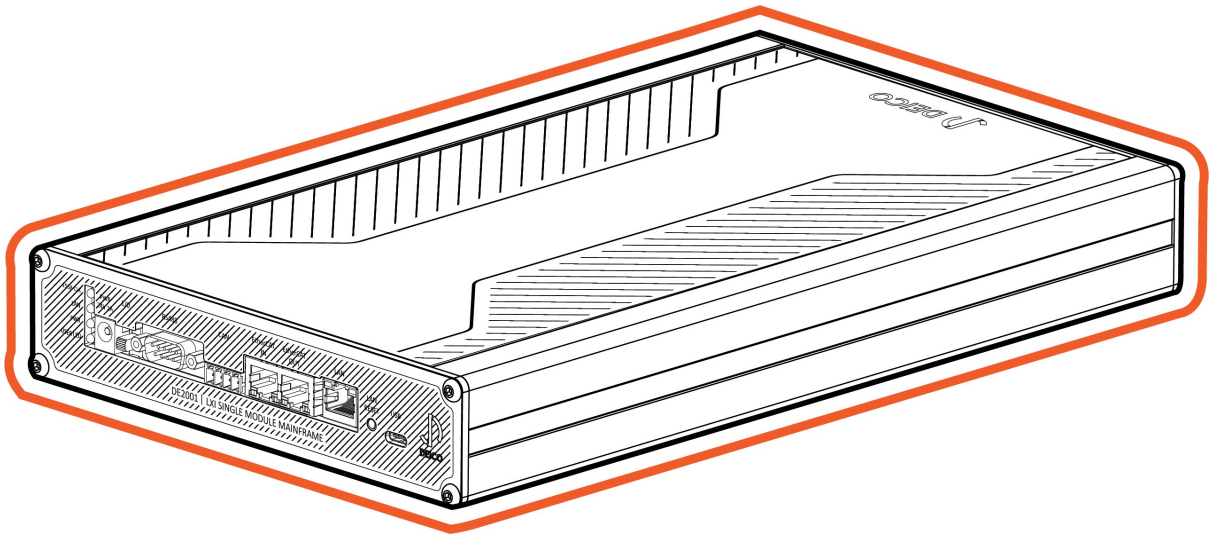
# DE2001 DATASHEET

SINGLE MODULE MAINFRAME



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# Contents

# DESCRIPTION

Single Module Mainframe is a single slot mainframe for related modules. This device allows user to control any related module through RS485, CAN, EtherCAT, Ethernet or USB interface. Single slot mainframe also distributes the required power to the module.

The general features of Single Module Mainframe are listed below.

## Key Features

- ⇨ RS485 interface full duplex
- ⇨ CAN interface
- ⇨ EtherCAT interface
- ⇨ Ethernet interface
- ⇨ USB type C interface
- ⇨ Indicator LEDs
- ⇨ 48W power distribution

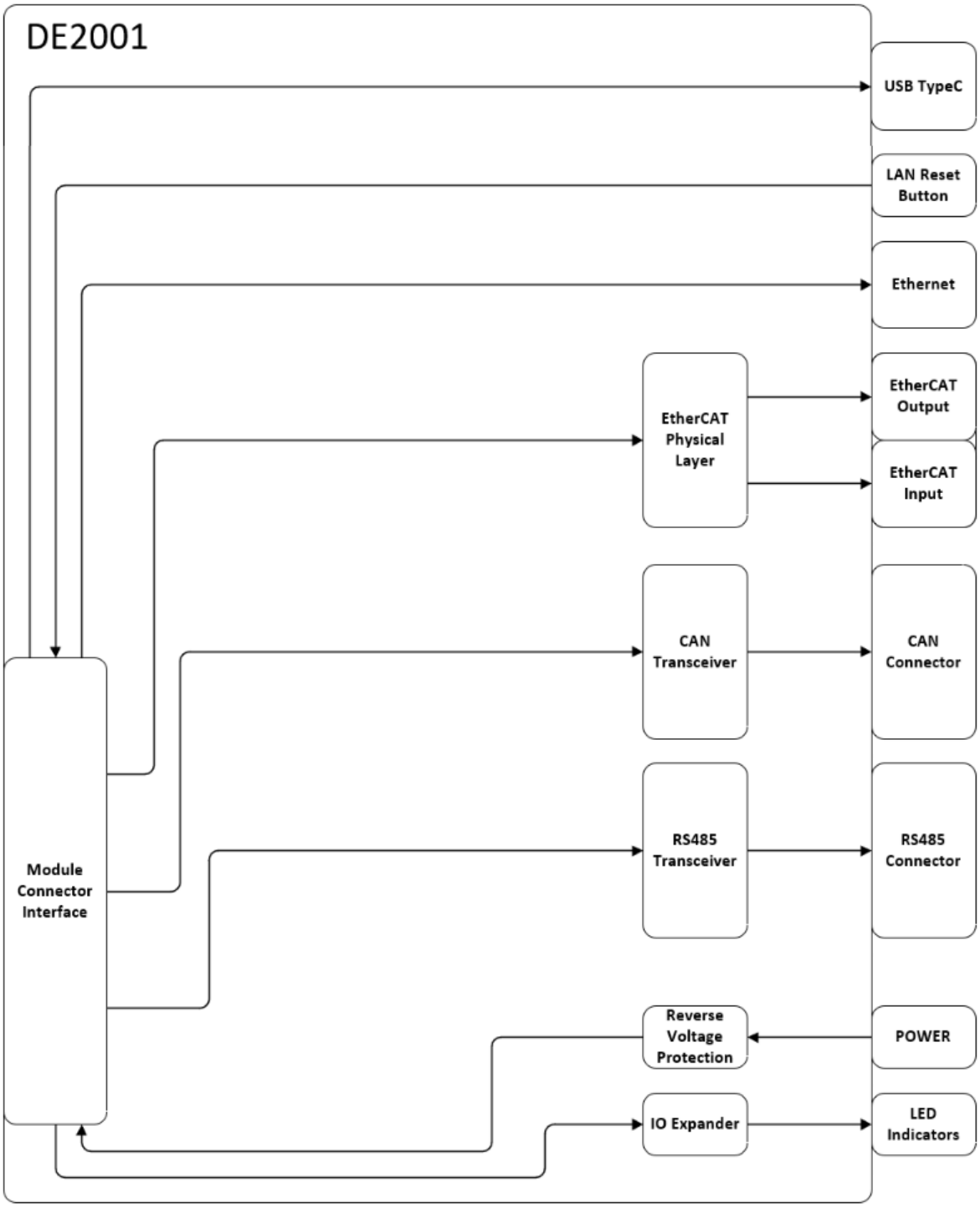
DE2001 is compatible with *IEC 60068-2-1 / IEC 60068-2-2 / IEC 60068-2-78 / IEC 60068-2-27 / IEC 60068-2-64 / EN 61326 (IEC 61326) / EN 55011 (CISPR 11) / AS/NZS CISPR 11 / FCC 47 CFR Part 15B/ ICES-001* standards.

Areas of application include:

- ⇨ LAB Usage
- ⇨ Modular Test Systems
- ⇨ Automated Test Equipment

# HARDWARE OVERVIEW

## Functional Block Diagram




*Mainframe Block Diagram*

# Hardware Specifications

## Electrical

| Specification | Min | Typical | Max | Notes |
|---|---|---|---|---|
| **Input Voltage** | 7.5V | 24V | 36V | - |
| **Input Current** | - | - | 2A | - |
| **Reverse Protection Voltage** | - | - | 200V | - |
| **RS485 Data Rate** | - | - | 20Mbps | Module Dependent |
| **CAN Data Rate** | - | - | 2Mbps | Module Dependent |
| **EtherCAT Data Rate** | - | - | 100Mbps | - |
| **Ethernet Interface** | - | - | 1Gbps | Module Dependent |
| **USB Type C Data Rate** | - | - | 480Mbps | - |

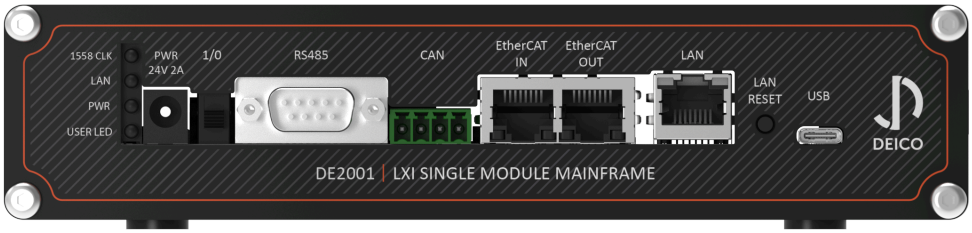
## Physical

| Specification | Description |
|---|---|
| **Dimensions (L/W)** | 331.4mm x 195mm |
| **Height (H)** | 45.4mm |

## Environmental

| Specification | Condition | Value |
|---|---|---|
| **Operating Humidity** | Relative, non-condensing | 10% - 90% |
| **Storage Humidity** | Relative, non-condensing | 5% - 95% |
| **Operating Temperature** | Forced-air cooling from chassis | 0°C - 55°C |
| **Storage Temperature** | - | -40°C - 71°C |

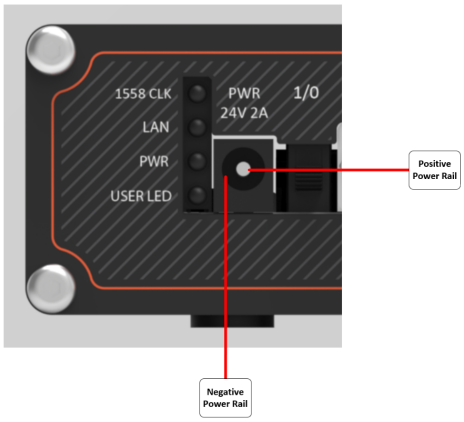
# SIGNAL CONNECTIONS




*DE2001 Connector Interface*

## Power Connector

A standard 2.5mm x 5.5mm barrel connector is used for power input. Recommended mating connector is CUI PN: PP3-002B.




*DE2001 Power Connector*

## RS485 Connector

RS485 interface is carried to outside with the standard DSUB9 (TE Connectivity PN: 2301843-2) connector. Mating connector can be selected among any DSUB9 female connector.

*RS485 Connector Pinout*

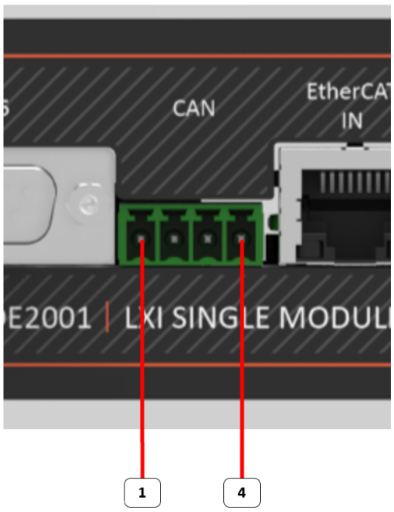
| Pin | Pin Description |
|---|---|
| 1 | RS485 TXN |
| 2 | RS485 TXP |
| 3 | RS485 RXP |
| 4 | RS485 RXN |
| 5 | GND |
| 6 | NC |

| | |
|---|---|
| 7 | NC |
| 8 | NC |
| 9 | NC |

## CAN Connector

A standard terminal block is used for CAN interface. The mating connector is PHOENIX PN: 1803594.

**Note** The mating connector is included to DE2001.




*DE2001 CAN Connector*

*CAN Connector Pinout*

| Pin | Pin Description |
|---|---|
| 1 | GND |
| 2 | CAN N |
| 3 | NC |
| 4 | CAN P |

## LED Indicators

LED indicators are used to show internal information.

*Indicator LED Functions*

| LED | Condition | Description |
|---|---|---|
| 1588 CLK | - | To be defined |
| LAN | Solid Green | Normal operation |
| | Flashing Green | Device identify |
| | Solid Red | LAN Fault |
| PWR | Off | No power |

| | | |
|---|---|---|
| | Solid Yellow | Standby power |
| | Solid Green | Power is on |
| USER LED | - | User defined |

### LAN Reset Button

LAN reset button is used to bring the Ethernet IP address to the default position. If the IP address information has been lost, LAN reset button can be pressed to give the default IP address to the device.

**Note** The default IP address for DE2001 is 192.168.1.2.

## CONFIGURATION

DE2001 can only operate with related modules. The modules are installed by sliding them into the DE2001.


*DE2001 and a Related Module Configuration*

## PROGRAMMING THE DEVICE

TBD.

## SAFETY GUIDELINES

**Caution** Do not operate the DE2001 in a manner not specified in this document. Product misuse can result in a hazard. You can compromise the safety protection built into the product if the product is damaged in any way. If the product is damaged, return it for repair.

## COMPATIBILITY GUIDELINES

This product was tested and complies with the regulatory requirements and limits for electromagnetic compatibility (EMC). These requirements and limits provide reasonable protection against harmful interference when the product is operated in the intended operational electromagnetic environment.

This product is intended for use in industrial locations. However, harmful interference may occur in some installations, if the product is connected to a peripheral device or test object, or if the product is used in residential or commercial areas. To minimize interference with radio and television reception and prevent unacceptable performance degradation, install and use this product in strict accordance with the instructions specified in the product documentation.

Furthermore, any changes or modifications to the product not expressly approved by DEICO could void your authority to operate it under your local regulatory rules.

**Caution** To ensure the specified EMC performance, operate this product only with shielded cables and accessories.
**Caution** To ensure the specified EMC performance, the length of any cable attached to front connectors must not be longer than 3 m (10 ft.)

## SUPPORTING PRODUCTS & SOFTWARE

DE2001 is used with related modules. Single usage (without a module) is not possible.

## NOTES

## Contact

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