



# **Optimization For CAN bus abnormality**

**EDA Technology Co., LTD**

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# Contact Us

Thank you very much for purchasing and using our products, and we will serve you wholeheartedly.

As one of the global design partners of Raspberry Pi, we are committed to providing hardware solutions for IOT, industrial control, automation, green energy and artificial intelligence based on Raspberry Pi technology platform.

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# Foreword




## Reader Scope

This manual is applicable to the following readers:

- ◆ Mechanical Engineer
- ◆ Electrical Engineer
- ◆ Software Engineer
- ◆ System Engineer

## Related Agreement

### Symbolic Convention

Symbolic	Instruction
	Prompt symbols, indicating important features or operations.
	Notice symbols, which may cause personal injury, system damage, or signal interruption/loss.
	Warning symbols, which may cause great harm to people.

# Safety Instructions

- ◆ This product should be used in an environment that meets the requirements of design specifications, otherwise it may cause failure, and functional abnormality or component damage caused by non-compliance with relevant regulations are not within the product quality assurance scope.
- ◆ Our company will not bear any legal responsibility for personal safety accidents and property losses caused by illegal operation of products.
- ◆ Please do not modify the equipment without permission, which may cause equipment failure.
- ◆ When installing equipment, it is necessary to fix the equipment to prevent it from falling.
- ◆ If the equipment is equipped with an antenna, please keep a distance of at least 20cm from the equipment during use.
- ◆ Do not use liquid cleaning equipment, and keep away from liquids and flammable materials.
- ◆ This product is only supported for indoor use.

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# 1 Problem Description

This chapter introduces the phenomenon of CAN bus abnormality and the involved product models.

- ✓ Phenomenon
- ✓ Involved Product



## 1.1 Phenomenon

When using the CAN bus, errors may occur in receiving data. Executing the **ifconfig** command shows that RX errors is non-0 and CAN data is lost.

Executing the **candump** command shows the following errors:

```
pi@raspberrypi:~/code $ candump -ta -xe "any,0~0,#FFFFFFF"
(1719208245.446711) can0 RX - - 20000004 [8] 00 01 00 00 00 00 00 00 ERRORFRAME
controller-problem{rx-overflow}
(1719208245.546417) can0 RX - - 20000004 [8] 00 01 00 00 00 00 00 00 ERRORFRAME
controller-problem{rx-overflow}
(1719208245.746512) can0 RX - - 20000004 [8] 00 01 00 00 00 00 00 00 ERRORFRAME
controller-problem{rx-overflow}
(1719208245.846654) can0 RX - - 20000004 [8] 00 01 00 00 00 00 00 00 ERRORFRAME
controller-problem{rx-overflow}
(1719208246.947546) can0 RX - - 20000004 [8] 00 01 00 00 00 00 00 00 ERRORFRAME
controller-problem{rx-overflow}
(1719208247.046967) can0 RX - - 20000004 [8] 00 01 00 00 00 00 00 00 ERRORFRAME
controller-problem{rx-overflow}
(1719208247.146978) can0 RX - - 20000004 [8] 00 01 00 00 00 00 00 00 ERRORFRAME
controller-problem{rx-overflow}
```

## 1.2 Involved Product

The products involved in CAN bus abnormality include ED-IPC2620, ED-IPC2630, ED-HMI2630-101C and ED-CM4SEN.

## 2 Solution

For the CAN bus abnormality, our company supports the optimization through online installation of Deb packages to solve this problem. And the operations for different product models are different.

- ✓ ED-IPC2630
- ✓ ED-IPC2620
- ✓ ED-HMI2630-101C
- ✓ ED-CM4SEN

## 2.1 ED-IPC2630

### Steps:

1. Execute the following commands in the command pane to update the information of apt source.

```
sudo apt update
```

2. Execute the following command to install the Deb package.

```
sudo apt install -y ed-ipc2630-firmware
```

## 2.2 ED-IPC2620

### Steps:

1. Execute the following commands in the command pane to update the information of apt source.

```
sudo apt update
```

2. Execute the following command to install the Deb package.

```
sudo apt install -y ed-ipc2620-firmware
```

## 2.3 ED-HMI2630-101C

### Steps:

1. Execute the following commands in the command pane to update the information of apt source.

```
sudo apt update
```

2. Execute the following command to install the Deb package.

```
sudo apt install -y ed-hmi2630-101C-firmware
```

## 2.4 ED-CM4SEN

### Steps:

1. Execute the following commands in the command pane to update the information of apt source.

```
sudo apt update
```

2. Execute the following command to install the Deb package.

```
sudo apt install -y ed-cm4sen-rev1p0-bsp
```