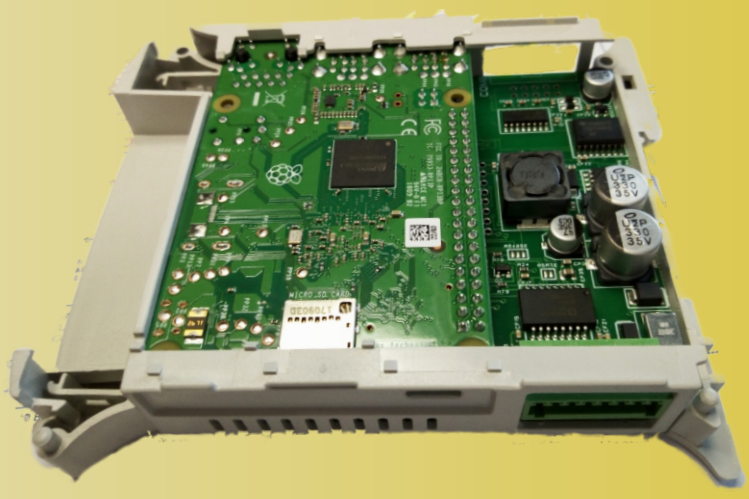
Design





PI I/O

Specifications:

RS232/A:

· Opto-isolated, power supply from DSR or external CTS

· Jumper selection: PI TTYam0 or Slot1 MicroE Click

RS232/B:

· Opto-isolated, power supply from DSR or external CTS

· Direct connection PIC RB6 RB7

Slot MicroE Click 1:

· Module for M size

· SPI connection: PI SPI0 CE0

· I2C connection: PI

· RS232 connection: DTE RS232/A mode, DCE PI TTYam0 mode or PIC RC1 RC2

Slot MicroE Click 1:

· Module for L size

· SPI connection: PI SPI0 CE1

· I2C connection: PI

· RS232 connection: DCE PI TTYam0 mode or PIC RC6 RC7

Consumption:

· Maximum power supply output 1.5 A

· Power supply 12..28 VDc 1.5A max

· Reverse polartiy protection

· Auto reset fuse protection inside

Applications:

· Environmental conditions measurement system.

· Domotics and building automation

· Industrial control and monitoring

Dimensions:

· PCB: 88.6 x 81.8 x 15.0 mm

· 10.0012225.RMB Din Box: 119 x 101 x 22.5 mm

· 10.0052450.RMB version with I/O and MicroE modules: 119 x 101 x 45 mm

· Net weight: 200 g without box or Raspberry PI

Order Info

· PIPS10-COMP 2xRS232, 1xRS422/485, RTC,Crypto

· PIPS10-EEPROM 2xRS232, 1xRS422/485, RTC,Crypto, EEprom 32Kx8

· PIPS10-IO-MICROE 2xRS232, 1xRS422/485, RTC,Crypto, 2xMicroE, 2 Input, 1 Output

Note: Raspberry PI and Italtronic box not included

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