

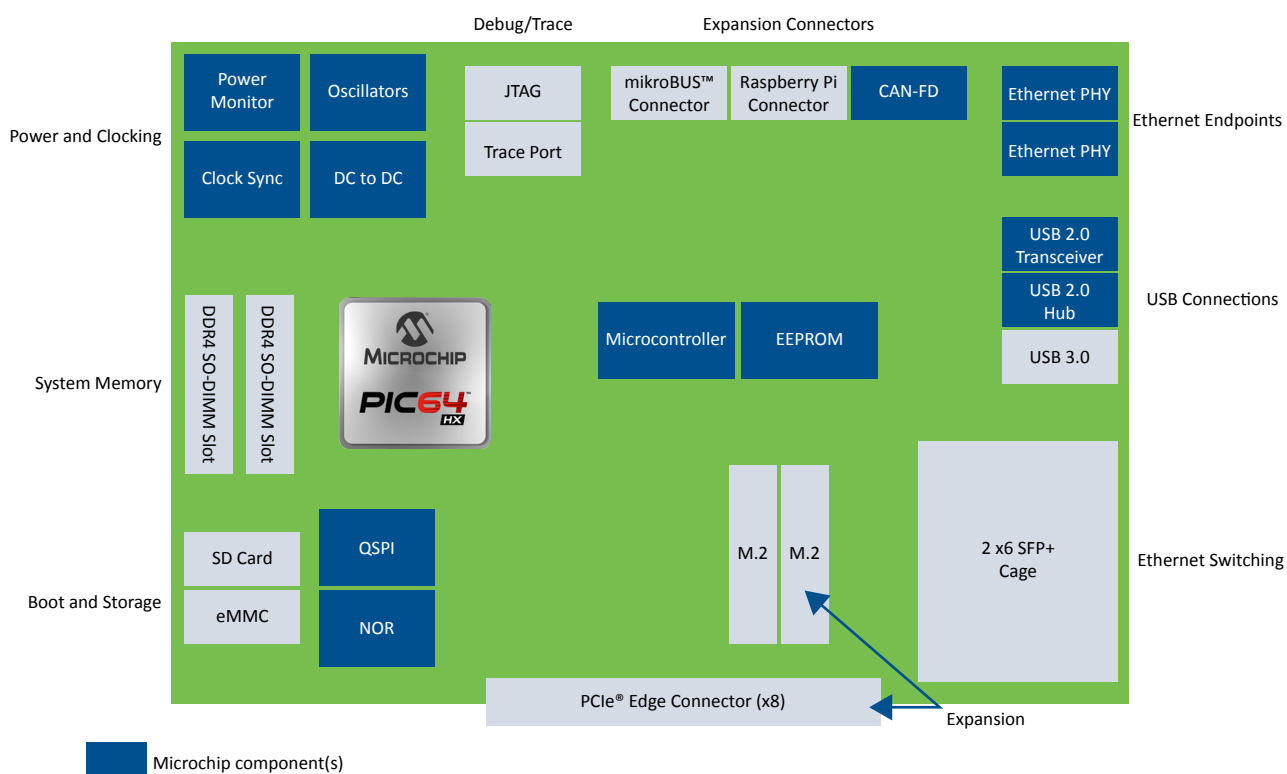
Total System Solution for PIC64HX Series of Microprocessors

Summary

The PIC64HX family consists of multi-core 64-bit RISC-V[®] based MPUs plus software and platform components to enable your development and deployment of computing solutions for the aerospace, defense and industrial markets. The PIC64HX family supports advanced technologies including hardware virtualization, Artificial Intelligence (AI), Ethernet Time-Sensitive Networking (TSN), Remote Direct Memory Access over Converged Ethernet (RoCE) v2, PCIe[®], Compute Express Link[®] (CXL[®]) 2.0 and post-quantum cryptography.

To simplify your design, we offer a pre-engineered Total System Solution (TSS) for the PIC64HX family. This total systems solution delivers the features and performance to support all aspects of your design, including power management, application complex configuration, end-to-end security, attaching AI/ML accelerators and a complement of peripheral devices (storage, sensors or actuators). This differentiated offering allows you to focus immediately on delivering your design.

PIC64HX Single-Board Computer Example Diagram



PIC64HX TSS Reference Design

- HX1000-KIT: PIC64HX Curiosity Ultra+ Evaluation Kit
- Includes TSS BOM and schematics

PIC64HX Component Recommendations

We offer a comprehensive portfolio of terrestrial-grade components for use in your PIC64HC MPU-based design.

Function	Recommended Part Number	Product Description
Microcontroller (MCU)	SAM D51	32-bit Arm® Cortex®-M4F based processor
Dual Ethernet PHY	VSC8662XIC-03	Dual-port 10/100/1000BASE-T PHY and 100BASE-FX/1000BASE-X SerDes with recovered clock output
CAN FD Controller/ Transceiver	MCP251863	External CAN controller with integrated transceiver
32.768 kHz Oscillator	DSC60xx	Ultra-small, ultra-low-power MEMS oscillator
12 MHz Oscillator	DSC10xx	1.8–3.3V low-power precision CMOS oscillator
USB 2.0 Hub Controller	USB2514B	Four-port USB 2.0 hub controller
Hi-Speed USB 2.0 Transceiver	USB3341	26 MHz USB 2.0 ULPI PHY IC
I²C IO Expander	MCP23008	8-bit I2C I/O expander with serial interface
Power Monitor	PAC1934	Quad DC power monitor with accumulation
EEPROM	24LC64	64 kb EEPROM
64 Mb QSPI NOR Flash	SST26VF064B	64 Mb 2.3–3.6V Serial Quad I/O (SQI) Flash
LVDS Oscillator	DSC1103/23	Low-jitter, precision LVDS oscillator (100 MHz PCIe® reference clock and 156.25 MHz reference clock)
Clock Synchronizer	ZL30632	System synchronizer with up to five channels
DC-DC Converter	MIC24055 MIC26603 MIC5167 MIC22705 MIC69303	12A switching regulator 6A switching regulator 6A VTT switching regulator 7A switching regulator 3A LDO

For More Information

Visit microchip.com/PIC64HX or contact your local Microchip sales representative

Leading Provider of:

- High-performance standard and specialized microcontrollers, Digital Signal Controllers (DSCs) and microprocessors
- Mixed-signal, analog, interface and security solutions
- Clock and timing solutions
- Wireless and wired connectivity solutions
- FPGA solutions
- Nonvolatile EEPROM and Flash memory solutions
- Flash IP solutions