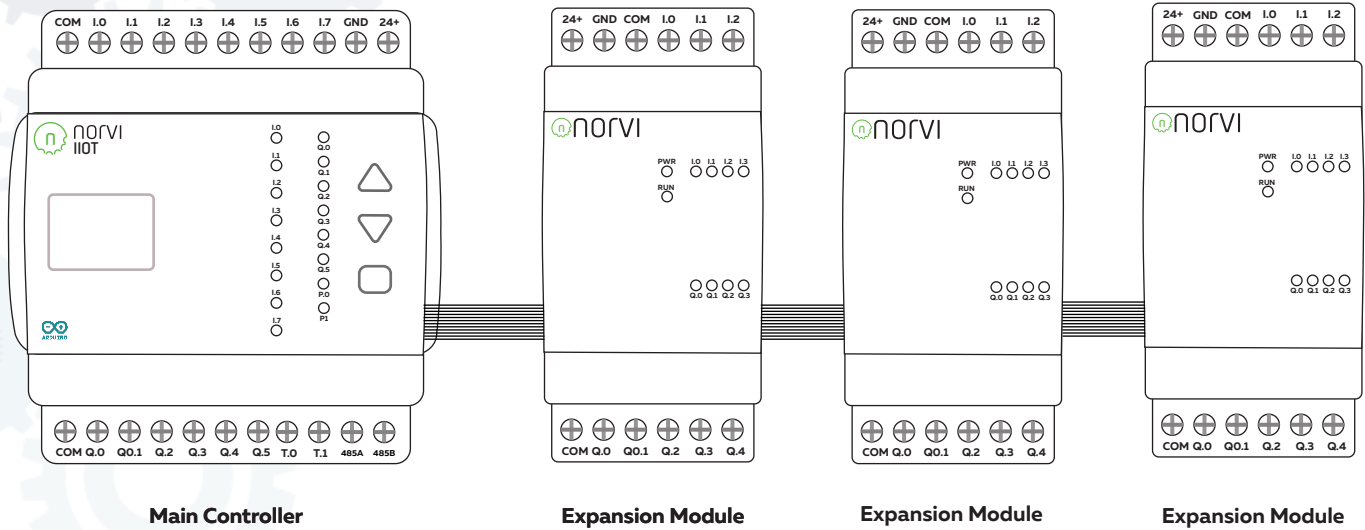


NORVI

Expansions

For Industrial IOT Applications



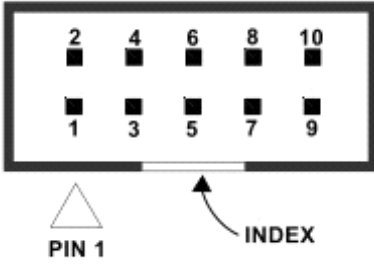
Expansion modules
Product lineup

How it works...

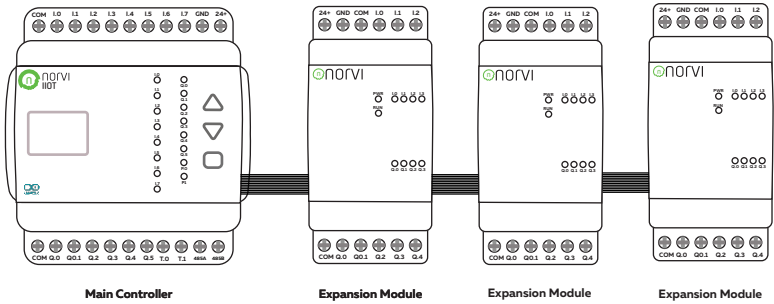
Expansion port

Connect the expansion modules to the side of the NORVI controllers. Expansion ports provides access to controller GPIO and UART / I2C connections.

PIN	ESP32 Connection
1	TXD0
2	IO33
3	RXD0
4	Not Connected
5	IO32
6	BOOT IO0
7	SCL IO17
8	Not Connected
9	SDA IO16
10	Ground



Daisy Chain Capability



Connect upto 6 modules in series to yeild the max out of the controller



Product line...

Analog expansions

NORVI-EX-ANV01

Analog input 0 to 10V

4 channel 0 - 10V inputs with ADS1115 16 bit ADC provides high accuracy analog inputs.

Acquisition

**Texas Instruments ADS-1115
16bit ADC with PGA**

Interface with controller
I2C

Input voltage range upto 10V

Over voltage protection

Programmable Gain Amplifier

NORVI-EX-ANI01

Analog input 0 to 20mA

4 channel 0 - 20mA / 4 - 20mA inputs with ADS1115 16 bit ADC provides high accuracy analog inputs.

Acquisition

**Texas Instruments ADS-1115
16bit ADC with PGA**

Interface with controller
I2C

Maximum current 25 mA

Voltage upto 35 V

10 Ohm Low impedance

NORVI-EX-TEX01

Thermocouple reading

2 channel thermocouple interface, with cold junction compensation, straight temperature readouts with 0.25° C resolution.

Acquisition

**MAX31855 cold-junction compensated
thermocouple-digital converter**

Interface with controller
I2C via SC18IS602B

Versions Available for Most Common Thermocouple Types:
K-, J-, N-, T-, S-, R-, and E-Type

Detects Thermocouple Shorts to GND or VCC

Detects Open Thermocouple

Allows readings as high as +1800°C and as low as -270°C

NORVI-EX-BR01

Load cell reading

2 channel load cell interface with HX711 24 bit ADC

Acquisition

HX711 24-Bit ADC for Weigh Scales

Interface with controller
I2C via SC18IS602B

On-chip active low noise PGA with selectable gain
of 32, 64 and 128

Built-in power supply regulator for load-cell

Simultaneous 50 and 60Hz supply rejection

Selectable 10SPS or 80SPS output data rate

Product line...

Communication expansions

NORVI-EX-LR4XX

LoRa connectivity

LoRa communication module with the RYLR896 transceiver provides ultra-long range spread spectrum communication and high interference immunity whilst minimising current consumption. The module is certified by NCC and FCC.

Communication module

REYAX RYLR896 | 868 / 915 Mhz

REYAX RYLR406 | 426 / 433 / 470 Mhz

Interface with controller

AT commands via UART

Semtech SX1276 Engine

High efficiency Power Amplifier

127 dB Dynamic Range RSSI

Built-in and external antenna options

NORVI-EX-NB95X

Narrowband IoT

Nb-IoT communication module with the BC95-G provides ultra low power communication interface for NORVI controllers. The module supports the global bands making it applicable around the world with a super high sensitivity.

Communication module

Quectel BC95-G | :B1/B3/B5/B8/B20/B28

Quectel BC28-G | :B1/B3/B5/B8/B20/B28

Interface with controller

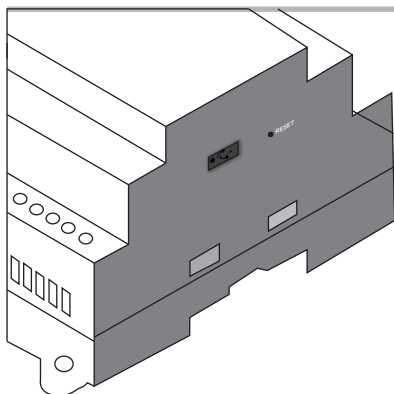
AT commands via UART

extremely low power

Embedded Internet Services Protocols

Quectel Enhanced AT Commands

Built-in and external antenna options



High EMI Environments
Industrial Temperatures

For further inquiries and tech support
info@icd.lk

ICONIC DEVICES PRIVATE LIMITED

Head office
183, Maharagama Road
Boralasgamuwa, Sri Lanka

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.