OXPCIe954
PCI Express® bridge to quad serial port

Description
Part of Oxford Semiconductor’s Expresso family of high performance PCI Express® devices, the OXPCIe954 is a single chip quad serial port device, with port expansion interface, in Oxford Semiconductor’s range of 2, 4 & 8 port solutions that includes the OXPCIe952 & OXPCIe958.

Incorporating Oxford Semiconductor’s ultra high performance 950 UART technology, it combines outstanding system performance with unrivalled flexibility for even the most demanding of serial applications.

Complete with the Oxide development tools and certified device drivers, the OXPCIe954 is easy to design-in and the ideal connectivity solution for a diverse range of products including: PC Add-on Cards, Industrial PC, Point of Sale Terminals, Industrial Control, Building Automation and Network Management.

Accelerate your product development and time to market with Oxide and Oxford Semiconductor’s easy to design-in, high performance serial connectivity solutions that just work.

Features
- Quad UART with port expansion interface
- ExpressCard™, Mini CARDTM & AIC compatible
- PCIe® x1 end-point with integrated SerDes
- PCIe® base spec 1.1 & PCI™ PM 1.2 compliant
- MSI/MSI-X compatible
- DMA/bus mastering facility for all UARTs
- ASPM (L0S, L1) Link power management
- High performance Oxford 950 UARTs
- Asynchronous baud rates up to 15 Mbps
- 128-byte deep transmit/receive FIFOs
- 9, 8, 7, 6 & 5-bit data framing
- Flexible clock pre-scaler from 1 to 31.875
- Automated in & out-of-band flow control
- Advanced FIFO fill management
- RS232, RS422, RS485 and IrDA operation
- Programmable RS485 Turn-around delay
- 450 through 950 software compatibility
- Seamless port expansion interface to a second OXPCIe954/8 for 8/12 port solutions
- 8 user-configurable GPIOs/PWMs
- Device parameters configurable via EEPROM
- 3.3 V operation
- 1.8V, 2.5V or 3.3V UART & GPIO I/O voltage
- 176 pin TFBGA package
- Industrial temperature range -40°C to 85°C
- Broad device driver support including Windows® Vista/XP/2K/CE & Linux
Outstanding Performance

The OXPCIe954 achieves ultra high performance by combining the class leading 15Mbps asynchronous data rates and deep FIFOs of Oxford’s 950 UART, with advanced MSI interrupt handling and bus master DMA for maximum throughput, minimum CPU overhead and optimal system performance.

Advanced features of the device, such as automated in-band flow control, readable FIFO levels and RS485 turnaround delay, provide further ability to fine tune performance, while the flexible clock pre-scaler provides for a wide range of baud rates.

With its high performance port expansion interface, providing seamless expansion to 8/12 ports without a PCI Express® switch, its comprehensive power management and its industrial temperature range the OXPCIe954 is the choice for high performance systems.

To support these advanced features the OXPCIe954 is backed by a dedicated Oxford device driver that is quality assured, exhaustively tested and WHQL approved; saving development time and providing peace of mind.

Development Support

Design and evaluation of the OXPCIe954 couldn’t be easier with this comprehensive evaluation kit.

The kit includes everything you need for PC installation and evaluation including hardware, Oxide Development Tools and software device drivers. Simply plug the half length PCI Express® evaluation board into any PCI Express® slot, install the software and its ready to go.

Changing the dynamics of device customization, Oxide development tools enable customization of the OXPCIe954 in minutes. No more complex, time consuming, error prone manual editing of programming files and driver source code; Oxide’s intuitive graphical user interface provides simple ‘point and click’ feature selection and text box entry for fast, error free customization with minimal software expertise. Check the Oxford Semiconductor website for details.

Ordering Information

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<tr>
<th>Device</th>
<th>Evaluation Kit</th>
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<tr>
<td>OXPCIe954–FBAG</td>
<td>EK–OXPCIe954</td>
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