Product Brief

OXPCIe958, PCI Express to Octal Serial Port

Highlights

- **General Features**
  - o Octal UART with port expansion interface
  - o PCIe x1 end-point
    - Integrated 2.5 GT/s SerDes
  - o 13 x 13mm^2, 176-pin TFBGA package
  - o Typical Power: 200 mWatts

- **Key Features**

  - o **Standards Compliant**
    - PCI Express Base Specification, r1.1 (backwards compatible with PCIe r1.0a)
    - PCI Power Management Spec, r1.2
    - ExpressCard, Mini Card & AIC compatible
    - MSI/MSI-X compatible
    - ASPM (L0S, L1) Link power management

  - o **High Performance**
    - PLX's Oxford 950 UART
    - DMA/bus mastering of both UARTs
    - Asynchronous baud rates up to 15 Mbps
    - 128-byte deep transmit/receive FIFO
    - 9, 8, 7, 6 & 5-bit data framing
    - Automated in & out-of-band flow control
    - Advanced FIFO fill management
    - Seamless port expansion interface to a second OXPCIe954/8 for 12/16 port solution

  - o **Flexibility**
    - RS232, RS422, RS485 and IrDA operation
    - Flexible clock pre-scaler from 1 to 31.875
    - Programmable RS485 Turn-around delay
    - 450 through 950 software compatibility
    - 8 user-configurable GPIOs/PWMs
    - Device parameters configurable via EEPROM
    - 1.8V, 2.5V or 3.3V UART & GPIO I/O voltage

  - o **Robust Operation**
    - Operation from a single 3.3 V supply
    - Industrial temperature range -40°C to 85°C

  - o **Broad Device Driver Support**
    - Windows Vista/XP/2K
    - WinCE 4.2/5.0/6.0
    - Linux 2.4/2.6

Part of the **Expresso** family of high performance PCI Express devices, the OXPCIe958 is a single chip octal serial port device with port expansion interface in a range of 2, 4 & 8 port solutions, that includes the OXPCIe952 & OXPCIe954.

Incorporating PLX Technology's ultra high performance Oxford 950 UART technology, the device 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 OXPCIe958 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 PLX Technology's easy to design-in, high performance serial connectivity solutions that just work.



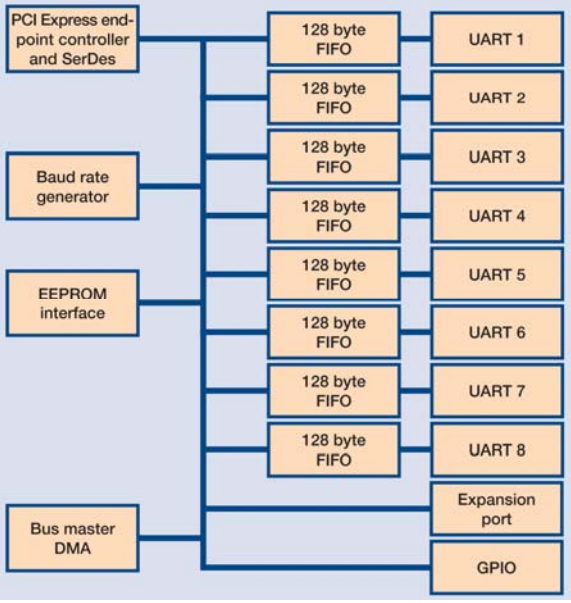
Outstanding Performance

The OXPCIe958 achieves ultra high performance by combining the class leading 15Mbps asynchronous data rates and deep FIFOs of PLX's Oxford 950 UART, with advanced MSI interrupt handling and bus master DMA for maximum throughput, minimum CPU overhead and optimal system performance.

Configurable octal ports the OXPCIe958 includes a host of advanced features such as, automated in-band flow control, readable FIFO levels and RS485 turnaround delay, that provides further scope to fine tune performance, while its flexible clock pre-scaler provides for a wide range of baud rates.

With its high performance port expansion interface, providing seamless expansion to 12 or 16 ports without a PCIe switch, its comprehensive power management and industrial temperature range the OXPCIe958 is *the* perfect choice for high performance systems.

To support these advanced features the OXPCIe958 is backed by a dedicated PLX device driver that is quality assured, exhaustively tested and WHQL approved; saving development time and providing peace of mind.



OXPCIe958

Development Support



Design and evaluation of the OXPCIe958 couldn't be easier with this comprehensive reference design kit (RDK). The RDK 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.

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Changing the dynamics of device customization, Oxide development tools enable customization of the OXPCIe958 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 as well as instant access to up to date documentation, software and reference designs. Check the PLX website for details.

Ordering Information

Part Number	Description
OXPCIe958-FBAG	Octal Serial Port to PCIe Bridge
EK-OXPCIe958	Reference Design Kit