MCS6437A

2-port RS-232 PCIe MiniCard Serial Board

Introduction

SUNIX MCS6437A, PCI Express serial communication board, allows users to add or expand two RS-232 COM ports on embedded PC system via full height Mini Card slot. SUNIX MCS6437A meets PCI Express Full-Mini Card Specification Revision 1.2. Compact PCB design is ideal for All-in-One PC, 1 liter PC, or embedded PC application. Furthermore, complete operation system driver support, 128-bytes onboard FIFO buffer, 16C950 compatible UART specification, and it is designed with SUNIX native PCI Express UART controller, SUN2410 and as well built with many of SUNIX advanced features and technologies, making it the best solution for commercial and industrial automation applications.

Features

- Expands 2 independent RS-232 serial ports with communication speeds up to 460.8 Kbps.
- High speed SUNIX PCI Express SUN2410 16C950 compatible UART controller on-board.
- Support PCI Express Full-Mini Card Specification Revision 1.2
- On-chip hardware auto flow control to guarantee no data loss.
- Built-in ± 15KV ESD protection for all serial signals meets IEC61000-4-2 standard.
- Plug-n-Play, I/O address and IRQ assigned by BIOS.
- Certified by CE, FCC, RoHS, and Microsoft WHQL approval.
- Support Microsoft Windows, Linux, and DOS

Specifications

General

Interface	RS-232
Controller	SUNIX SUN2410 (16C950 UART Compatible)
BUS	PCI Express x1
IRQ & IO	Assigned by System

Serial Communication

Interface	RS-232
No. of Port	2-port
FIFO	128byte Hardware
Signal	DCD, TxD, RxD, RTS, CTS, DTR, DSR, GND
Baud rate	50bps ~ 460.8 Kbps
Stop bit	1, 1.5, 2
Parity	even, odd, none, mark, space
Flow Control	None, Xon/Xoff, RTS/CTS
Protection	±15KV ESD protection for each signal Human Body Model (HBM) ±15KV IEC61000-4-2 Air Gap Discharge ±8KV IEC61000-4-2 Contact Discharge
PCB Connector	Pin Header (pitch 2.0mm)

Driver Support

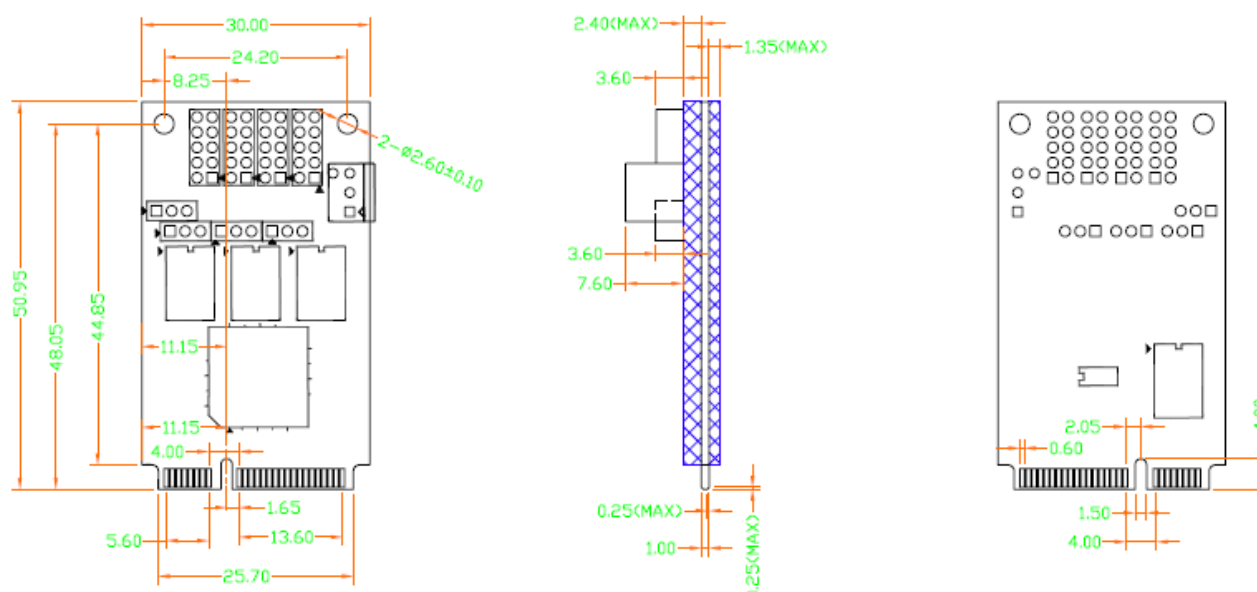| Microsoft Client	7 / 8.x / 10 (X86/X64)
Microsoft Server	2003 / 2008 / 2012 / 2016 (X64)
Microsoft Embedded	Windows XP Embedded / POSReady 2009 / POSReady / Embedded System 2009
Linux	Linux 2.x / 3.x / 4.x / 5.3
DOS	DOS

Regulatory Approvals

Hardware	CE / FCC / VCCI / BSMI
Software	Microsoft WHQL Windows Microsoft Client: 7 / 8.x / 10 (X86/X64) Microsoft Server: 2003 / 2008 / 2012 / 2016 (X64)

Environment

Operation Temperature	0 to 60°C (32 to 140°F)
Operation Humidity	5 to 95% RH
Storage Temperature	-20 to 85°C (-4 to 185°F)

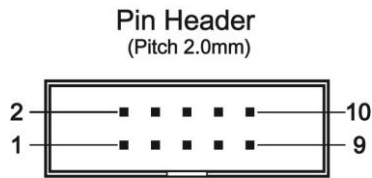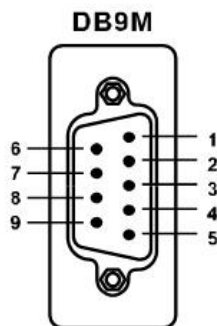# Mechanical Drawings (Unit = mm)

Note:

The height of pin header component (max 7.6mm) exceeds PCI Express Full-Mini Card Specification (max 2.4mm) on the PCB top side. This card uses header to access power and standard DB9M COM port to the system external panel. If there is any mechanical chassis compatible problem, please contact us for the ODM service.

Pin Assignment
Serial

Pin Header
(Pitch 2.0mm)

PIN	Pin Header	PIN	Pin Header
DCD	1	CTS	6
DSR	2	DTR	7
RxD	3	-	8
RTS	4	GND	9
TxD	5	-	10

DB9M

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

Note:

SUNIX provides special cable for user who needs the DB9M connector. This cable is the additional accessory for options.

Package
■ MCS6437A – 2-port RS-232 PCI Express MiniCard Serial Board
■ 5x2 Pin Header (Pitch 2.0mm) to 1-port DB9 Male IDC Ribbon Cable x 2