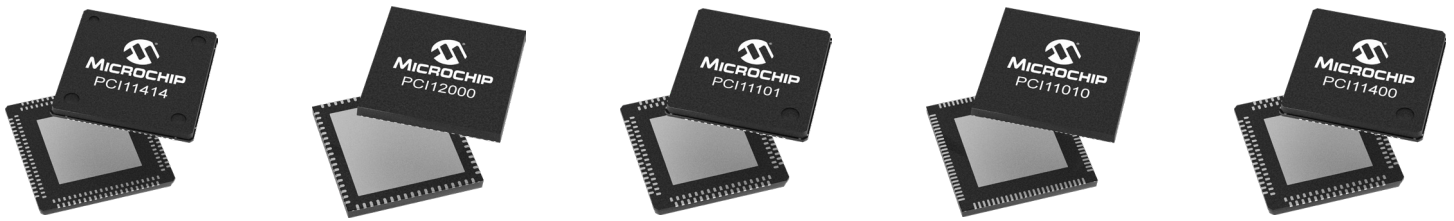


PCIe® Peripheral Family (PCI11xxx/PCI12xxx)

Flexible Single-Chip PCIe Fanout Switches



Summary

Our single-chip PCIe® fanout switches feature highly integrated peripherals for seamless connectivity in industrial applications. Versatile and industrial grade, the PCI11xxx/PCI12xxx family offers multiple interfaces for a wide range of applications. With integrated PCIe physical interfaces offering a multi-lane upstream port and downstream ports, the PCI11xxx/PCI12xxx addresses the growing demand for higher bandwidth PCIe subsystems in embedded applications. These devices can accommodate varying system bandwidths. They are designed to fit on various System-on-Module carrier boards, including application-specific expansion boards.

Common Applications

- Industrial PCs
- Industrial process control
- Automotive telematics
- Server systems
- Robotics
- Artificial Intelligence of Things (AIoT) edge computing
- Enabling AI DVR/NVR connectivity to cameras
- PCIe networks

Microchip System Solution

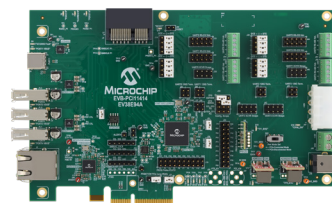
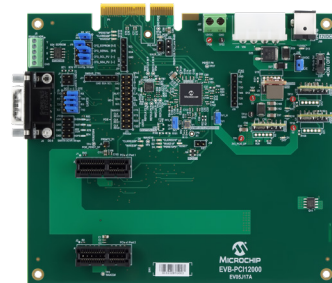
- Complete solution creates seamless connectivity from processor to peripheral
- Development tools enable rapid evaluation of critical functionality
- Available in commercial, industrial, extended industrial and automotive grades

Key Features

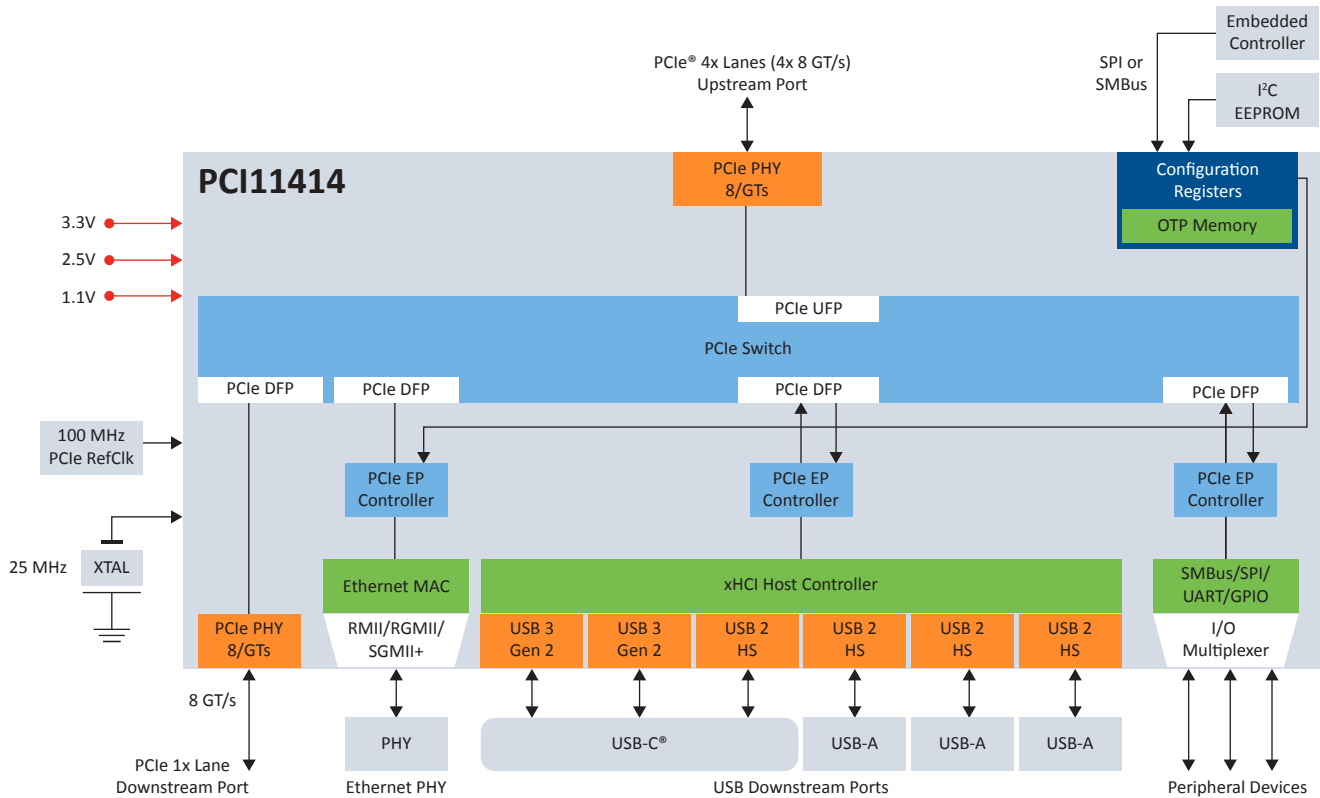
- Embedded USB 3.2 Gen 2 (10 Gbps) host controller
- 2.5 Gbps Ethernet MAC & PTP
- Programmable I/O
- Integrated PCIe switching fabric with Low Power Sub States (LPSS)
- PCIe Precision Time Measurement (PTM)
- PCIe cabled and optical links
- RS232, RS485, GPIO, SPI, I²C
- Single, Dual, Quad lane upstream port
- Single-/dual-lane downstream port

PCI11xxx/12xxx Evaluation Boards

These evaluation boards showcase the capabilities of the PCI11xxx/PCI12xxx family of PCIe peripherals. With five versions available, corresponding with the different part numbers found in the table below, there is an evaluation board for every use case. Complimentary access to our microCHECK Design Review services and reference design schematics is also provided.



Block Diagram for the PCI11414



For more information visit www.microchip.com/en-us/products/interface-and-connectivity/PCIe-Peripherals

Compare the Family of PCIe Peripheral Products

Part Number	Description	Upstream Port	Downstream Port	Networking MAC	USB xHCI Host Controller	Package	Development Tool Part Number
PCI11414	PCIe switch with integrated USB 3.2 Gen 2 host controller, Ethernet MAC and programmable I/O	✓	1	✓	✓	164 DQFN	(EVB-PCI11414) EV38E94A
PCI11400	PCIe switch with integrated quad USB 3.2 Gen 2 host controller and programmable I/O	✓	1		✓	132 DQFN	(EVB-PCI11400) EV96N38A
PCI11101	PCIe switch enabling M.2 build-out with integrated USB, PCIe and programmable I/O	✓	1		✓	132 DQFN	(EVB-PCI11101) EV73F18A
PCI11010	PCIe switch with integrated 2.5G Ethernet MAC & PTP with downstream port and integrated I/O	✓	1	✓		100 VQFN	(EVB-PCI11010) EV03B65A
PCI12000	Three-port PCIe switch with integrated programmable I/O	✓	2			72 VQFN	(EVB-PCI12000) EV05J17A