# IPC-E3308S

**Industrial 8-port RS-232/422/485 with Surge PCI-Express Serial Card**

## Introduction

SUNIX IPC-E3308S, Industrial 8-port RS-232/422/485 PCI-Express Serial Card, allows users to expand eight RS-232/422/485 ports on PC-based system. Each serial port achieves data rates up to 921.6 Kbps and utilizes UART with an on-chip 128-bytes hardware FIFO buffer for reliable, high-speed serial I/O. With SUNIX patented Auto-Switching RS-422/485 and RS-485 AHDC™ technology, user can easily manage different serial interfaces selection and RS-485 signal direction control. SUNIX IPC-E3308S board is provided with 2KV IEC6100-4-5 Level 3 Surge Suppressor and 15KV IEC61000-4-2 ESD Discharge Transceiver. Besides, board supports a wide variety of operating systems, including Windows and Linux. It is the best serial communicating solution for industrial and harsh environment applications.

## Features

- Expands 8 independent RS-232/422/485 serial ports with communication speeds up to 921.6Kbps
- High reliable SUNIX PCI Express UART controller
- PCI Express Base Specification Revision 2.0
- RS-422 and RS-485 auto detect and switching technology
- AHDC/CS™ technology for collision free communication
- On-chip hardware auto flow control to guarantee no data loss
- Ultra low power consumption design for Green Environment
- 15KV ESD protection on all serial signals meets IEC-61000-4-2 standard
- 2KV surge protection on RS-232/422/485 serial signals, IEC-61000-4-5 Level 3 standard
- Plug-n-Play, I/O address and IRQ assigned by BIOS
- Certified by CE, FCC, VCCI, BSMI, RoHS, and Microsoft WHQL approval
- Support Microsoft Windows and Linux operation systems

# Specifications

## Serial Communication

| Interface | RS-232/422/485 | Baud rate | 50bps ~921.6Kbps |
|---|---|---|---|
| Controller | SUNIX **QiuNiu** controller | Stop bit | 1, 1.5, 2 |
| BUS | PCI Express 2.0 x 1 (single lan) | Parity | even, odd, none, mark, space |
| No. of Port | 8 ports | Flow Control | Xon/Xoff (software) |
| IRQ & IO | Assigned by System | FIFO | 128byte Hardware |
| Signal | RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND<br>RS-422: TxD+, TxD-, RxD+, RxD-, GND<br>4-wire RS-485: TxD+, TxD-, RxD+, RxD-, GND<br>2-wire RS-485: Data+, Data-, GND | | |
| Protection | ±15KV ESD Air<br>±8KV ESD Contact<br>2KV Surge | | |
| PCB Connector | DB62 Female | | |

## Driver Support

| Microsoft Client | Windows 10 32/64bit / Windows 11 64bit |
|---|---|
| Microsoft Server | Windows Server 2022 64bit |
| Linux | Linux 5.0 / 5.4 |

## Regulatory Approvals

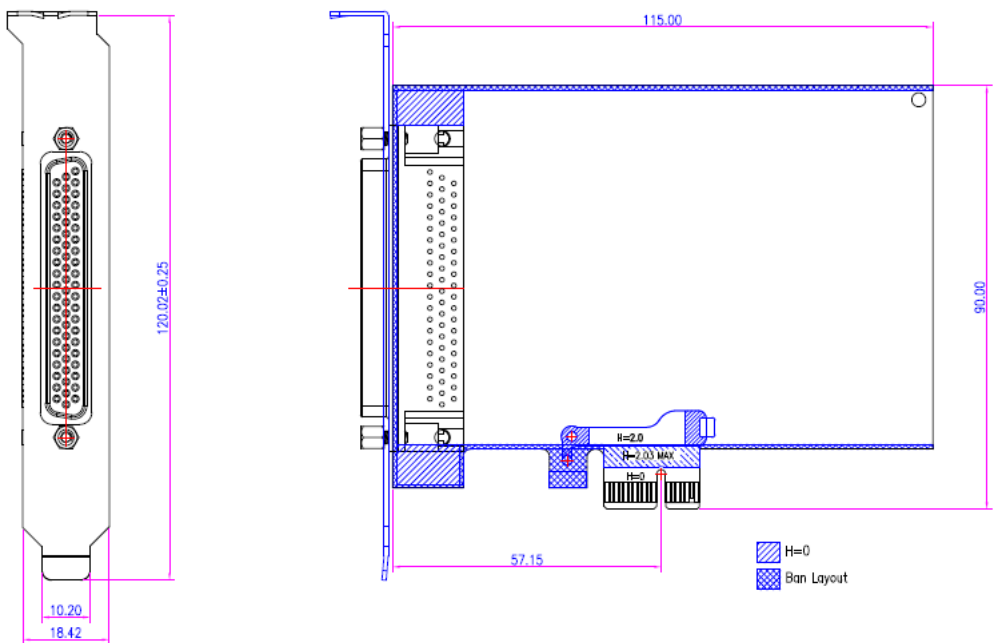| Hardware | CE/FCC/VCCI/BSMI |
|---|---|
| Software | Microsoft WHQL driver<br>Windows 10 (X86/X64) / Windows 11<br>Server 2022 (X64) |

## Environment

| Operating Temperature | 0 to 70°C (32 to 158°F) |
|---|---|
| Operation Humidity | 5 to 95% RH |
| Storage Temperature | -20 to 85°C (-4 to 185°F) |

## Dimensions

| PCB Dimension | 115 x 90 mm |
|---|---|
| Bracket | Standard 120 mm |
| Bracket Space | 1 |

# Mechanical Drawings (Unit = mm)

# Pin Assignment

■ **RS-232**
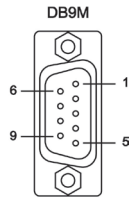
DB9M



| PIN | DB9M |
|-----|------|
| DCD | 1 |
| RxD | 2 |
| TxD | 3 |
| DTR | 4 |
| GND | 5 |
| DSR | 6 |
| RTS | 7 |
| CTS | 8 |
| NC | 9 |

■ **RS-422**
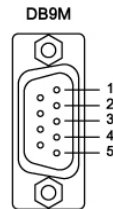
DB9M



| PIN | DB9M |
|-----|------|
| TxD- | 1 |
| TxD+ | 2 |
| RxD+ | 3 |
| RxD- | 4 |
| GND | 5 |

■ **RS-485**
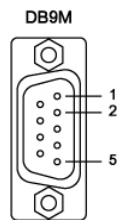
DB9M



| PIN | DB9M |
|-----|------|
| Data- | 1 |
| Data+ | 2 |
| GND | 5 |

# Package

■ IPC-E3308S - Industrial 8 ports RS-232/422/485 with Surge PCI-Express Serial Card

■ DB62 to 8-port DB9 Male Connection Cable, 40 cm

■ Quick installation guide