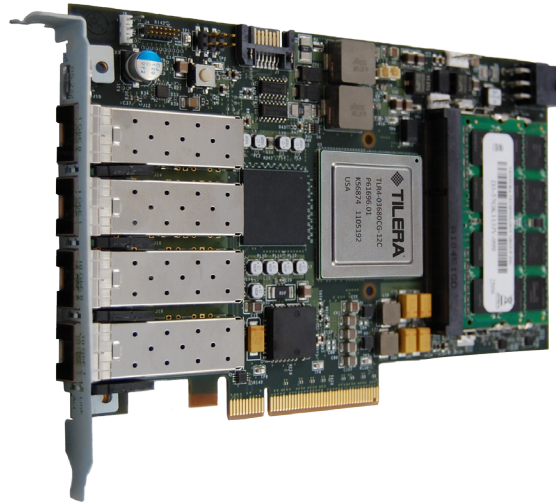


TILEncore-Gx36 Development Platform

The TILEncore-Gx36™ PCIe card is a very high-performance, high density PCIe platform that is ideally suited for evaluating and developing applications for the TILE-Gx family of manycore processors. The massive compute of the TILE-Gx™ processor is complimented with 40 Gbps of Ethernet I/O, enabling both network endpoint or “bump in the wire” configurations.

Powerful Computing Platform

The 36-core TILE-Gx8036™ processor brings over 40 GHz of compute to bear on the most demanding applications. The processor is supported by up to 8 GBytes of DDR3 memory and an on-board SATA disc controller allows connecting large amounts of rotating or solid-state storage. It is typically installed into a host x86 desktop or rackmount PC, or alternatively it can be configured to operate in a standalone mode without the use of its PCIe edge connector.



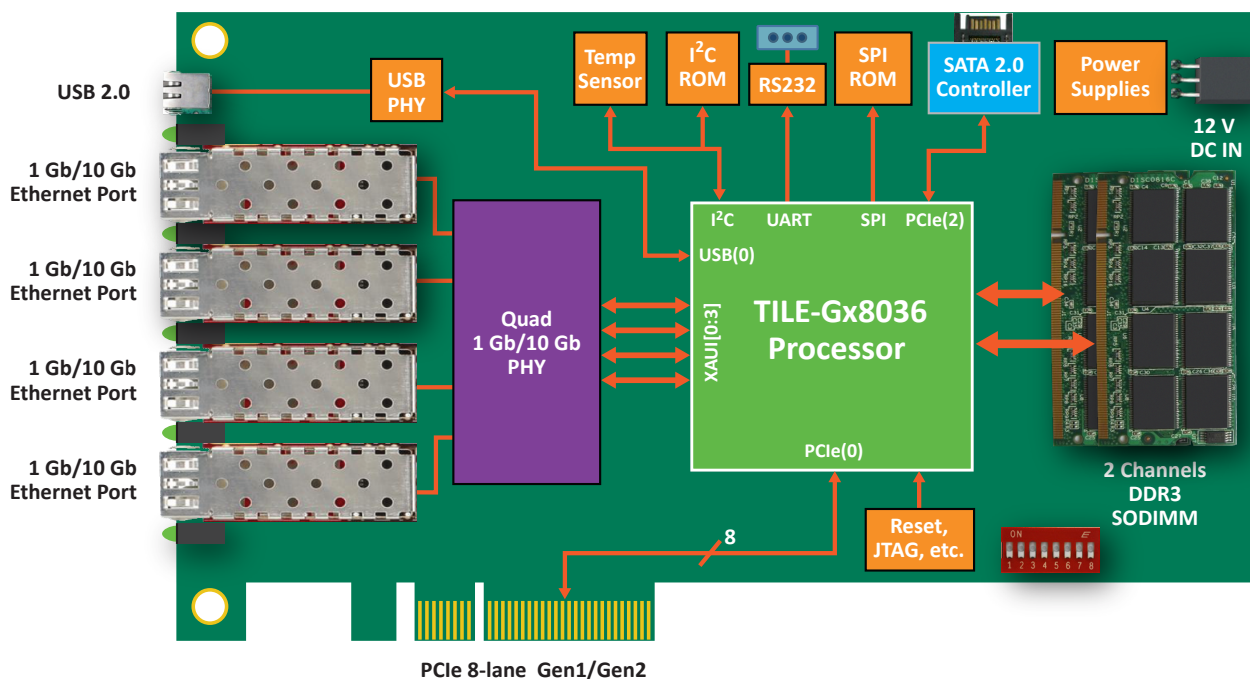
Flexible I/O

The rear plate includes four high-speed Ethernet ports (SFP/SFP+) that can each be configured for 1 or 10 Gbps operation. In addition, a USB 2.0 port is included for debug and management purposes. An 8-lane PCIe Gen2 edge connector interfaces to the host system, offering up to 32 Gbps of peak throughput.

Use-Case Examples

- Platform for Gx software development
- Evaluation system to execute performance benchmarks
- 4x 10G intelligent offload Network Interface Card (NIC) for quick hardware deployment
- PCIe-based accelerator card for compute-intensive offloads

TILEncore-Gx36 Block Diagram



TILEncore-Gx36 Development Platform

Specifications

General	Full-height, half-length, single-slot PCI Express RoHS-6 compliant per EU 2002/95/EC
PCIe Interface	Eight-lane PCIe 2.0, Gen2 compliant Fall-back to 4, 2, or 1 lane. Fall-back to Gen1 mode Hot-plug compliant
Network Interfaces	Flexible interface capability: <ul style="list-style-type: none"> – Four SFP/SFP+ ports, each configurable as 1 Gbps or 10 Gbps Ethernet – One USB 2.0 endpoint port for development and debug Optional co-processor mode with interfaces disabled (all traffic passed over PCIe)
Memory	Two SO-DIMM sockets for DDR3 SDRAM PC3-10600 (DDR3-1333), 2 to 8 GB total capacity
Storage	One SATA 2 connector for connection to rotating disc or Flash disc (SSD)
Indicators	On-board power supply status indicators LEDs on rear plate for Ethernet link status and activity

Technical Features	Supports INTx and MSI interrupts across PCI On-board dual temperature sensor and integrated fan control JTAG test connector
Power	Standard 6-pin Molex “ATX power” connector Single 12 V supply from ATX connector Typical power dissipation: 50 W @ 1.2 GHz Cooling: Active cooling fan/heatsink Required airflow: 0.55 m/s (100 lfm) @ 50°C
Environmental	Operating temperature: 0° to 50°C Storage temperature: -40° to 70°C Humidity: 10% to 90% RH non-condensing
Physical Specifications	Board height: 4.38 in (11.1 cm) Board length: 6.6 in (16.8 cm) Bracket height: 4.72 in (12 cm)

Ordering Information

Part Number	Processor	Processor Frequency	Memory Installed	I/O Interfaces	Operating Temperature
TLB4-03680-12-PCIe-4S10-4-GC	TILE-Gx8036	1.2 GHz	4 GBytes	Four 1G/10G SFP/SFP+ ports	Commercial
TLB4-03680-12-PCIe-4S10-8-GC	TILE-Gx8036	1.2 GHz	8 GBytes	Four 1G/10G SFP/SFP+ ports	Commercial