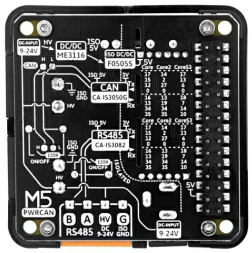
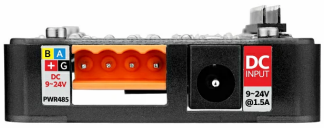
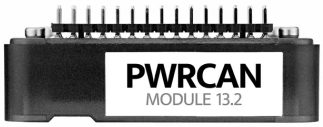
Module13.2 PwrCAN

SKU:M139







Description

Module13.2 PwrCAN is a versatile module designed for the PwrCAN bus, which integrates isolated CAN communication and a DC 9 ~ 24V power supply bus. The module also includes Pwr485 (isolated) bus functionality and provides isolated 5V power supply to the M5 host. The CAN communication part uses the CA-IS3050G isolated transceiver, and the RS485 part uses the CA-IS3082W isolated transceiver. The GPIOs associated with CAN and RS485 communication can be selected via DIP switches, and 120-ohm terminal resistors can be connected in parallel at the CAN and RS485 outlets via DIP switches. The module's power bus supports a wide input voltage range of DC 9 ~ 24V, with the DC jack directly connected to the HT3.96 and XT30 power sections. The module provides power to the M5 host through the built-in isolated power module F0505S-2WR3. This module is suitable for applications such as robot control, protocol conversion, industrial automation, vehicle communication systems, intelligent transportation, and building automation.

Features

- Isolated CAN bus (dual-channel)

- Isolated RS485 bus
- Signal isolation
- Isolated power supply
- Multiple power interfaces
- Wide input voltage range (9-24V)
- CAN/RS485 communication pin switching DIP switch

Includes

- 1 x Module13.2 PwrCAN
- 1 x HT3.96-4P
- 1 x XT30(2+2)PW-M cable

Applications

- Robot control
- Protocol conversion
- Industrial automation
- Vehicle communication systems
- Intelligent transportation
- Building automation

Specifications

Specification	Parameters
Supported Protocols	CAN & RS485 bus communication protocols
CAN Communication	CA-IS3050G@dual-channel
RS485 Communication	CA-IS3082W@single-channel
CAN Interface	XT30(2+2)PW-M horizontal solder board male header
RS485 Interface	HT3.96-4P
CAN Bus Speed	Up to 1Mbps
RS485 Bus Speed	Up to 500Kbps
CAN Supported Nodes	110
RS485 Supported Nodes	256
Voltage Input Range	9-24V
Power Supply Methods	DC power jack (5.5/2.1mm, inner positive outer negative), 485 interface (HT3.96) power supply, CAN interface (XT30) power supply
Operating Temperature	0-40°C
Product Size	54.0 x 54.0 x 19.7mm
Product Weight	27.8g
Package Size	132.0 x 95.0 x 21.0mm
Gross Weight	51.2g

RS485 Communication Test

Communication Distance	Data Rate
30 meters	Maximum data rate 512Kbps, normal transmission and reception, 0% packet loss, 0% error rate
50 meters	Maximum data rate 512Kbps, normal transmission and reception, 0% packet loss, 0% error rate
100 meters	Maximum data rate 512Kbps, normal transmission and reception, 0% packet loss, 0% error rate

CAN Communication Test

Communication Distance	Data Rate
10 meters	Data rate 1000Kbps, normal transmission and reception, 0% packet loss, 0% error rate
30 meters	Data rate 500Kbps, normal transmission and reception, 0% packet loss, 0% error rate
50 meters	Data rate 500Kbps, normal transmission and reception, 0% packet loss, 0% error rate
100 meters	Data rate 250Kbps, normal transmission and reception, 0% packet loss, 0% error rate

Load Capacity Test

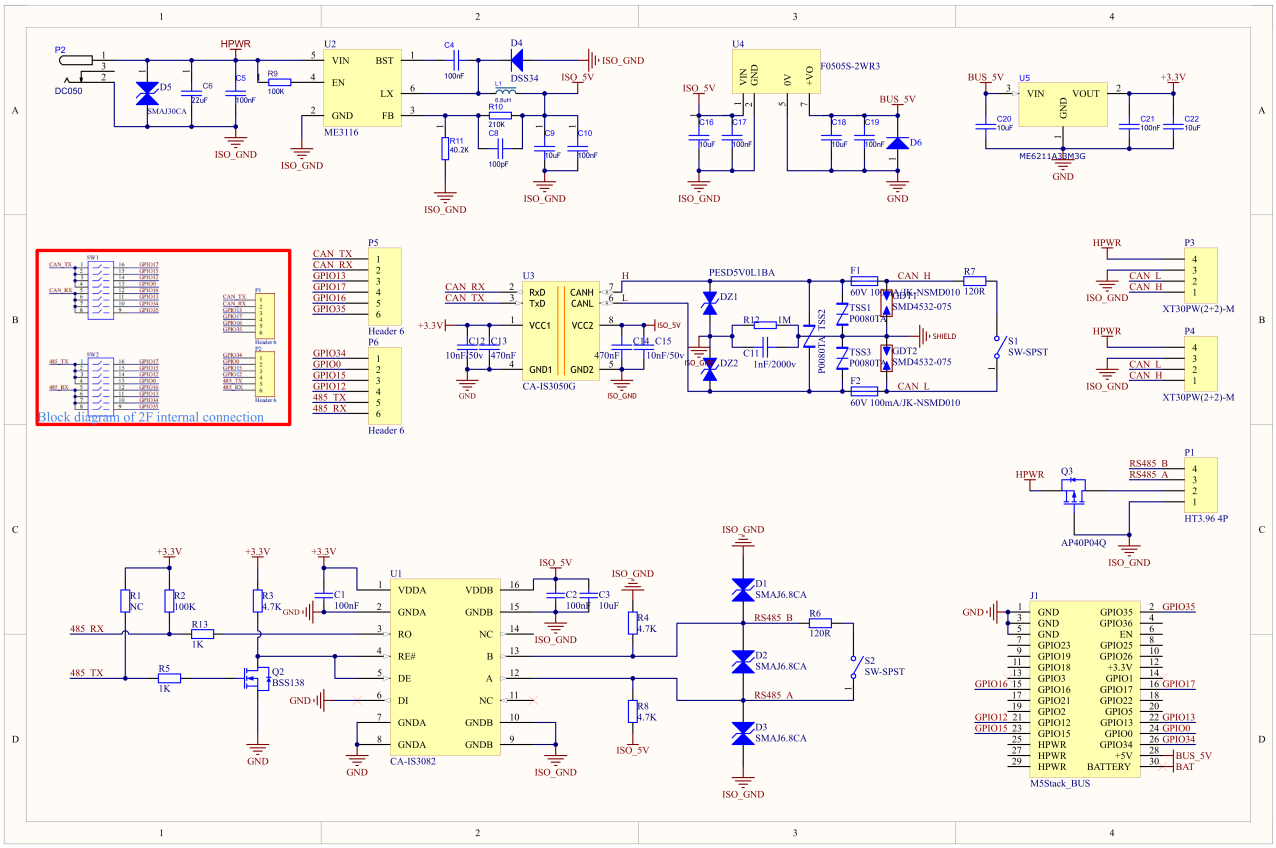
Parameter Category	Specifications
Output Load Capacity	Isolated output maximum current: DC: 4.70V@218mA Non-isolated output maximum current: DC: 4.70V@1.1A

Power Consumption Test

Parameter Category	Specifications
Standby Current	DC 9V@30.94mA DC 12V@23.57mA DC 24V@10mA
Operating Current (with host)	DC 9V@78.60mA DC 12V@65.54mA DC 24V@31mA

Schematics

- Module13.2 PwrCAN Schematics PDF

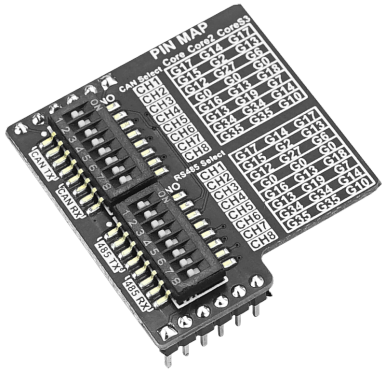


PinMap

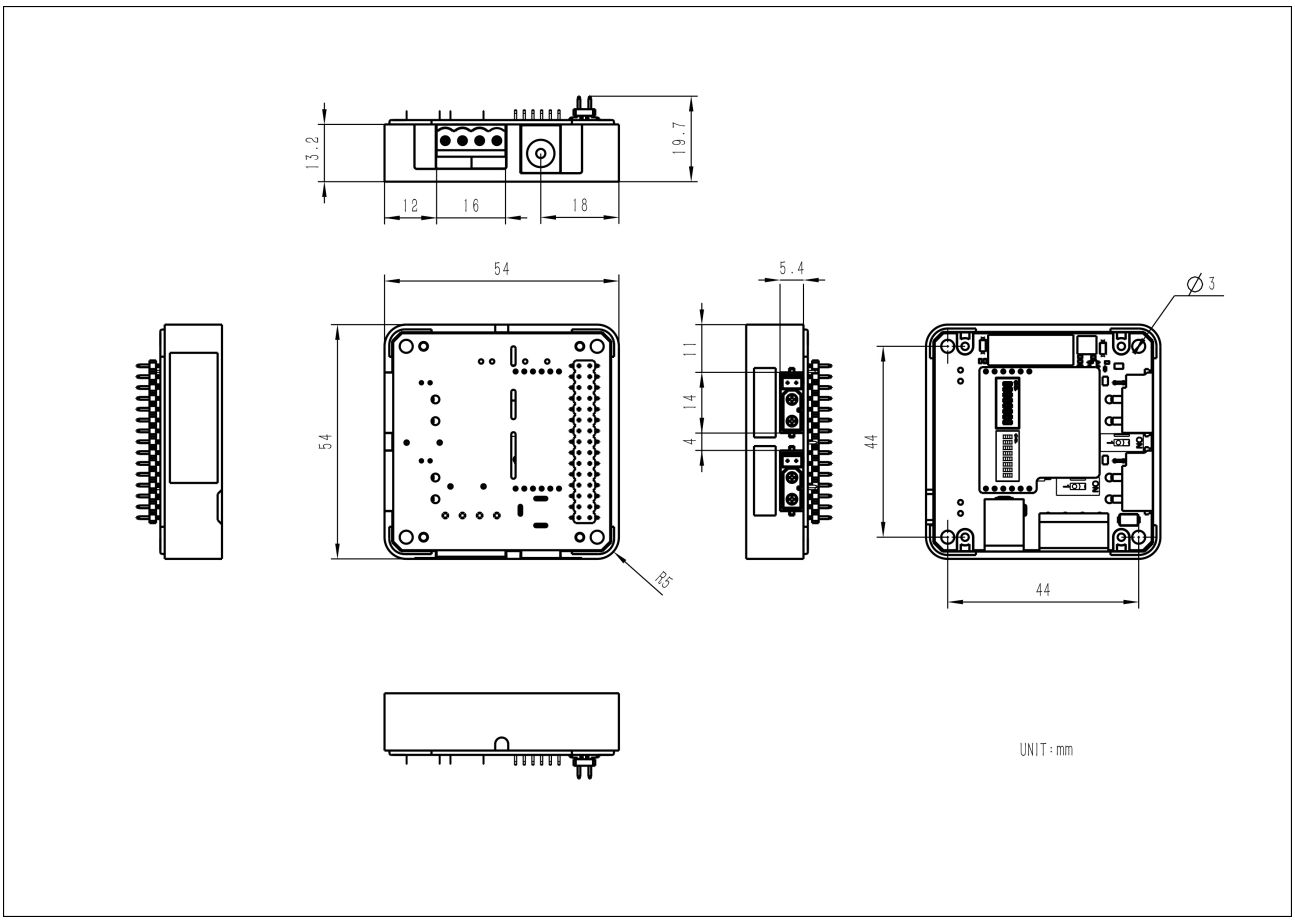
Product	CAN_TX/RS485_TX	CAN_RX/RS485_RX
Basic	G17 / G15 / G12 / G0	G16 / G13 / G34 / G35
Core2	G14 / G2 / G27 / G0	G13 / G19 / G34 / G35
CoreS3	G17 / G13 / G6 / G0	G18 / G7 / G14 / G10

Note

The TX/RX pins of CAN and RS485 cannot share the same pin simultaneously, as it will cause conflicts! Switch the corresponding pins to "ON" using the DIP switch as shown in the figure below.



Model Size



Datasheets

- CA-IS3050G(CAN)
- CA-IS3082W(RS485)

Softwares

Arduino

- Module13.2 PwrCAN Transceiver Test
- Module13.2 PwrCAN RS485 Example
- Module13.2 PwrCAN Control Xiaomi Motor Case

Video

pwrcan视频.mp4