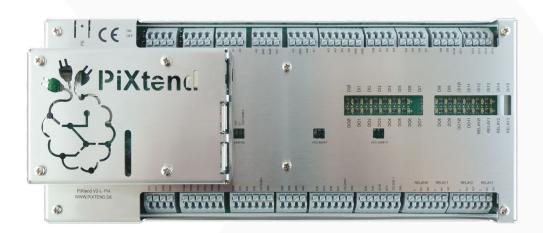
PiXtend[®] V2 -L- Pi 4 & Pixtend[®] V2 -L-Raspberry Pi



Powerful and Industrially compatible

- > Retain memory for data back up
- ▶ Industrial outputs, 12x High-Side switches with separate feed and all-round protection
- ➤ Use Node-RED to turn PiXtend® V2 into an edge device, data flows can be linked graphically and configured as required
- ▶ PiXtend® V2 Pi 4 housing with passive heat sink



Broadcom BCM 2711, Raspberry Pi 4 Model B	FUNCTION	PiXtend® V2 -L- Pi 4	PiXtend® V2 -L-
POWER SUPPLY 24 V DC ±20 % 24 V DC ±20 % RETAIN-/REMANENCE MEMORY 64 Bytes Flash EEPROM 64 Bytes Flash EEPROM REAL TIME CLOCK (RTC) with battery buffering with battery buffering TEMPERATURE- AND AIR HUMDITY SENSORS up to 4 DHT11, DHT22, AM2302 up to 4 DHT11, DHT22, AM2302 CAN BUS 1x* 1x* RS232 1x* 1x* RS485 1x*, Modbus RTU capable 1x*, Modbus RTU capable DIGITAL INPUTS (DI) 16x 3,3 / 5 / 12 / 24 V 16x 3,3 / 5 / 12 / 24 V DIGITAL OUTPUTS (DO) 12x PNP 5 / 12 / 24 V, 0,5 A 12x PNP 5 / 12 / 24 V, 0,5 A ANALOG VOLTAGE INPUTS (AI-U) 4x 05 V, 010 V, 10 Bit 4x 05 V, 010 V, 10 Bit ANALOG CURRENT INPUTS (AI-U) 2x 010 V, 10 Bit 2x 020 mA, 10 Bit ANALOG OUTPUTS (AO) 2x 010 V, 10 Bit 2x 010 V, 10 Bit RELAIS 4x, max. 230 V / 6 A 4x, max. 230 V / 6 A PWM-/SERVO OUTPUTS 6x, 16 Bit resolution, 5 V 6x, 16 Bit resolution, 5 V GPIO 4x 5 V GPIO 5hort circuit proof, supply with reverse polarity and overload protection (self-resetting safety device) MAX. TEM	FUNCTION	PIXteriu~ VZ -L- Pi 4	PIXLEIIU° VZ -L-
RETAIN-/REMANENCE MEMORY 64 Bytes Flash EEPROM 64 Bytes Flash EEPROM REAL TIME CLOCK (RTC) with battery buffering with battery buffering TEMPERATURE- AND AIR HUMDITY SENSORS up to 4 DHT11, DHT22, AM2302 up to 4 DHT11, DHT22, AM2302 CAN BUS 1x** 1x** RS232 1x* , Modbus RTU capable 1x*, Modbus RTU capable DIGITAL INPUTS (DI) 16x 3,3 / 5 / 12 / 24 V 16x 3,3 / 5 / 12 / 24 V DIGITAL OUTPUTS (DO) 12x PNP 5 / 12 / 24 V, 0,5 A 12x PNP 5 / 12 / 24 V, 0,5 A ANALOG VOLTAGE INPUTS (AI-U) 4x 05 V, 010 V, 10 Bit 4x 05 V, 010 V, 10 Bit ANALOG CURRENT INPUTS (AI-U) 2x 020 mA, 10 Bit 2x 020 mA, 10 Bit ANALOG OUTPUTS (AD) 2x 010 V, 10 Bit 2x 010 V, 10 Bit RELAIS 4x, max. 230 V / 6 A 4x, max. 230 V / 6 A PWM-/SERVO OUTPUTS 6x, 16 Bit resolution, 5 V 6x, 16 Bit resolution, 5 V GPIO 4x 5 V GPIO 4x 5 V GPIO INTERFACES AND I/OS Short circuit proof, supply with reverse polarity and overload protection (self-resetting safety device) 5hort circuit proof, supply with reverse polarity and overload protection (self-resetting safety device)	CPU	Broadcom BCM 2711, Raspberry Pi 4 Model B	Broadcom BCM 2837B0, Raspberry Pi 3 Model B+
REAL TIME CLOCK (RTC) with battery buffering up to 4 DHT11, DHT22, AM2302 up to 4 DHT11, DHT22, AM2302 up to 4 DHT11, DHT22, AM2302 LX** RS232 IX* RS248 IX*, Modbus RTU capable DIGITAL INPUTS (DI) DIGITAL OUTPUTS (DI) DIGITAL OUTPUTS (DI) IX PNP 5 / 12 / 24 V, 0,5 A ANALOG VOLTAGE INPUTS (AI-I) ANALOG CURRENT INPUTS (AI-I) ANALOG OUTPUTS (AO) IX MALOG OUTPUTS (AO) IX	POWER SUPPLY	24 V DC ±20 %	24 V DC ±20 %
TEMPERATURE - AND AIR HUMIDITY SENSORS up to 4 DHT11, DHT22, AM2302 up to 4 DHT11, DHT22, AM2302 CAN BUS 1x** 1x** R5232 1x* 1x*, Modbus RTU capable DIGITAL INPUTS (DI) 16x 3,3 / 5 / 12 / 24 V 16x 3,3 / 5 / 12 / 24 V DIGITAL OUTPUTS (DO) 12x PNP 5 / 12 / 24 V, 0,5 A 12x PNP 5 / 12 / 24 V, 0,5 A ANALOG VOLTAGE INPUTS (AI-U) 4x 05 V, 010 V, 10 Bit 2x 020 mA, 10 Bit ANALOG CURRENT INPUTS (AI-U) 2x 020 mA, 10 Bit 2x 010 V, 10 Bit ANALOG OUTPUTS (AO) 2x 010 V, 10 Bit 2x 010 V, 10 Bit RELAIS 4x, max. 230 V / 6 A 4x, max. 230 V / 6 A PWM-/SERVO OUTPUTS 6x, 16 Bit resolution, 5 V 6x, 16 Bit resolution, 5 V GPIO 4x 5 V GPIO 4x 5 V GPIO INTERFACES AND I/Os Short circuit proof, supply with reverse polarity and overload protection (self-resetting safety device) Short circuit proof, supply with reverse polarity and overload protection (self-resetting safety device) MAX. TEMPERATURE RANGE 0 °C50 °C 0 °C50 °C DIMENSION - WITHOUT HOUSING 236.3 x 101.8 x 27 mm 236.3 x 101.8 x 27 mm TOP HAT RAIL HOUSING <	RETAIN-/REMANENCE MEMORY	64 Bytes Flash EEPROM	64 Bytes Flash EEPROM
HUMIDITY SENSORS CAN BUS 1x** R5232 1x* R5485 1x*, Modbus RTU capable DIGITAL INPUTS (DI) 16x 3,3 / 5 / 12 / 24 V DIGITAL OUTPUTS (DO) 12x PNP 5 / 12 / 24 V, 0,5 A ANALOG VOLTAGE INPUTS (AI-U) ANALOG CURRENT INPUTS (AI-I) ANALOG OUTPUTS (AO) 2x 020 mA, 10 Bit 2x 020 mA, 10 Bit 2x 010 V, 10 Bit RELAIS PWM-/SERVO OUTPUTS 6x, 16 Bit resolution, 5 V GPIO INTERFACES AND I/Os Short circuit proof, supply with reverse polarity and overload protection (self-resetting safety device) MAX. TEMPERATURE RANGE 0 °C50 °C DIMENSION - WITHOUT HOUSING TO HAT RAIL HOUSING Ava Modbus RTU capable 1x* 1x* 1x* 1x* 1x* 1x* 1x* 1x	REAL TIME CLOCK (RTC)	with battery buffering	with battery buffering
RS232 1x* 1x* RS485 1x*, Modbus RTU capable 1x*, Modbus RTU capable DIGITAL INPUTS (DI) 16x 3,3 / 5 / 12 / 24 V 16x 3,3 / 5 / 12 / 24 V DIGITAL OUTPUTS (DO) 12x PNP 5 / 12 / 24 V, 0,5 A 12x PNP 5 / 12 / 24 V, 0,5 A ANALOG VOLTAGE INPUTS (AI-U) 4x 05 V, 010 V, 10 Bit 4x 05 V, 010 V, 10 Bit ANALOG CURRENT INPUTS (AI-I) 2x 020 mA, 10 Bit 2x 020 mA, 10 Bit ANALOG OUTPUTS (AO) 2x 010 V, 10 Bit 2x 010 V, 10 Bit RELAIS 4x, max. 230 V / 6 A 4x, max. 230 V / 6 A PWM-/SERVO OUTPUTS 6x, 16 Bit resolution, 5 V 6x, 16 Bit resolution, 5 V GPIO 4x 5 V GPIO 4x 5 V GPIO INTERFACES AND I/Os Short circuit proof, supply with reverse polarity and overload protection (self-resetting safety device) Short circuit proof, supply with reverse polarity and overload protection (self-resetting safety device) MAX. TEMPERATURE RANGE 0 °C50 °C 0 °C50 °C DIMENSION – WITHOUT HOUSING 236.3 x 101.8 x 27 mm 236.3 x 101.8 x 27 mm TOP HAT RAIL HOUSING Aluminium Aluminium		up to 4 DHT11, DHT22, AM2302	up to 4 DHT11, DHT22, AM2302
Nx *, Modbus RTU capable Nx *, Modbus PTU capable Nx *, Modbus RTU capable Nx *, Modbus PTU ca	CAN BUS	1x**	1x**
DIGITAL INPUTS (DI) 16x 3,3 / 5 / 12 / 24 V 16x 3,3 / 5 / 12 / 24 V DIGITAL OUTPUTS (DO) 12x PNP 5 / 12 / 24 V, 0,5 A 12x PNP 5 / 12 / 24 V, 0,5 A ANALOG VOLTAGE INPUTS (AI-U) 4x 05 V, 010 V, 10 Bit 4x 05 V, 010 V, 10 Bit ANALOG CURRENT INPUTS (AI-I) 2x 020 mA, 10 Bit 2x 020 mA, 10 Bit ANALOG OUTPUTS (AO) 2x 010 V, 10 Bit 2x 010 V, 10 Bit RELAIS 4x, max. 230 V / 6 A 4x, max. 230 V / 6 A PWM-/SERVO OUTPUTS 6x, 16 Bit resolution, 5 V 6x, 16 Bit resolution, 5 V GPIO 4x 5 V GPIO 4x 5 V GPIO INTERFACES AND I/Os Short circuit proof, supply with reverse polarity and overload protection (self-resetting safety device) 5hort circuit proof, supply with reverse polarity and overload protection (self-resetting safety device) MAX. TEMPERATURE RANGE 0 °C50 °C 0 °C50 °C DIMENSION - WITHOUT HOUSING 236.3 x 101.8 x 27 mm 236.3 x 101.8 x 27 mm TOP HAT RAIL HOUSING Aluminium Aluminium	RS232	1x*	1x*
DIGITAL OUTPUTS (DO) 12x PNP 5 / 12 / 24 V, 0,5 A 12x PNP 5 / 12 / 24 V, 0,5 A ANALOG VOLTAGE INPUTS (AI-U) 4x 05 V, 010 V, 10 Bit 4x 05 V, 010 V, 10 Bit ANALOG CURRENT INPUTS (AI-I) 2x 020 mA, 10 Bit 2x 020 mA, 10 Bit ANALOG OUTPUTS (AO) 2x 010 V, 10 Bit 2x 010 V, 10 Bit RELAIS 4x, max. 230 V / 6 A 4x, max. 230 V / 6 A PWM-/SERVO OUTPUTS 6x, 16 Bit resolution, 5 V 6x, 16 Bit resolution, 5 V GPIO 4x 5 V GPIO 4x 5 V GPIO INTERFACES AND I/Os Short circuit proof, supply with reverse polarity and overload protection (self-resetting safety device) Short circuit proof, supply with reverse polarity and overload protection (self-resetting safety device) MAX. TEMPERATURE RANGE 0 °C50 °C 0 °C50 °C DIMENSION - WITHOUT HOUSING 236.3 x 101.8 x 27 mm 236.3 x 101.8 x 27 mm TOP HAT RAIL HOUSING Aluminium Aluminium	RS485	1x *, Modbus RTU capable	1x *, Modbus RTU capable
ANALOG VOLTAGE INPUTS (AI-U) 4x 05 V, 010 V, 10 Bit 4x 05 V, 010 V, 10 Bit ANALOG CURRENT INPUTS (AI-I) 2x 020 mA, 10 Bit 2x 020 mA, 10 Bit ANALOG OUTPUTS (AO) 2x 010 V, 10 Bit 2x 010 V, 10 Bit RELAIS 4x, max. 230 V / 6 A 4x, max. 230 V / 6 A PWM-/SERVO OUTPUTS 6x, 16 Bit resolution, 5 V 6x, 16 Bit resolution, 5 V GPIO 4x 5 V GPIO 4x 5 V GPIO INTERFACES AND I/Os Short circuit proof, supply with reverse polarity and overload protection (self-resetting safety device) Short circuit proof, supply with reverse polarity and overload protection (self-resetting safety device) MAX. TEMPERATURE RANGE 0 °C50 °C 0 °C50 °C DIMENSION - WITHOUT HOUSING 236.3 x 101.8 x 27 mm 236.3 x 101.8 x 27 mm TOP HAT RAIL HOUSING Aluminium Aluminium	DIGITAL INPUTS (DI)	16x 3,3 / 5 / 12 / 24 V	16x 3,3 / 5 / 12 / 24 V
ANALOG CURRENT INPUTS (AI-I) ANALOG OUTPUTS (AO) 2x 020 mA, 10 Bit 2x 010 V, 10 Bit 2x 010 V, 10 Bit 4x, max. 230 V / 6 A 4x, max. 230 V / 6 A 6x, 16 Bit resolution, 5 V GPIO INTERFACES AND I/Os Short circuit proof, supply with reverse polarity and overload protection (self-resetting safety device) MAX. TEMPERATURE RANGE 0°C50°C DIMENSION - WITHOUT HOUSING Aluminium 2x 020 mA, 10 Bit 2x 010 V, 10 Bit 2x 010 V, 10 Bit 4x, max. 230 V / 6 A 6x, 16 Bit resolution, 5 V 4x 5 V GPIO 4x 5 V GPIO Short circuit proof, supply with reverse polarity and overload protection (self-resetting safety device) 0°C50°C 0°C50°C 236.3 x 101.8 x 27 mm Aluminium	DIGITAL OUTPUTS (DO)	12x PNP 5 / 12 / 24 V, 0,5 A	12x PNP 5 / 12 / 24 V, 0,5 A
ANALOG OUTPUTS (AO) 2x 010 V, 10 Bit 2x 010 V, 10 Bit 4x, max. 230 V / 6 A 4x, max. 230 V / 6 A 6x, 16 Bit resolution, 5 V 6x, 16 Bit resolution, 5 V 4x 5 V GPIO INTERFACES AND I/Os Short circuit proof, supply with reverse polarity and overload protection (self-resetting safety device) MAX. TEMPERATURE RANGE 0°C50°C 0°C50°C DIMENSION - WITHOUT HOUSING Aluminium Aluminium 2x 010 V, 10 Bit 4x, max. 230 V / 6 A 6x, 16 Bit resolution, 5 V 4x 5 V GPIO 5xort circuit proof, supply with reverse polarity and overload protection (self-resetting safety device) 0°C50°C 236.3 x 101.8 x 27 mm Aluminium	ANALOG VOLTAGE INPUTS (AI-U)	4x 05 V, 010 V, 10 Bit	4x 05 V, 010 V, 10 Bit
RELAIS 4x, max. 230 V / 6 A PWM-/SERVO OUTPUTS 6x, 16 Bit resolution, 5 V 6x, 16 Bit resolution, 5 V 6x, 16 Bit resolution, 5 V 4x 5 V GPIO INTERFACES AND I/Os Short circuit proof, supply with reverse polarity and overload protection (self-resetting safety device) MAX. TEMPERATURE RANGE 0°C50°C 0°C50°C DIMENSION - WITHOUT HOUSING Aluminium 4x, max. 230 V / 6 A 6x, 16 Bit resolution, 5 V 4x 5 V GPIO 5hort circuit proof, supply with reverse polarity and overload protection (self-resetting safety device) 0°C50°C 236.3 x 101.8 x 27 mm Aluminium	ANALOG CURRENT INPUTS (AI-I)	2x 020 mA, 10 Bit	2x 020 mA, 10 Bit
PWM-/SERVO OUTPUTS 6x, 16 Bit resolution, 5 V 6pio 4x 5 V GPIO 4x 5 V GPIO 4x 5 V GPIO Short circuit proof, supply with reverse polarity and overload protection (self-resetting safety device) MAX. TEMPERATURE RANGE 0°C50°C 0°C50°C 0°C50°C 236.3 x 101.8 x 27 mm Aluminium Aluminium Aluminium	ANALOG OUTPUTS (AO)	2x 010 V, 10 Bit	2x 010 V, 10 Bit
GPIO 4x 5 V GPIO 4x 5 V GPIO INTERFACES AND I/Os Short circuit proof, supply with reverse polarity and overload protection (self-resetting safety device) Short circuit proof, supply with reverse polarity and overload protection (self-resetting safety device) MAX. TEMPERATURE RANGE 0°C50°C 0°C50°C DIMENSION - WITHOUT HOUSING 236.3 x 101.8 x 27 mm 236.3 x 101.8 x 27 mm TOP HAT RAIL HOUSING Aluminium Aluminium	RELAIS	4x, max. 230 V / 6 A	4x, max. 230 V / 6 A
INTERFACES AND I/Os Short circuit proof, supply with reverse polarity and overload protection (self-resetting safety device) MAX. TEMPERATURE RANGE O °C50 °C DIMENSION - WITHOUT HOUSING O °C50 °C 236.3 x 101.8 x 27 mm Aluminium Short circuit proof, supply with reverse polarity and overload protection (self-resetting safety device) O °C50 °C 236.3 x 101.8 x 27 mm Aluminium	PWM-/SERVO OUTPUTS	6x, 16 Bit resolution, 5 V	6x, 16 Bit resolution, 5 V
overload protection (self-resetting safety device) overload protection (self-resetting safety device) MAX. TEMPERATURE RANGE 0 °C50 °C 0 °C50 °C 236.3 x 101.8 x 27 mm Aluminium Aluminium Aluminium	GPIO	4x 5 V GPIO	4x 5 V GPIO
DIMENSION – WITHOUT HOUSING 236.3 x 101.8 x 27 mm 236.3 x 101.8 x 27 mm TOP HAT RAIL HOUSING Aluminium Aluminium	INTERFACES AND I/Os		
TOP HAT RAIL HOUSING Aluminium Aluminium	MAX. TEMPERATURE RANGE	0 °C50 °C	0 °C50 °C
	DIMENSION – WITHOUT HOUSING	236.3 x 101.8 x 27 mm	236.3 x 101.8 x 27 mm
EXTENSION ROADD 2 RASIC 18+ 7 R 3 R 3 R+ // R 18+ 7 R 3 R 3 R+ // R	TOP HAT RAIL HOUSING	Aluminium	Aluminium
באז בועסט אסטוני דייז כין פיני בין בין פיני בין פיני בין פיני בין פיני בין בין פיני בין בין פיני בין פיני בין פיני בין פיני בין פיני בין בין פיני בין פיני בין בין פיני בין פיני בין פיני בין פיני בין בין בין בין בין בין בין בין בין בי	EXTENSION BOARD & BASIC	1 B+, 2 B, 3 B, 3 B+, 4 B	1 B+, 2 B, 3 B, 3 B+, 4 B

^{*} RS232 and RS485 cannot be operated simultaneously **CAN interfaces and analog outputs cannot be used together

PiXtend® V2 can be programmed with the following Languages

- ▶ CODESYS® V3 Professional programming system for PLC programming according to IEC 61131-3
- > C Linux programming standard
- Python Script language on the Raspberry Pi
- ▶ FHEM Open source home automation system, control homes via web or app
- ➤ Node-RED Graphical flow programming for the IoT age

Product Highlights

PiXtend® is a programmable logic controller based on the high-performing Raspberry Pi single-board computer. It is available in two variants, with the RPi 3 B+ Broadcom BCM 2837B0 and new with the RPI 4 B Broadcom BCM2711, the most powerful processor of the Raspberry Pi Foundation.

The modules can be expanded with the PiXtend® eIO, an I/O system for digital and analog sensors and actuators that can be connected via Modbus. Other devices, controllers and computer

system are easily connected via serial standard interfaces (RS232, RS485, CAN, Ethernet and WiFi). All these robust interfaces comply with the PLC standard (IEC 61131-2).

The PiXtend® controller can be programmed in common programming languages such as C or Python and is suitable for use with the CODESYS® SoftPLC. An integrated CODESYS® web visualization tool is available for displaying your control elements, diagrams and graphics on tablet or PC.

Client Benefits

- ➤ Easy Design-In thanks to connection planner, 3D models and detailed manuals
- 6 times PWM for actuating drives and model servos, without costly add-on modules
- Perfect connections, high-grade clamps, optional plug-in version

Applications

- Mechanical engineering controller
- Plant engineering controller

PRODUCT NAME	ARTICLE NO.	OPTIONS
PiXtend® V2 -L- EXTENSION BOARD	50199 001	Without Raspberry Pi



PiXtend® V2 -L- ePLC® Basic & Basic Pi 4

PRODUCT NAME	ARTICLE NO.	OPTIONS
PiXtend® V2 -L- ePLC® Basic Pi 4	50199 018	Preinstalled SD-Card, Basis Image
PiXtend® V2 -L- ePLC® Basic Pi 4	50199 019	CODESYS® Image
PiXtend® V2 -L- ePLC® Basic	50199 002	Preinstalled SD-Card, Basis Image
PiXtend® V7 -I - ePI C® Rasic	50199 011	CODESYS® Image



- Board basic version
- Open version
- > Product with Raspberry Pi 4 B or product with Raspberry Pi 3 B+

PiXtend® V2 -L- ePLC® Pro & Pro Pi 4

PRODUCT NAME	ARTICLE NO.	OPTIONS
PiXtend® V2 -L- ePLC® Pro Pi 4	50199 022	Preinstalled SD-Card, Basis Image
PiXtend® V2 -L- ePLC® Pro Pi 4	50199 023	CODESYS® Image
PiXtend® V2 -L- ePLC® Pro	50199 003	Preinstalled SD-Card, Basis Image
PiXtend® V2 -L- ePLC® Pro	50199 012	CODESYS® Image
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- PiXtend
- Complete device Pro
- > Top hat rail housing
- **▶** Brushed stainless steel
- ▶ Product with Raspberry Pi 4 B or Product with Raspberry Pi 3 B+



About Kontron

Kontron is a global leader in IoT/Embedded Computing Technology (ECT) and offers individual solutions in the areas of Internet of Things (IoT) and Industry 4.0 through a combined portfolio of hardware, software and services. With its standard and customized products based on highly reliable state-of-the-art technologies, Kontronprovides secure and innovative applications for a wide variety of industries. As a result, customers benefit from accerated time-to-market, lower total cost of ownership, extended product lifecycles and the best fully integrated applications.

For more information, please visit: www.kontron.com

About Kontron Electronics

Kontron Electronics GmbH is a full-service provider in the field of electronics, development and manufacturing services. Our business portfolio includes proprietary and client-specific products, development and design services for complex electronics components, modules and systems, as well as production and assembly services for entire devices. The company is part of the technology corporation Kontron AG.

For more Information please visit: www.kontron-electronics.com

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