

NORVI CONTROLLERS
NORVI-GSM-AE07-R-L

Product Features

- ESP32-WROOM32 Module
- GSM / LTE Connection
- Built-in 0.96 OLED Display
- Built-in Button on front panel
- Digital Inputs
- Relay Outputs
- DIN-Rail mount

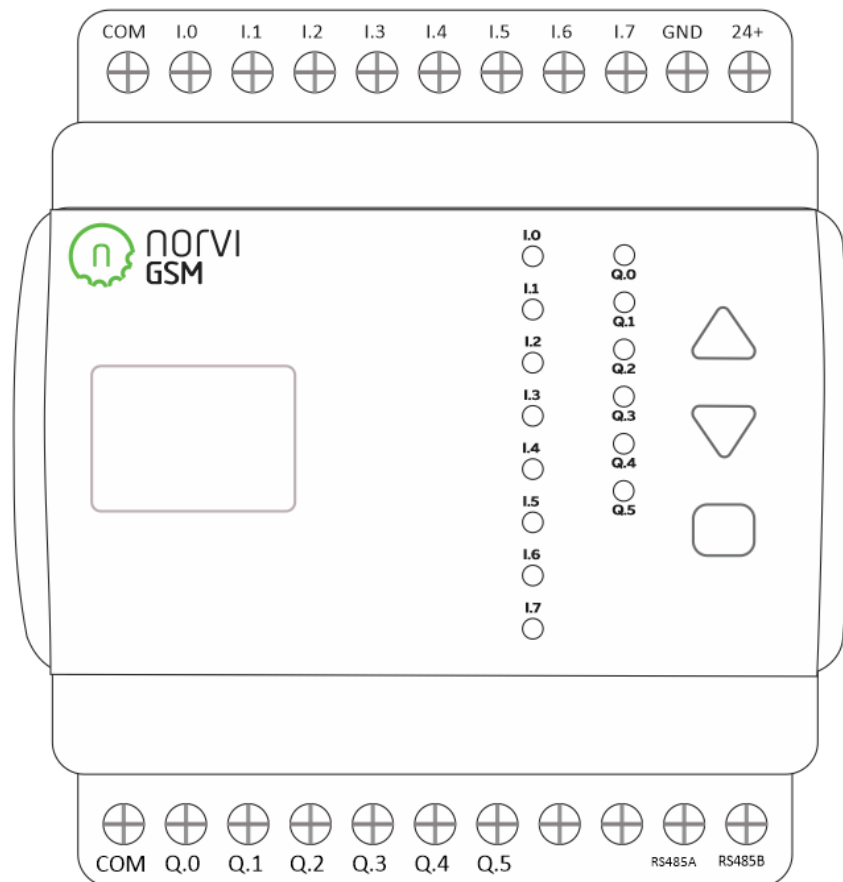


Cellular Communication

Module	SIM7500-E
Brand Name	SIMCom
FCC ID	UDV-201606
TAC	86147503

Expansions Supported

- Analog Input
- Digital Input
- Relay Output



Main

Range of Product	NORVI GSM
Product type	Programmable Controller
Certifications	EN 61131-2:2007 EN 61010-1:2010+A1:2019 EN IEC 61010-2-201:2018 2014/30/EU- Electromagnetic Compatibility (EMC) Annex III, Part B, Module C
Rated supply voltage	24V DC
Communication	WiFi / Bluetooth LTE / EDGE - Quectel EC21 RS-485
Inputs and Outputs	8 x Digital Inputs 6 x Relay Outputs
Displays and Visual Indicators	0.96 OLED Display - POWER INDICATOR - OUTPUT INDICATOR

Product Identification

Product Unified Code	NORVI-GSM-AE07-R-L
Product Part Numbers	NORVI-GSM-AE07-R-L

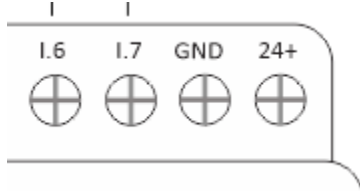
Mechanical Properties

Enclosure	NORVI 204
Mounting / Installation Method	DIN RAIL / MOUNTING TABS
Terminal Type	SCREW TERMINAL
Terminal Arrangement	Top and Bottom
Length	91.0 mm
Height	58.4 mm
Width	70.0 mm

Environment

IP degree of protection	IP20
Operating altitude	0 - 2000 meters
Operating Temperature	- -10 ... +85° C (14...185 °F)
Storage altitude	0 - 2000 meters
Shock resistance	15 gn for 11ms
Resistance to electrostatic discharge	4kV on contact 8kV on air
Resistance to electromagnetic fields	10 V/m (80 MHz 1GHz) 3 V/m (1.4 MHz 2 GHz) 1 V/m (2 MHz 3 GHz)

Electrical Characteristics

Rated Supply Voltage (V)	24V DC
Current Consumption (mA)	400mA
Recommended Power Source	1A 24V DC
Terminal Arrangement	 <p>The diagram shows a terminal block with four pins. Above the pins are labels: '1.6', '1.7', 'GND', and '24+'. Each pin has a circle with a plus sign (+) inside, indicating positive polarity for the first three pins. The 'GND' pin is the ground reference. The '24+' pin is the power supply terminal.</p>

Processing

SOC / MCU	ESP32-WROOM32
Flash Memory	4MB
ROM	448 KB
SRAM	520 KB
PSRAM	NOT AVAILABLE

Built-in Buttons

Button 1 Pin	GPIO36 Analog Input Level 1
Button 2 Pin	GPIO36 Analog Input Level 2
Button 3 Pin	GPIO36 Analog Input Level 3

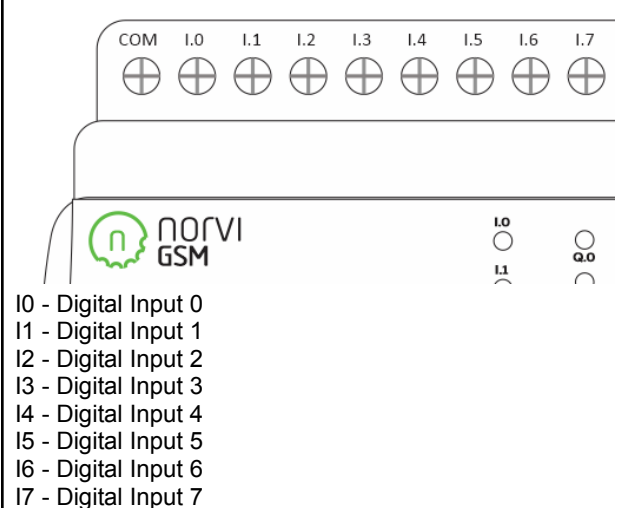
OLED Display

Display Driver	SSD1306
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Display Size	0.96 inch
SCL Pin	GPIO17
SDA Pin	GPIO16
RESET Pin	NOT CONNECTED


INPUTS and OUTPUTS

Digital Inputs

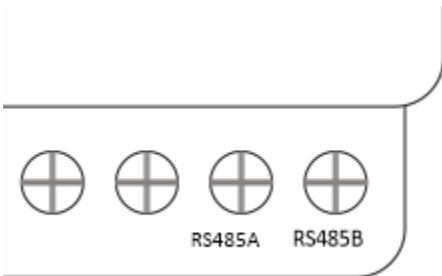
Number of Digital Inputs	8
Digital Input Polarity	Supports both Sink and Source
Digital Input Maximum Voltage	32V DC
Digital Input Minimum Voltage	18V DC
Maximum Switching Frequency	1 kHz
Terminal Arrangement	 <p> I.0 - Digital Input 0 I.1 - Digital Input 1 I.2 - Digital Input 2 I.3 - Digital Input 3 I.4 - Digital Input 4 I.5 - Digital Input 5 I.6 - Digital Input 6 I.7 - Digital Input 7 </p>

Relay Outputs

Number of Relay Outputs	6
Relay Output Type	Normally Open - Single Pole
Contact Current Rating (Resistive)	5A 250VAC / 30VDC
Maximum Contact Voltage	270VAC - 125VDC
Maximum Switching Frequency	N/A

Terminal Arrangement	 <p>COM - Common for Relays Q0 - Relay Output 0 Q1 - Relay Output 1 Q2 - Relay Output 2 Q3 - Relay Output 3 Q4 - Relay Output 4 Q5 - Relay Output 5</p>
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Communication Channels RS-485 Communication

Communication Mode	HALF-DUPLEX
Transceiver	MAX485
Unit Load	1/4
Flow Control / Direction Control Pin	GPIO22
TX Pin	GPIO26
RX Pin	GPIO25
Terminal Arrangement	

GSM / LTE Communication

Model of GSM Modem	SIM7500A
Manufacturer	SIMCom
FCC ID	UDV-201606
TAC	86147503

DATASHEET

NORVI CONTROLLERS
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GSM SERIES

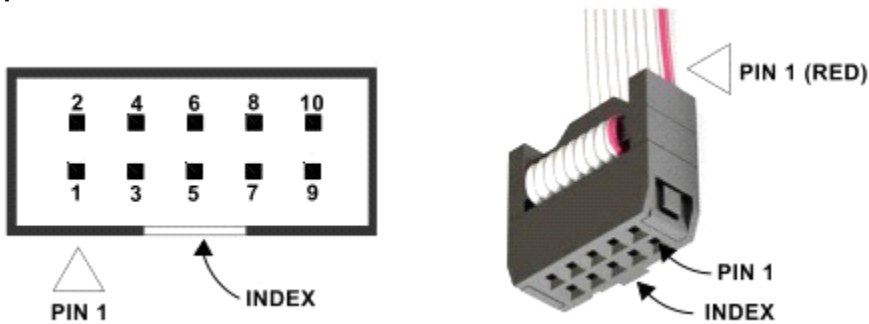
Method of Handling	AT Command over UART
Default Baud Rate	115200 bps
RESET Pin	GPIO21
TX Pin	GPIO33
RX Pin	GPIO32

GPIO Map

GPIO	Description	Usage
0	outputs PWM signal at boot	NRST
1	debug output at boot	RX0 - USB
2	connected to on-board LED	OUTPUT 1 - Relay
3	HIGH at boot	RX0 - USB
4		OUTPUT 3 - Relay
5	outputs PWM signal at boot	Digital Input 5
6	connected to the integrated SPI flash	
7	connected to the integrated SPI flash	
8	connected to the integrated SPI flash	
9	connected to the integrated SPI flash	
10	connected to the integrated SPI flash	
11	connected to the integrated SPI flash	
12	boot fail if pulled high	OUTPUT 0 - Relay
13		Digital Input 4
14	outputs PWM signal at boot	Digital Input 3
15	outputs PWM signal at boot	Digital Input 6
16		SDA - I2C
17		SCL - I2C
18		OUTPUT 5 - Relay
19		Digital Input 7
21		RESET GSM Module
22		RS-485 Flow Control
23		OUTPUT 4 - Relay
25		RS-485 - RXD
26		RS-485 - TXD
27		OUTPUT 2 - Relay

32		RX- GSM Module
33		TX - GSM Module
34	input only	Digital Input 1
35	input only	Digital Input 2
36	input only	Front Panel Buttons
39	input only	Digital Input 0

Expansion Port



PIN	ESP32 Connection
1	NOT CONNECTED
2	TXD0
3	5V DC
4	RXD0
5	BOOT IO0
6	NOT CONNECTED
7	3.3V DC
8	SCL - GPIO17
9	GROUND
10	SDA - GPIO16



REACH US

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