



NEXTuino BASE

Industrial Programmable Logic Controller

- 6× Analog Inputs 24-bit + 4× ADI 12-bit
- 8× Digital Outputs 3A · PWM 16-bit
- USB-C · Ethernet · RS-485 or CAN (see variants)
- Compact 100×50×19.5 mm · 80 g · Aluminium housing

AVAILABLE VARIANTS

042001000100	RS-485	Screwable terminal block plugs
042001000200	CAN	Screwable terminal block plugs
042001000300	RS-485	Screwless terminal block plugs
042001000400	CAN	Screwless terminal block plugs

GENERAL

Dimensions (W × H × D)	mm / 100 x 50 x 19,5 / Weight in g / g / 80 / Mounting
screw holes (rail mount with adapter)	Housing / aluminium

ENVIRONMENTAL CONDITIONS

Operating ambient temperature	°C / -10° .. 55°
Relative humidity – non-condensing	80 % for temp. up to 31 °C,
decreasing linearly to 50 %	
relative humidity at 55 °C	Pollution Degree / PD2 / Altitude
up to 2000m AMSL	
Vibration (5 f 9 Hz)	1,75 mm amplitude sinus / 3,5 mm amplitude random
Vibration (9 f 150 Hz)	0,5 g acceleration sinus / 1,0 g acceleration random
Transport and Storage	-20°C – +70°C / 10 to 90% no condensation
Altitude 3000m AMSL	Shock response / 15g, 11ms half sinus all 3 axes

ELECTRICAL CHARACTERISTICS

Nominal Voltage	V DC	12-24
Absolute Maximum	V DC	36
Power consumptions	W	0,8 .. 1,0

I/O

USB (Power for programming only)	
USB-C for RP2040 core	Ethernet
RJ45, 10/100Mbps	
Analog inputs AI0 .. AI5	V / 0 .. 28 @Amplifier Gain 2 (by default) / Resolution / bit / 24 / Sampling Rate / kHz / up to 1,15 / Amplifier Gain / 0.33, 1, 2 (default), 4, 8, 16, 32, 64
@64 measure range = 0 .. 0,85V @24bit	
Analog/Digital inputs ADI0 .. ADI3	0 .. 25,8V
Analog Sampling Rate	kHz / up to 66 / Resolution / bit / 12
Digital Outputs, no galvanic insulation	8x Half-Bridge Driver up to 3A per channel / 8x PWM 16 Bit (8bit by default)
Adjustable output current limit from 0.5A to 3A	
	Logic level I/Os / 2x GPIO 3,3V
	Communication

PARAMETER	COND.	VALUE / SPECIFICATION
COMPUTE CAPABILITIES		
Chip Type		RPI RP2040 / On Chip SRAM / 264KB
Flash Memory (external over QSPI)		16 Megabyte / Chip Frequency / 133Mhz / Secure Element
ECC608 Cryptochip		
PROTECTION		
ESD HBM Class 0		
Contact discharge: ±4kV		Air discharge: ±8kV
Supply input over current protection		-
Supply input reverse polarity protection		yes / Digital Output
Overload, short circuit, ESD		Signal Input
Overvoltage, ESD		
Pin header connector		ESD / Current +3,3V
total 500mA, resettable fuse		

PHYSICAL DIMENSIONS

