

# CAN-E2104SI

PCIe to 4-port CAN FD Card  
With Surge and Isolation



## Introduction

SUNIX CAN-E2104SI, industrial PCIe to 4-port isolated high speed CAN FD communication card, is designed for Edge Computer that enables CAN FD and CAN bus data communication capability for electric vehicle industry application. This board not only built-in SUNIX CAN FD controller but also built with many of SUNIX advanced features and technologies. In addition, SUNIX provides Windows and SocketCAN drivers, allowing users to use this card on Windows and Linux operating systems. SUNIX CAN-E2104SI card enriches CAN 2.0/ CAN FD interface expandable capacity; it is the best CAN bus communication solution for electric vehicle and AVG/AMR applications.

## Features

- Designed to meet PCI Express Base Specification Revision 2.1.
- Equipped with high reliable SUNIX **CAN FD** controller
- Complies with CAN specifications 2.0 and FD
- CAN FD bit rates for the data field up to 8 Mbit/s
- Isolation on the each CAN channel up to 2.5KV
- Surge protection up to 2KV
- Plug-n-Play, I/O address and IRQ assigned by system
- Support Windows and Linux SocketCAN drivers

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## Specifications

### Board Level

|                     |                                                                                                                             |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>Interface</b>    | PCI Express                                                                                                                 |
| <b>Controller</b>   | SUNIX CAN FD controller                                                                                                     |
| <b>BUS</b>          | PCI Express Gen2 x 1 (single Lane)                                                                                          |
| <b>IRQ &amp; IO</b> | Assigned by System                                                                                                          |
| <b>Protection</b>   | ±15KV IEC61000-4-2 Air Gap Discharge<br>±8KV IEC61000-4-2 Contact Discharge<br>Isolation on each channel 2.5KV<br>Surge 2KV |

### CAN Communication

|                      |                             |                             |           |
|----------------------|-----------------------------|-----------------------------|-----------|
| <b>Type</b>          | CAN 2.0 / CAN FD            | <b>Channel</b>              | 4-channel |
| <b>Isolation</b>     | 2500 VDC                    | <b>Arbitration bit rate</b> | 1 Mbit/s  |
| <b>Pin Define</b>    | CAN H, CAN L, GND           | <b>Data bit rate</b>        | 8 Mbit/s  |
| <b>Termination</b>   | 120Ω Configured by Software |                             |           |
| <b>PCB Connector</b> | DB44 Female                 |                             |           |

### Software Support

|                |               |
|----------------|---------------|
| <b>Windows</b> | Windows 10/11 |
| <b>Linux</b>   | SocketCAN     |

### Declaration

|                      |            |
|----------------------|------------|
| <b>Green Product</b> | RoHS, WEEE |
|----------------------|------------|

### Regulatory Approvals

|                 |                        |
|-----------------|------------------------|
| <b>Hardware</b> | CE / FCC / VCCI / BSMI |
|-----------------|------------------------|

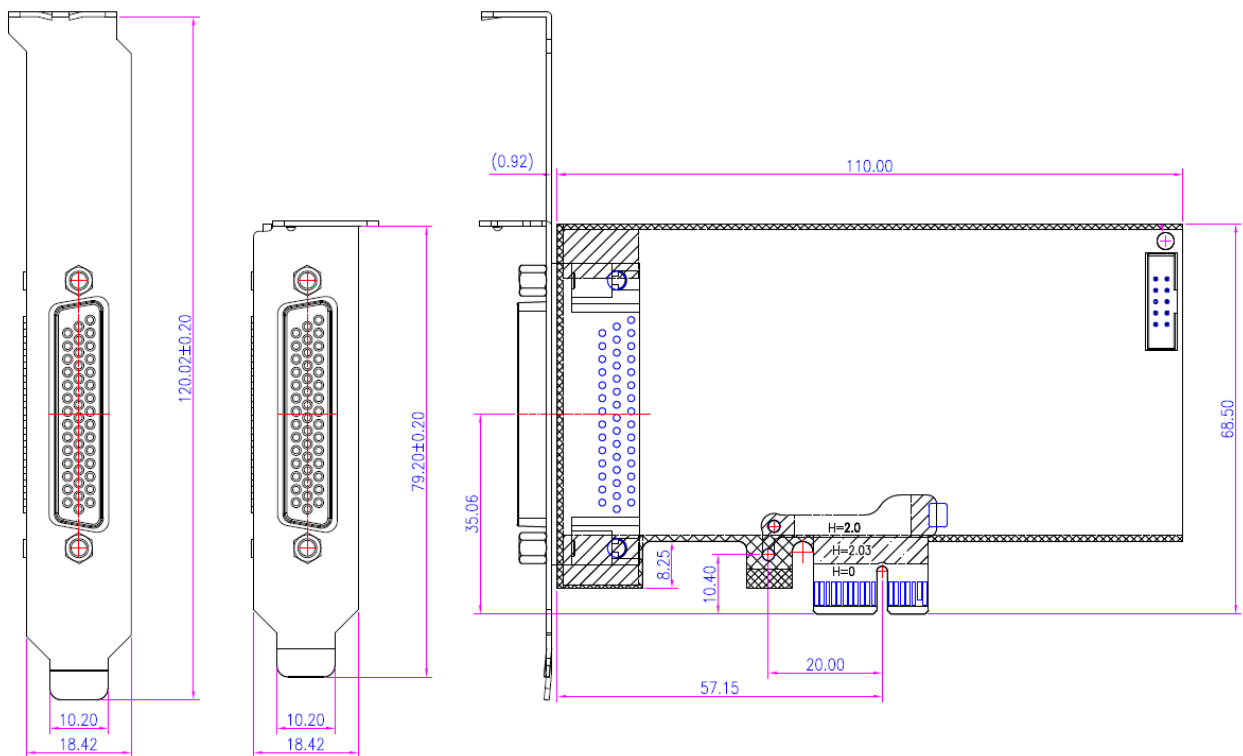
## Environment

|                              |                           |
|------------------------------|---------------------------|
| <b>Operation Temperature</b> | -20 to 70°C (-4 to 158°F) |
| <b>Operation Humidity</b>    | 5 to 95% (non-condensing) |
| <b>Storage Temperature</b>   | -20 to 85°C (-4 to 185°F) |

## Dimension

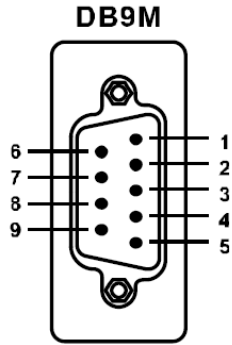
|                      |                                         |
|----------------------|-----------------------------------------|
| <b>PCB Dimension</b> | 110 x 68.5mm                            |
| <b>Bracket</b>       | Full Height 120 mm / Low Profile 79.2mm |
| <b>Bracket Space</b> | 1                                       |

Unit : mm



## Pin Assignment

### ■ CAN interface



| PIN | Signal |
|-----|--------|
| 1   | -      |
| 2   | CAN L  |
| 3   | GND    |
| 4   | -      |
| 5   | -      |
| 6   | GND    |
| 7   | CAN H  |
| 8   | -      |
| 9   | -      |

## Package

- CAN-E2104SI PCIe to 4-port Isolated CAN FD Card
- DB44 to 4-port DB9 Male Connection Cable