SB5001

PCI Express to Serial Multiport Bridge with x1 PHY

SystemBase
SB5001
0951
D4L4M-025

»Main Features

- Standard PCI Express Base Specification v1.0a and v1.1 compliant
- Built-In PCI Express x1 PHY
- Built-In Quad-UART with 256-Byte FIFO, SB16C1054
- Auto Toggling pins for RS422 and RS485 network
- Supports various scalability : 4, 8, 16, 24, 32 ports Serial MultiPort
- Supports Power Management and MSI functions
- LQFP176, Supports easy & economy soldering

SB5001

Features

Integrated PCI Express Interface

- Standard PCI Express Base Specification v1.0a and v1.1 compliant
- Built-In x1 PCI Express PHY
- PCI Express single-lane(x1), Compatible with x4, x8, x16 PCI Express slots
- PCI Express 2.5Gbps per direction
- One Virtual Channel
- Supports Power Management (PCI-PM v1.2 & ASPM LOs) functions
- Supports Message Signaled Interrupt (MSI) & INTx emulation
- Downloads Configuration header data from external serial EEPROM
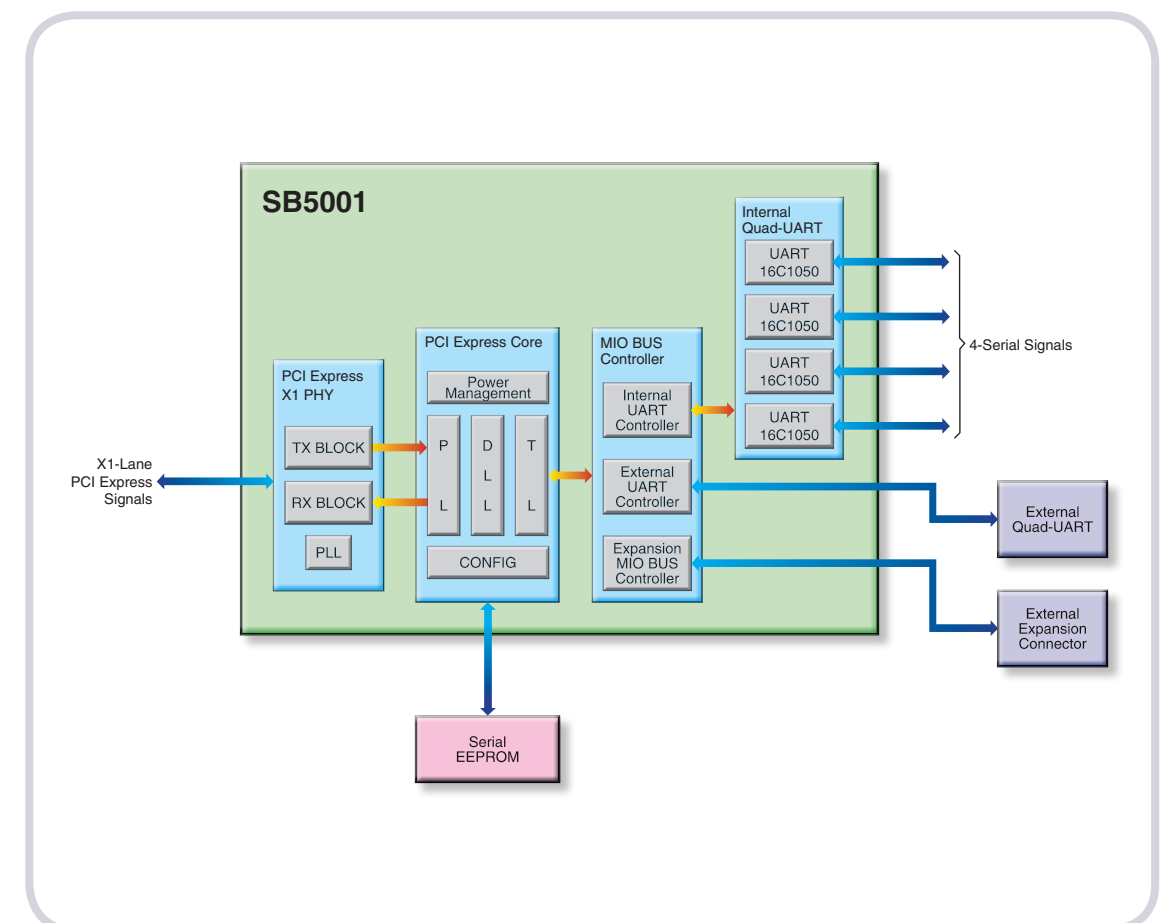
Local I/O Bus Interface

- Supports New MultiPort I/O Bus by SystemBase
  8-bit data width & 8-bit address width support for Multiport
  Chip Selection & Interrupt Request per Channel
- Built-In Quad UART with 256-byte FIFO, SB16C1054 with Auto Toggling pins
- Scalability up to 32-port Serial MultiPort PCIe Adapter Card
- Capable of controlling UART Read/Write time
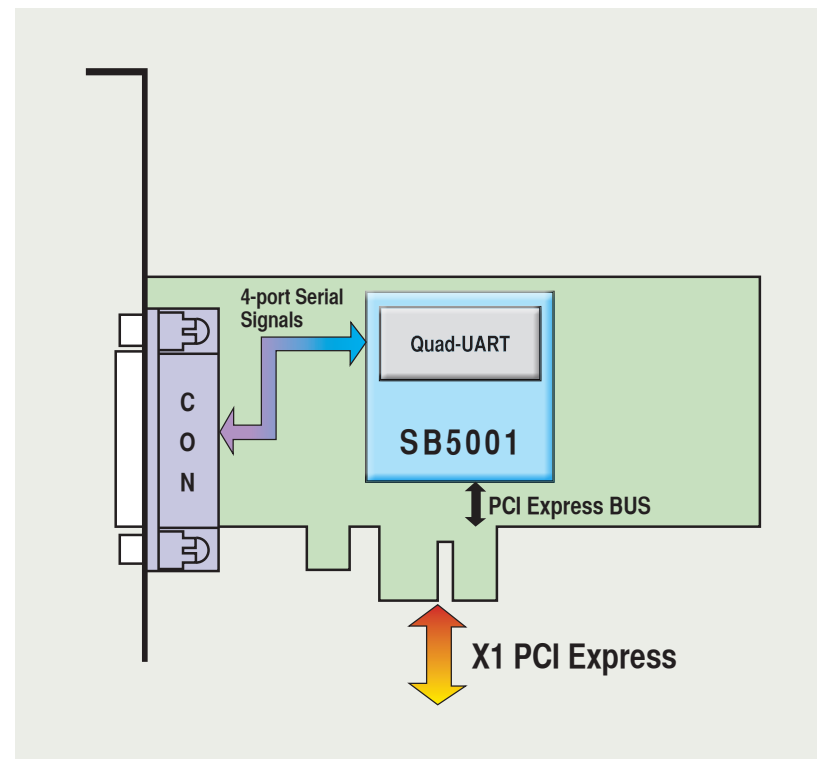
Support & Order Information

- LQFP176, Supports economy soldering for manufacturing & service
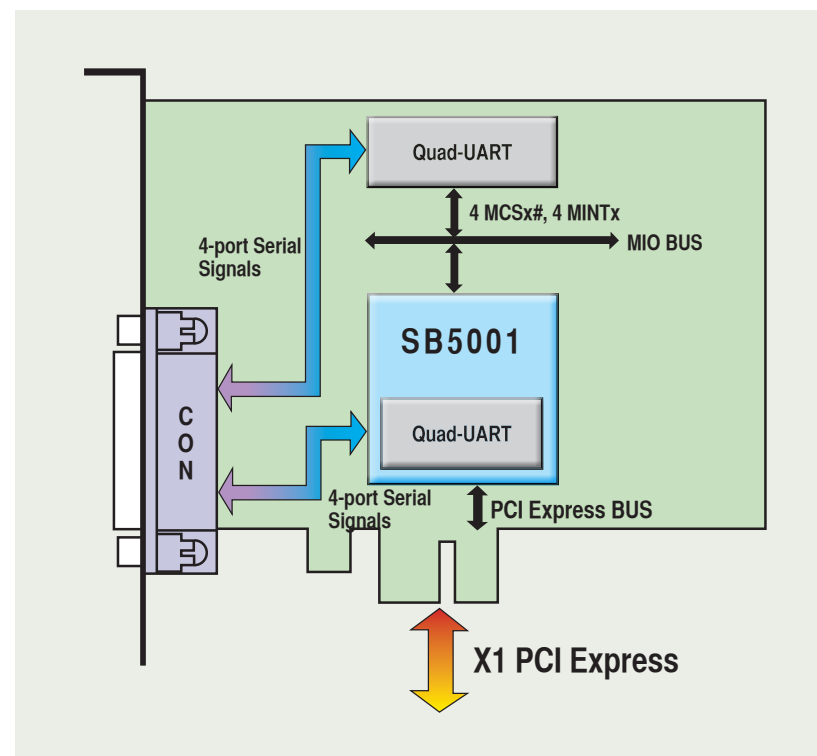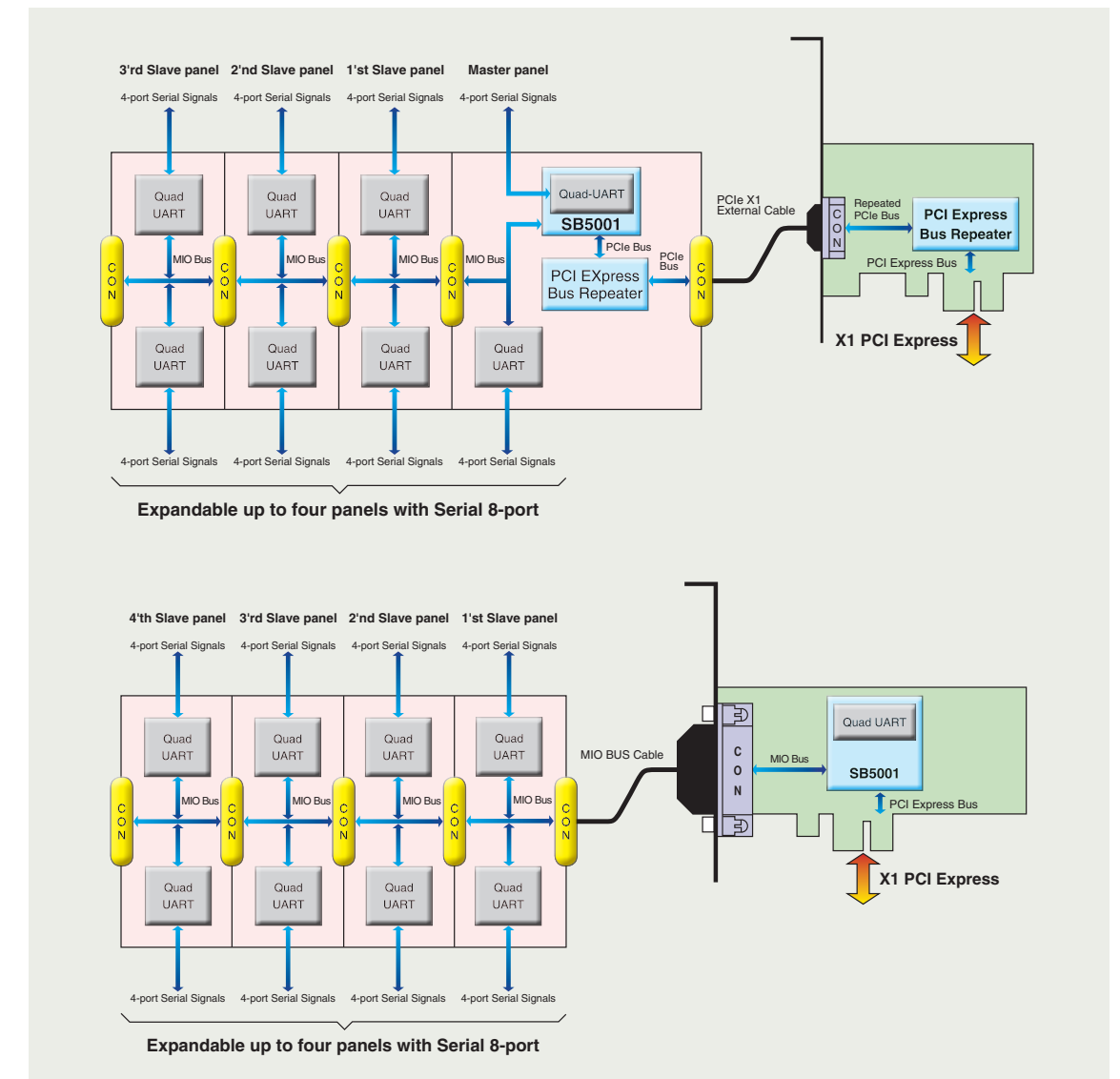
Block Diagram

Semiconductor

SERIAL COMMUNICATION EXPERTS

SystemBase
Serial Communication Experts
Since 1987

SB5001

Application

Serial 4-port Card

4-port Serial Signals

Quad-UART

SB5001

CON

PCI Express BUS

X1 PCI Express

Serial 8-port Card

Quad-UART

4 MCSx#, 4 MINTx

MIO BUS

4-port Serial Signals

SB5001

CON

Quad-UART

4-port Serial Signals

PCI Express BUS

X1 PCI Express

Extendable Serial 32-port Card

3'rd Slave panel | 2'nd Slave panel | 1'st Slave panel | Master panel

4-port Serial Signals

Quad UART

MIO Bus | CON

Quad-UART

SB5001

PCIe Bus

PCI EXpress Bus Repeater

PCIe X1 External Cable

Repeated PCIe Bus

PCI Express Bus Repeater

PCI Express Bus

X1 PCI Express

4-port Serial Signals

Expandable up to four panels with Serial 8-port

4'th Slave panel | 3'rd Slave panel | 2'nd Slave panel | 1'st Slave panel

4-port Serial Signals

Quad UART

MIO Bus | CON

MIO BUS Cable

CON

MIO Bus

SB5001

PCI Express Bus

X1 PCI Express

4-port Serial Signals

Expandable up to four panels with Serial 8-port

Ordering Information

Ordering Information

Part Number	SB5001-LQ
Package	176-pin LQFP
Operating Temperature Range	-40˚C to +125˚C
Device Status	Active