DFI®

EC510-SD/EC511-SD Installation Guide

Package Contents

• 1 EC510-SD/EC511-SD system unit
• Mounting screws for SATA drive
• Mounting screws for Mini PCIe module

Panel

DVI-I
(DVI-D signal)   HDMI[3]

DC-in   USB 3.0   LAN 1 LAN 2   Status LED (Orange)
                                        HDD LED (Red)

                                        Power Button[2]
                                        with LED (Green)

Digital IO

PoE 1~4[1]
or
LAN 3~6   Mic-in, Line-out

Expansion slot

COM 1   VGA

COM 3

COM 2   Remote power on/off
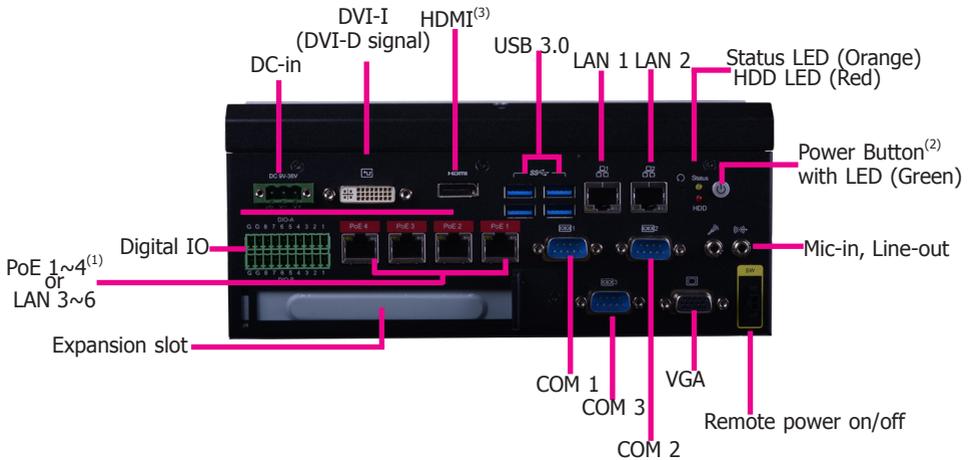
Notes:

1. The PoE ports support PoE devices that comply with 802.3af and each port delivers 15.4W of power to connected devices. The system may be equipped with 4 Gigabit Ethernet ports without PoE depending on the SKU; please refer to the Ordering Information for details.

2. Please gently press the power button to avoid possible damages.

3. The HDMI is a DP/HDMI combo port but can only provide HDMI connectivity (unless wired as a DP port by request). Please plug in an HDMI cable with the right orientation and alignment to avoid damage to the connector. You should feel resistance (due to a pin on the right) if the cable is not inserted correctly. For detailed instructions, please see a video at https://youtu.be/SUj07rfN5l8.

Aligning side
(left)   Angled-corner
                pin   Angled-corner   Align this edge with the
   (up)   left side of the connector

Removing the Chassis Cover

Please observe the following guidelines and follow the procedure to open the system.

1. Make sure the system and all other peripheral devices connected to it have been powered off.

2. Disconnect all power cords and cables.

3. The 6 mounting screws on the bottom and both sides of the system are used to secure the cover to the chassis. Remove these screws and put them in a safe place for later use.

Chassis screw

Chassis screw

Chassis screw
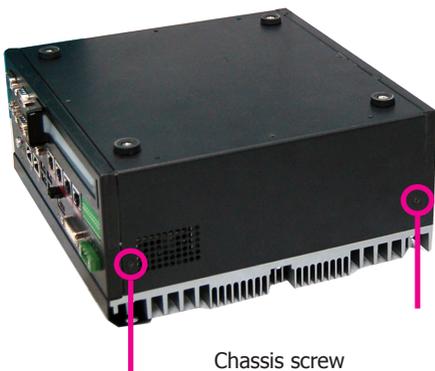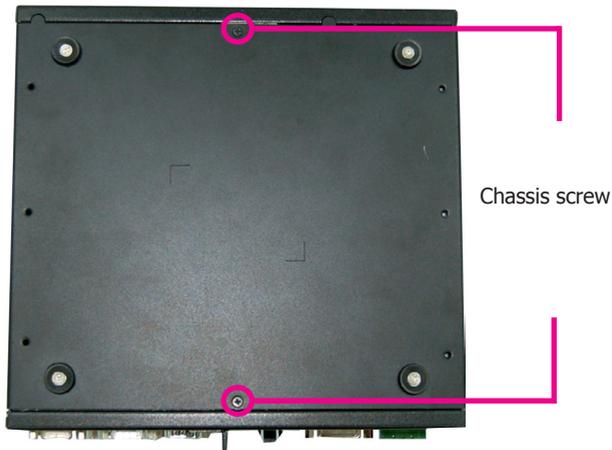
Installing a 2.5" SATA Drive

1. The SATA HDD bracket is included in the product package. Locate the SATA drive bay on which the SATA HDD bracket will be mounted.
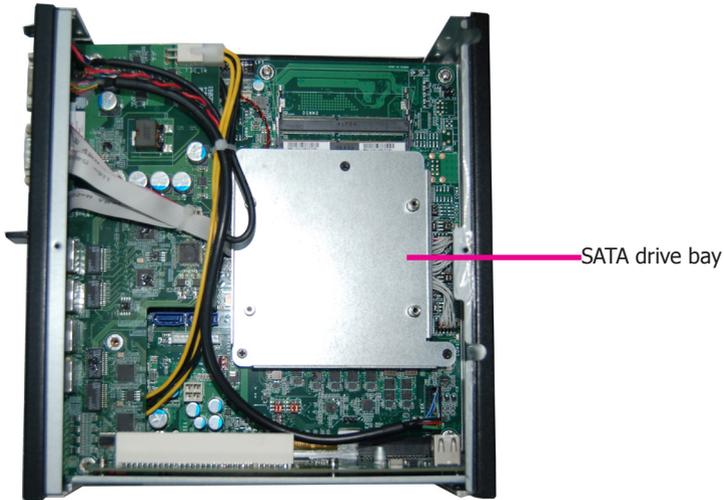
SATA drive bay

2. Insert the SATA drive into the HDD bracket and secure it in place with the provided screws (black screws). The HDD bracket can accommodate two SATA drives.

Mounting screw

Mounting screw

SATA cables

Mounting screws
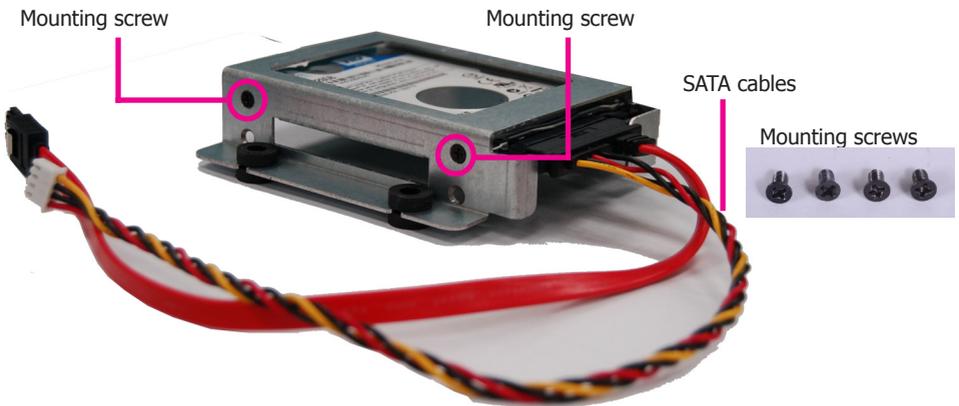
Note:
Connect SATA cables before affixing the SATA drive on the HDD bracket as the HDD bracket would prevent access to the SATA connectors of the drive.

3. Place the SATA drive with the HDD bracket into the system. Align the mounting holes on the HDD bracket with the mounting holes on the SATA drive bay and use the provided screws to secure the drive in place.


Mounting Screw
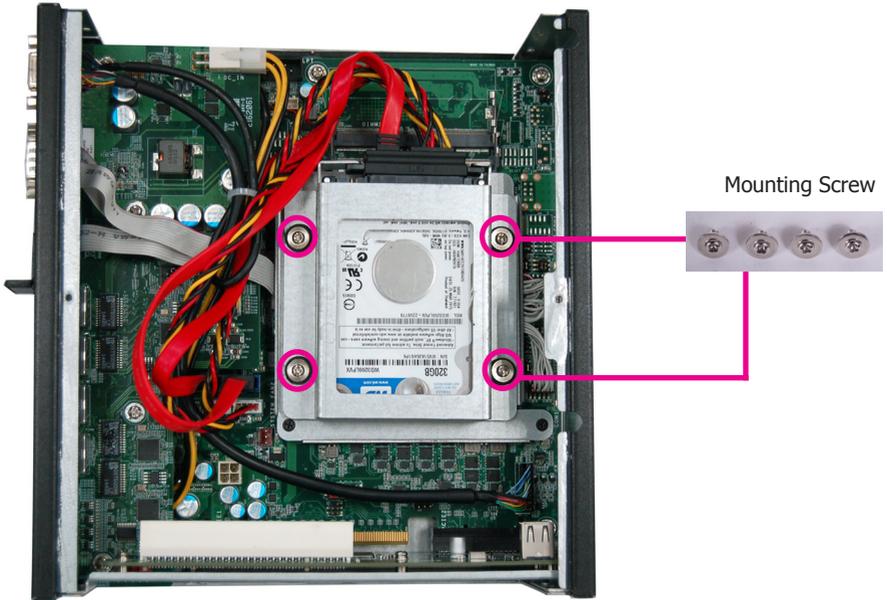
4. Connect the other end of the SATA data cable and the SATA power cable to the SATA data and SATA power connector on the mainboard respectively.

SATA data connector

SATA power connector
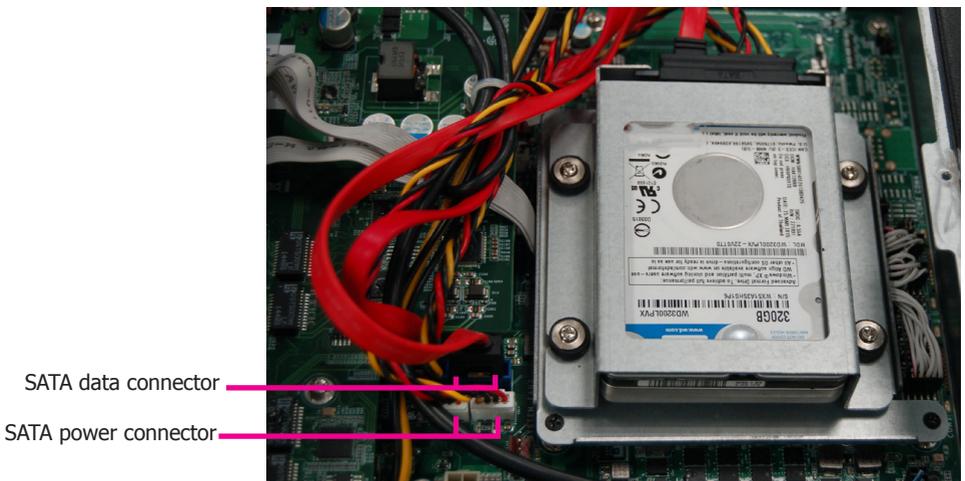
Installing a SODIMM

Grasp the module by its edges and align the SODIMM's notch with the socket's key; then insert the SODIMM into the socket at an angle and push it down until the retaining clips snap into place.

DIMM2
DIMM1
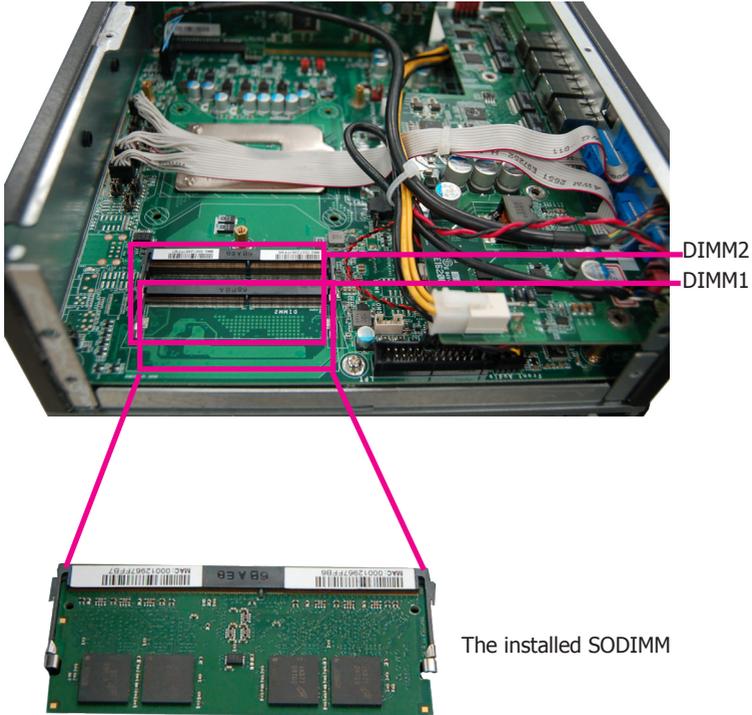
The installed SODIMM

To remove a SODIMM, gently spread the retaining clips at each end of the SODIMM socket. The SODIMM should pop out of the socket. Lift the SODIMM away from the socket on the mainboard.

Notes:
1. The system supports dual-channel configuration. To enable dual-channel, populate both SODIMM sockets.
2. If you plan to install only one SODIMM, install it in the DIMM1 socket (lower one and farther from the center of the mainboard).
3. The SODIMM sockets can only accept DDR4 memory modules. Please do not install other types of memory modules.

Installing a Mini PCIe Expansion Card

The Mini PCIe sockets are located on the mainboard. You need to revmove the riser card and daughter board to access them.

The 2 mounting screws on the supporting bracket of the riser card are used to secure the riser card to the chassis. Remove these screws and put them in a safe place for later use. To disengage the riser card from the mainboard, gently pull the card out of the connector on the mainboard.

The 4 mounting screws on the daughter board are used to secure the board to the mainboard. Remove these screws and put them in a safe place for later use. To disengage the daughter board from the mainboard, gently pull the card out of the connector on the mainboard.

Mounting screw
on the riser card

Mounting screw
on the daughter board
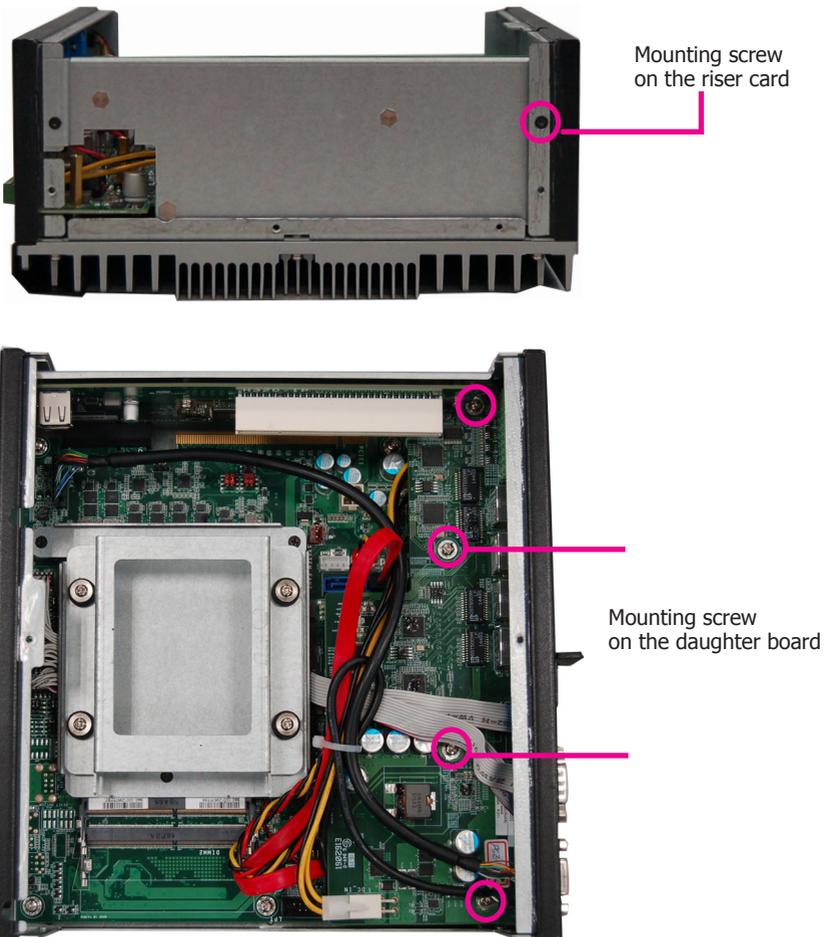
The mainboard is equipped with 2 Mini PCIe slots: one full-size and one half-size slot. Here we will demonstrate the installation of a full-size Mini PCIe card.

1. Grasp the Mini PCIe card by its edges and align the notch in the connector of the Mini PCIe card with the connector's key on the mainboard.
2. Secure the card on the mainboard with the provided mounting screw.
3. If the Mini PCIe card has antennas, route the antennas to the antenna holes on the rear chassis of the device.

Wireless antenna
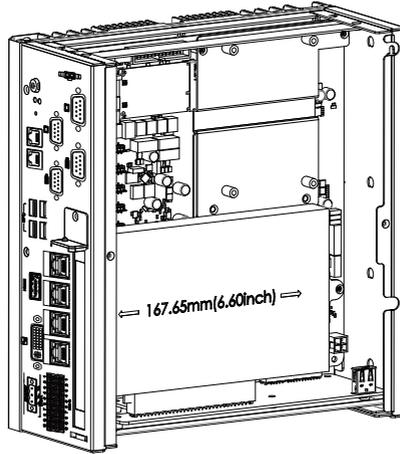
Mounting screw
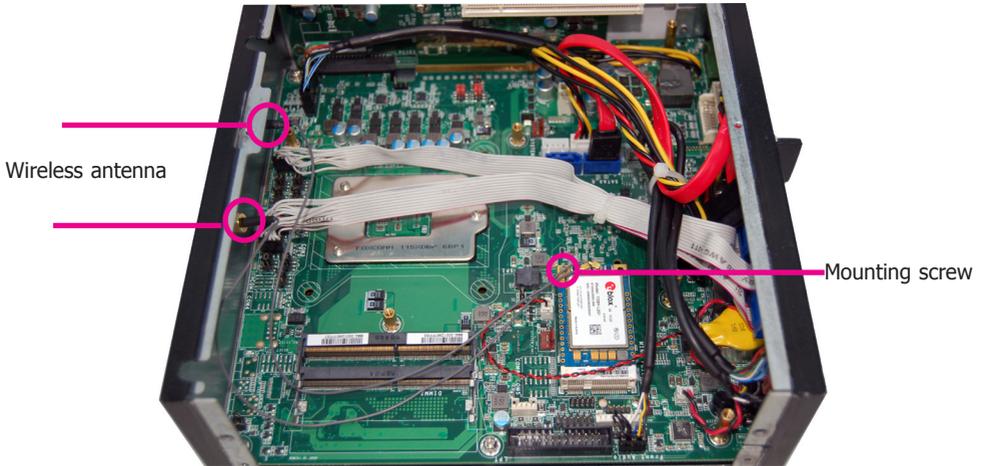
> **Note:**
> The system also has a half-size Mini PCIe slot that can accommodate a Mini PCIe card using mSATA or USB signals.

Installing a PCI or PCIe Expansion Card

> **Important:**
> When inserting expansion cards into the system, please select a standard card within 167.65mm (as shown in the picture below) in order to fit into the expansion slot.

167.65mm(6.60inch)

The PCI and PCIe slots on the riser card inside the system are used to install expansion cards. To install an expansion card you need to first remove the slot plate and bracket by uninstalling the screw on the front chassis.
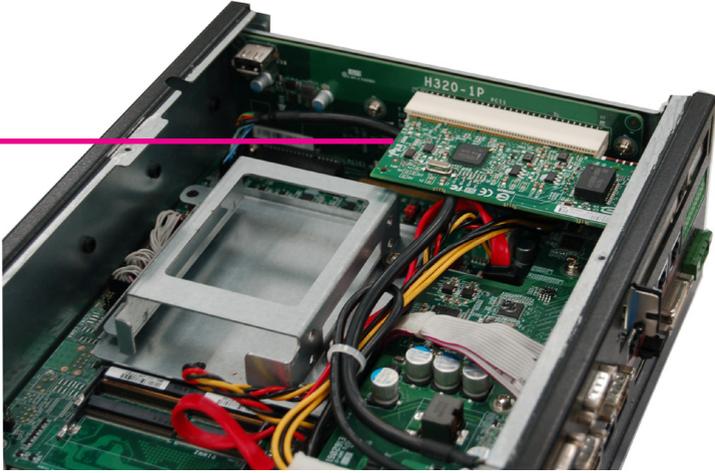

Slot plate

Mounting screw and bracket

2. Insert the expansion card into a PCI or PCIe slot on the riser card. Ensure the card is properly seated into the slot and secure the bracket in place.
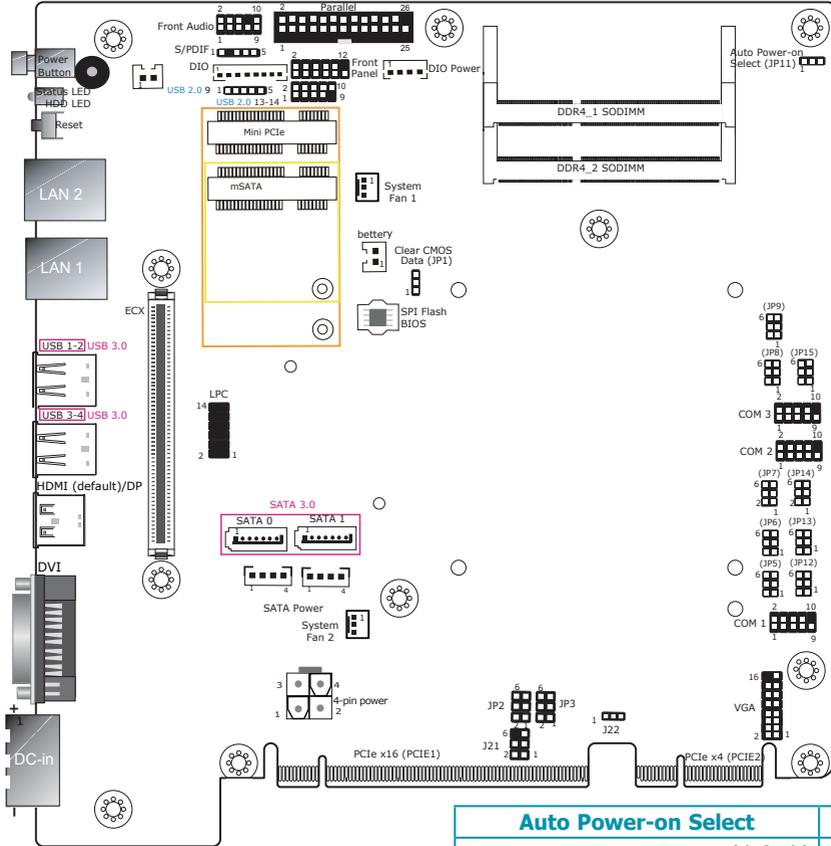
PCI card

Front View

Note:

The EC511-SD has one PCIe x16 slot with the H120-1E riser card, whereas the EC510-SD has one PCI slot with the H320-1P riser card.

Board Layout and Jumper Settings

Clear CMOS Data	JP1
Normal (default)	1-2 On
Clear CMOS Data	2-3 On

RS232/Power Select: COM 1 (JP3), COM 2 (JP2)	
RS232 (default)	1-3 (RI), 2-4 (DCD) On
RS232 with power	3-5 (+5V), 4-6 (+12V) On

RS232/422/485 Select: COM 1 (JP6), COM 2 (JP13)	
RS232 (default)	1-2 On
RS422 Full Duplex	3-4 On
RS485	5-6 On

RS232/422/485 Select: COM 1 (JP5/JP12), COM 2 (JP7/JP14)	
RS232 (default)	1-3, 2-4 On
RS422 Full Duplex/RS485	3-5, 4-6 On

Auto Power-on Select	JP11
Power-on via Power Button (default)	1-2 On
Power-on via AC Power	2-3 On

RS232/422/485 Select: COM 3 (JP9)	
RS232 (default)	1-2 On
RS422 Full Duplex	3-4 On
RS485	5-6 On

RS232/422/485 Select: COM 3 (JP8/JP15)	
RS232 (default)	1-3, 2-4 On
RS422 Full Duplex/RS485	3-5, 4-6 On

Notes:

1. When COM1 RS232/422/485 is selected, JP5 and JP12 must be set in accordance to JP6.

2. When COM2 RS232/422/485 is selected, JP7 and JP14 must be set in accordance to JP13.

3. When COM3 RS232/422/485 is selected, JP8 and JP15 must be set in accordance to JP9.