

# Product data sheet

## Characteristics

# NORVI ARITA

STM32F103VCT6 | ATMEGA 2560

14 Digital Inputs  
10 Relay outputs  
2 Transistor outputs  
RS-485 Communication  
4 - 20mA Analog inputs  
0 - 10V Analog inputs  
W5500 Ethernet connectivity  
micro-SD Card support



## Main

Range of product	NORVI ARITA
Product type	Programmable Controller
Rated supply voltage	24V DC
Discrete input number	14 discrete input , interrupts configurable on each input
Discrete output type	Relay and Transistor
Discrete output number	10 Relay outputs , 2 Transistor outputs
Discrete output voltage	24V DC for transistor output
Discrete output current	0.5A with T0.0... T0.1 Transistor 2 A with R0....R4 and Q0....Q4 Relay outputs

## Complementary

Discrete IO number	26
Number of Expansions	4
Supply voltage limits	20.4....28.8V
Inrush current	<=50A
Power consumption in W	32.6.....40.4 with all outputs ON
Discrete logic input	Sink or source
Discrete input voltage	24V
Discrete input voltage type	DC
Voltage state 1 guaranteed	>=15 V for input
Voltage state 0 guaranteed	<=5 V for input
Discrete input current	5 mA for input
Input impedance	4.7k Ohm for input
Memory capacity	Refer datasheet of base micro-controller
Battery type	lithium non rechargeable *Model 8 Only
Backup time	2 years at 25°C *Model 8 Only

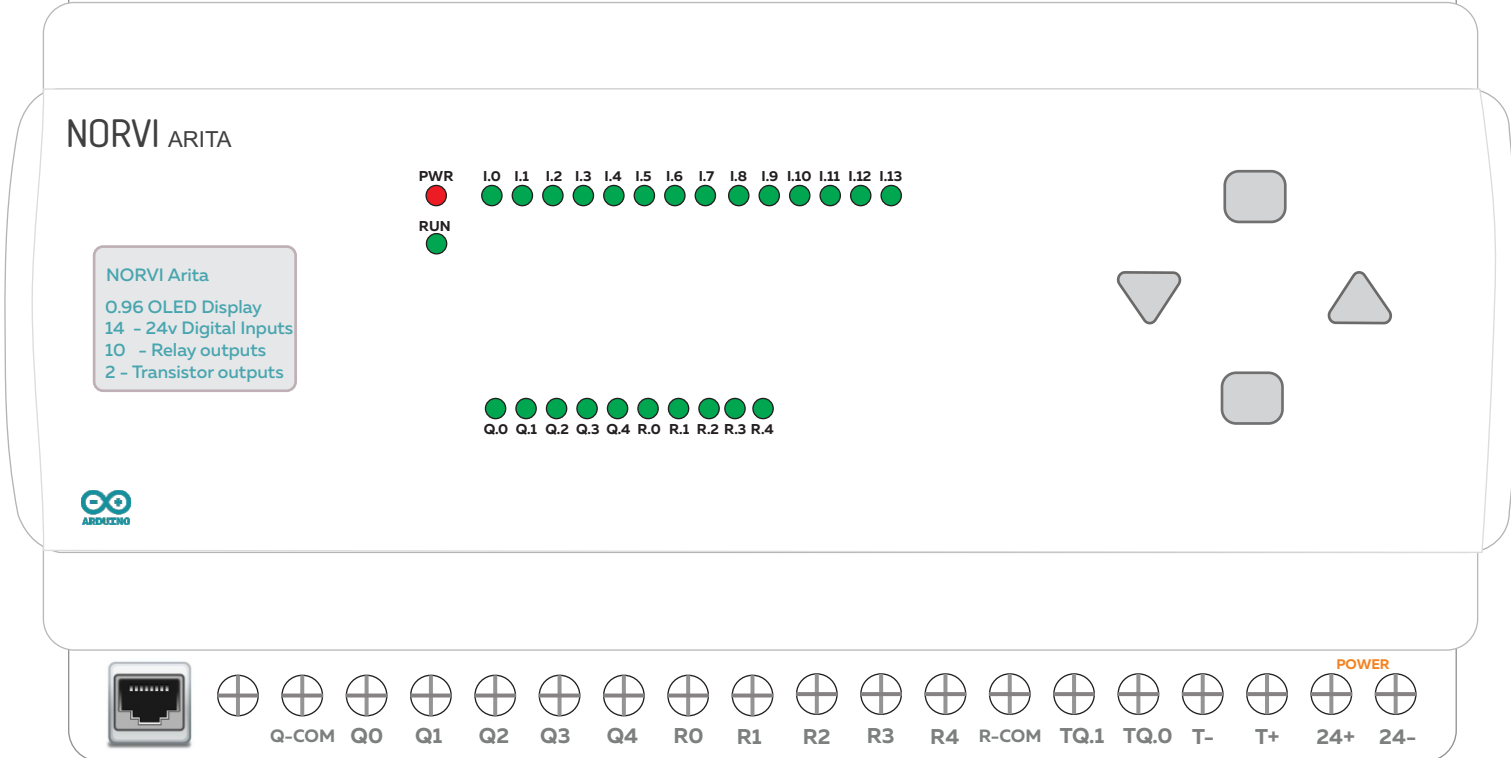
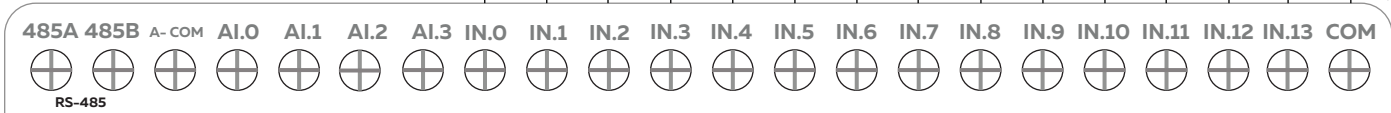
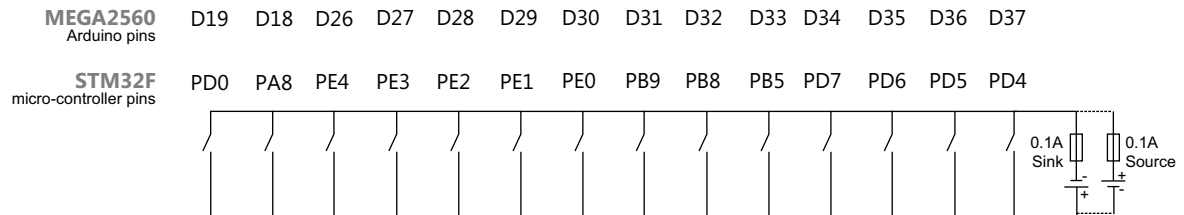
Local signalling	1 LED green for PWR 1 LED green for RUN 14 LED green for I0.....I14 10 LED green for Q0.....Q4 and R0.....R4 2 LED green for T0....T1
Electrical connection	Removable screw terminal block for inputs and outputs (pitch 5.08 mm)
Mounting support	Top hat type TH35-15 rail conforming to IEC 60715 Top hat type TH35-7.5 rail conforming to IEC 60715 Plate or panel with fixing kit
Height	86.60 mm
Depth	56.60 mm
Width	122.10 mm
Product weight	0.43 Kg

## Environment

Resistance to electrostatic discharge	4kV on contact 8kV on air
Resistance to electro magnetic fields	10 V/m (80 MHz ..... 1GHz) 3 V/m (1.4 MHz ..... 2 GHz) 1 V/m (2 MHz ..... 3 GHz)
Immunity to microbreaks	10 ms
Relative humidity	10....95% without condensation in operation
IP degree of protection	IP20
Operating altitude	0...2000m
Storage altitude	0...3000m
Shock resistance	15 gn for 11 ms

### Digital inputs wiring diagram

24V DC Sink/Source



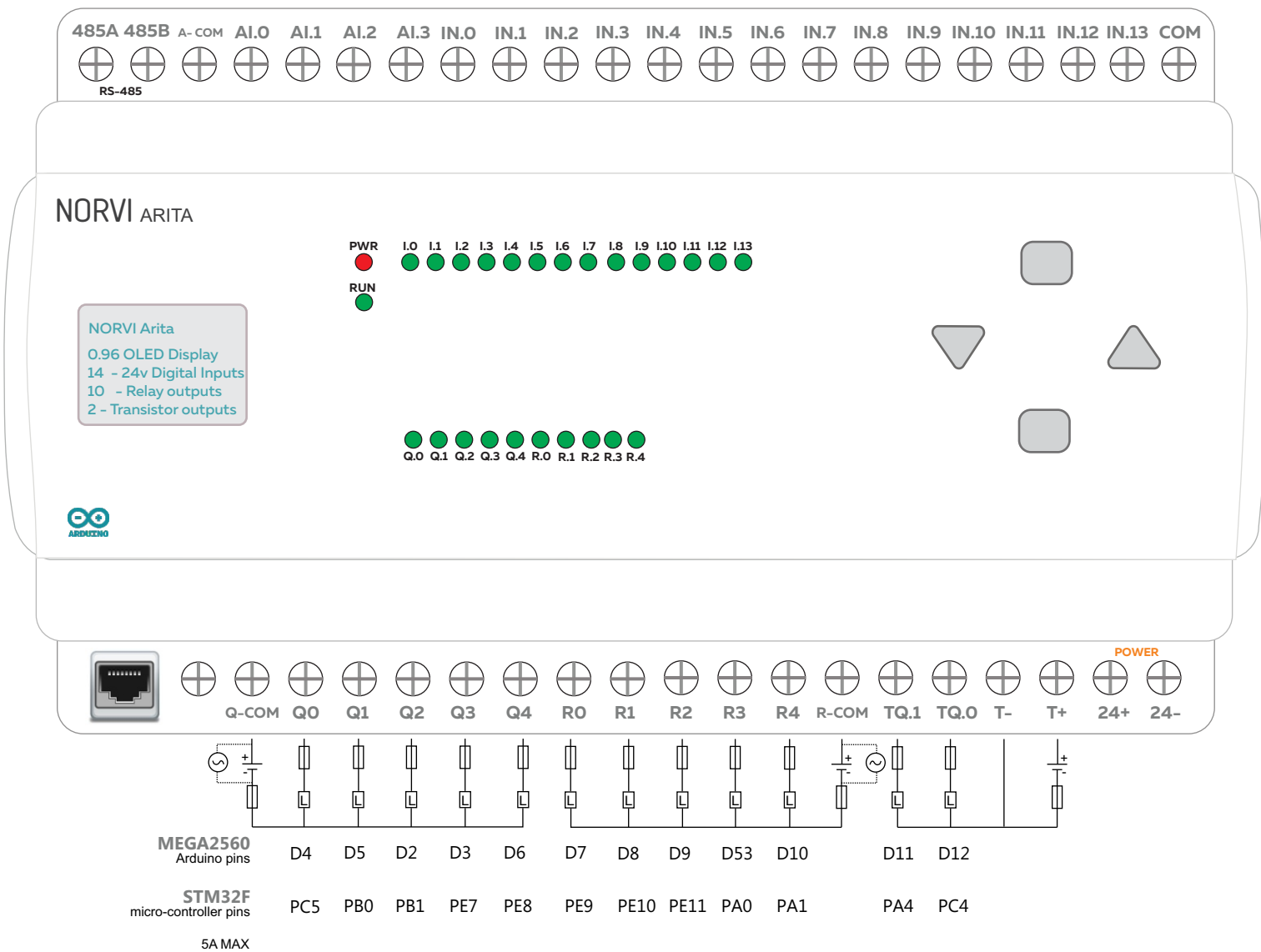
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## Connections and Schema

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## Relay and Transistor outputs wiring diagram



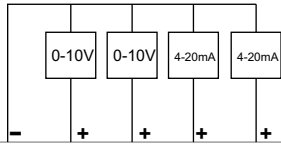
### Analog input wiring diagram

ADC : ADS1115

Connection : I2C 0x48

SCL PD0 D21

SDA PD1 D20



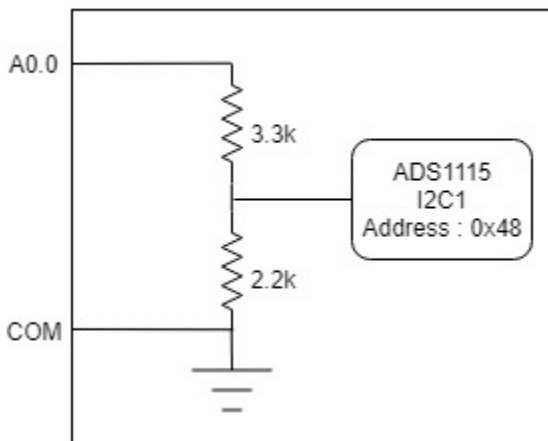
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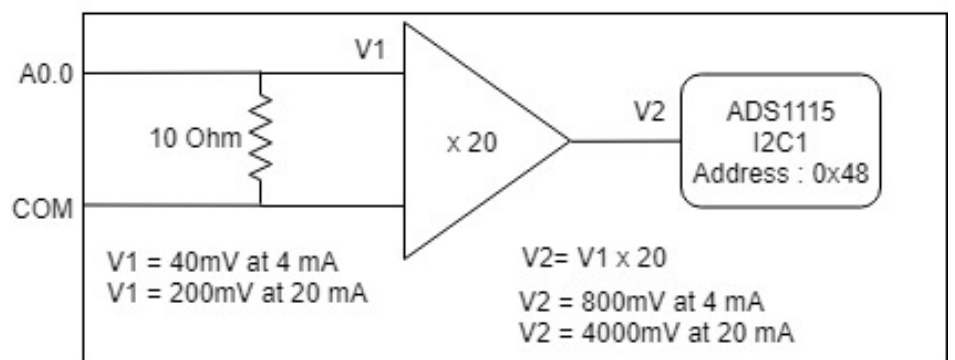
- 0.96 OLED Display
- 14 - 24v Digital Inputs
- 10 - Relay outputs
- 2 - Transistor outputs



0 -10 V input to 0 - 4V



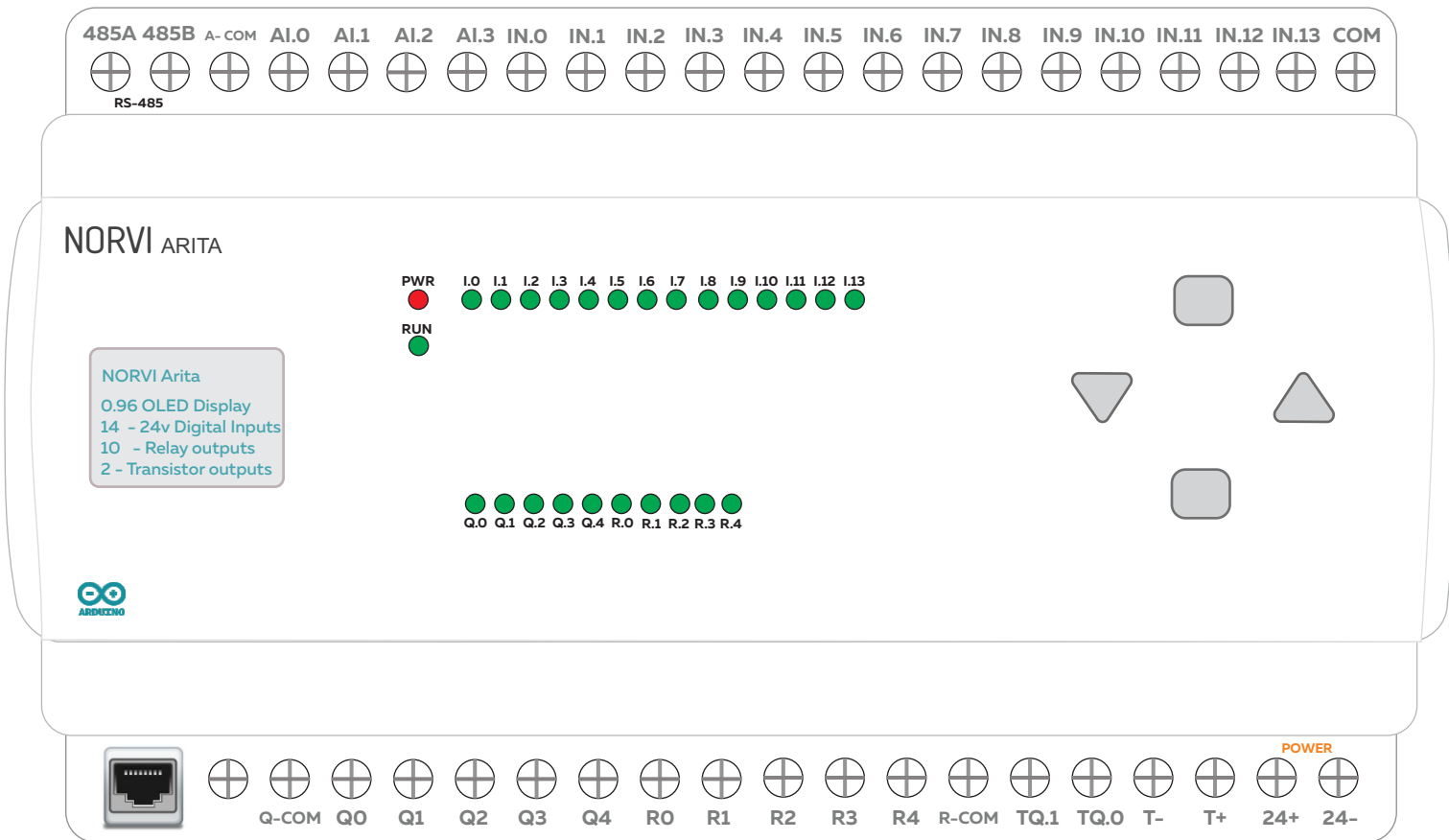
0 -10 V input to 0 - 4V



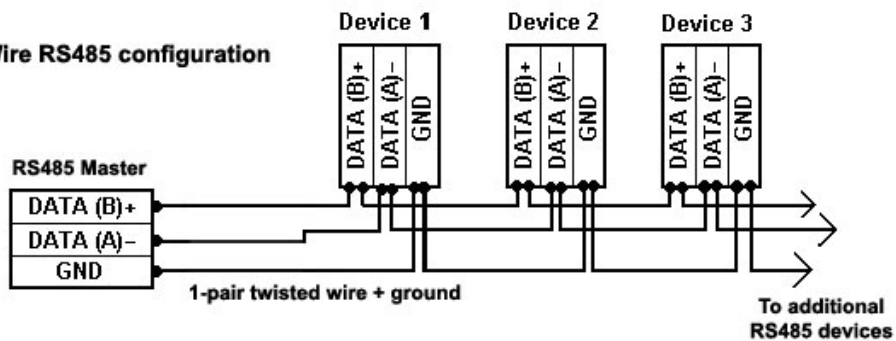
## RS-485 communication wiring diagram

Driver	MAX485
UART Connection	Serial 3
Flow Control	D42 -MEGA2560 / PC9 STM32

Hardware UART library file should be edited to work with UART connections



### 2-Wire RS485 configuration



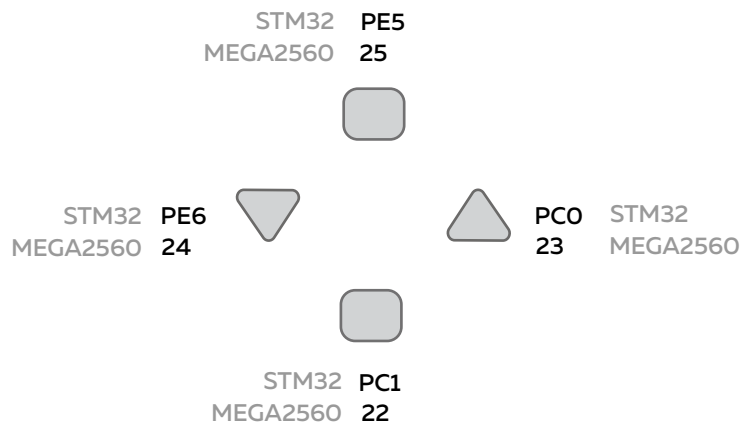
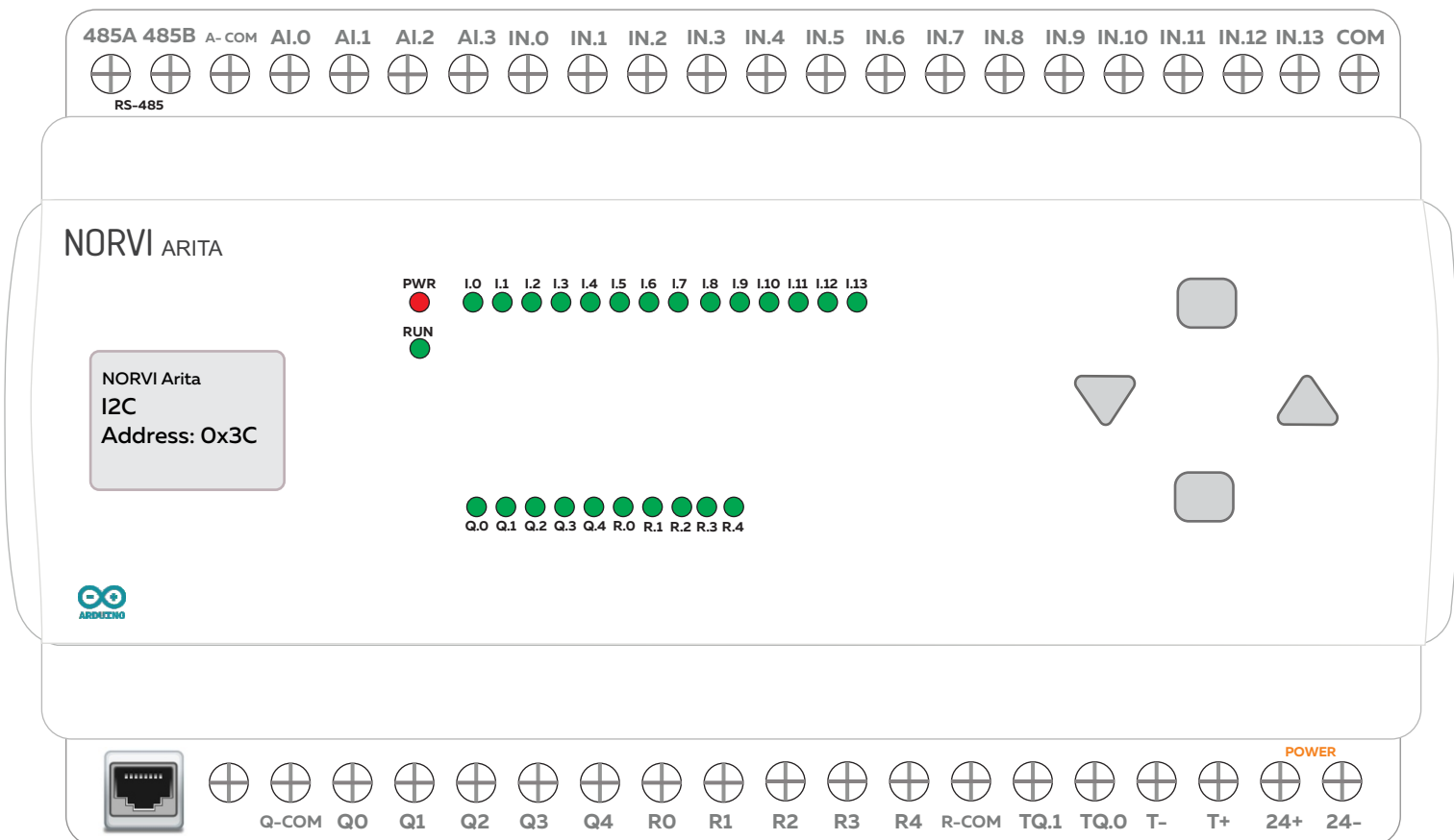
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Connections and Schema

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## Integrated OLED Display and Buttons



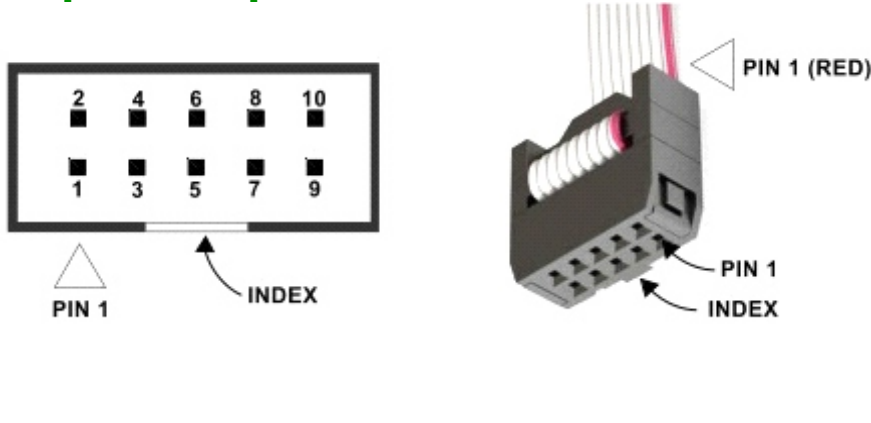
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## Expansion

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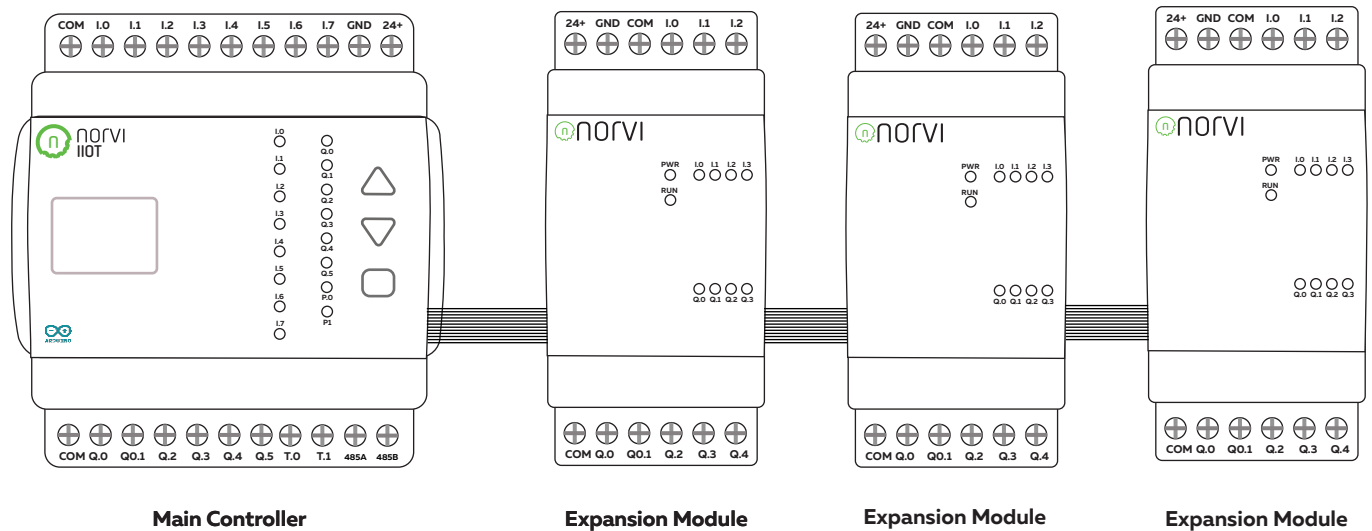
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## Expansion port



PIN	Mega Connection		
1	TX2	PH1	D16
2	SCK1	PB1	D52
3	RX2	PH0	D17
4	MISO1	PB3	D50
5	EXP1	PB7	D13
6	MOSI1	PB2	D51
7	EXP2	PD7	D38
8	SCL	PD0	D21
9	Ground		
10	SDA	PD1	D20

## Expansion modules



Expansion modules connects to the right side of the controller

Upto 6 expansion modules can be connected on one controller

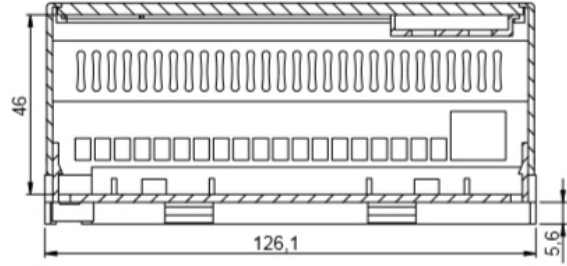
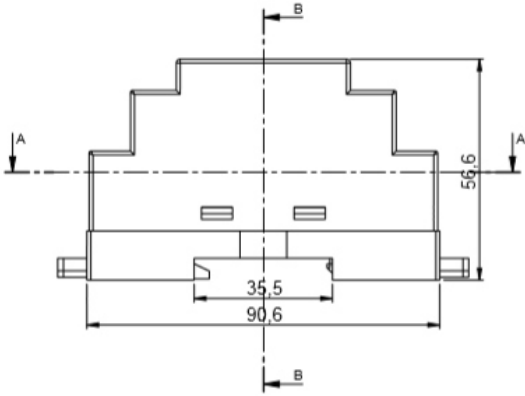
Expansion modules use I2C, UART and GPIO on the expansion port

Depending on the model, some expansion modules require external power





## Dimensions



SECTION B-B  
SCALE 1 : 1

