

G30-XFibre-10/40G

Zynq Ultrascale+ Network and Storage Accelerator SmartNIC Card - 10G/40G

The G30-XFibre-10/40G, powered by Zynq UltraScale+ MPSoC technology, is an advanced SmartNIC platform built for high-bandwidth and low-latency networking solutions. Engineered for next-generation edge computing, virtualization, and real-time packet analytics, it delivers consistent, wire-speed performance for demanding network infrastructures.

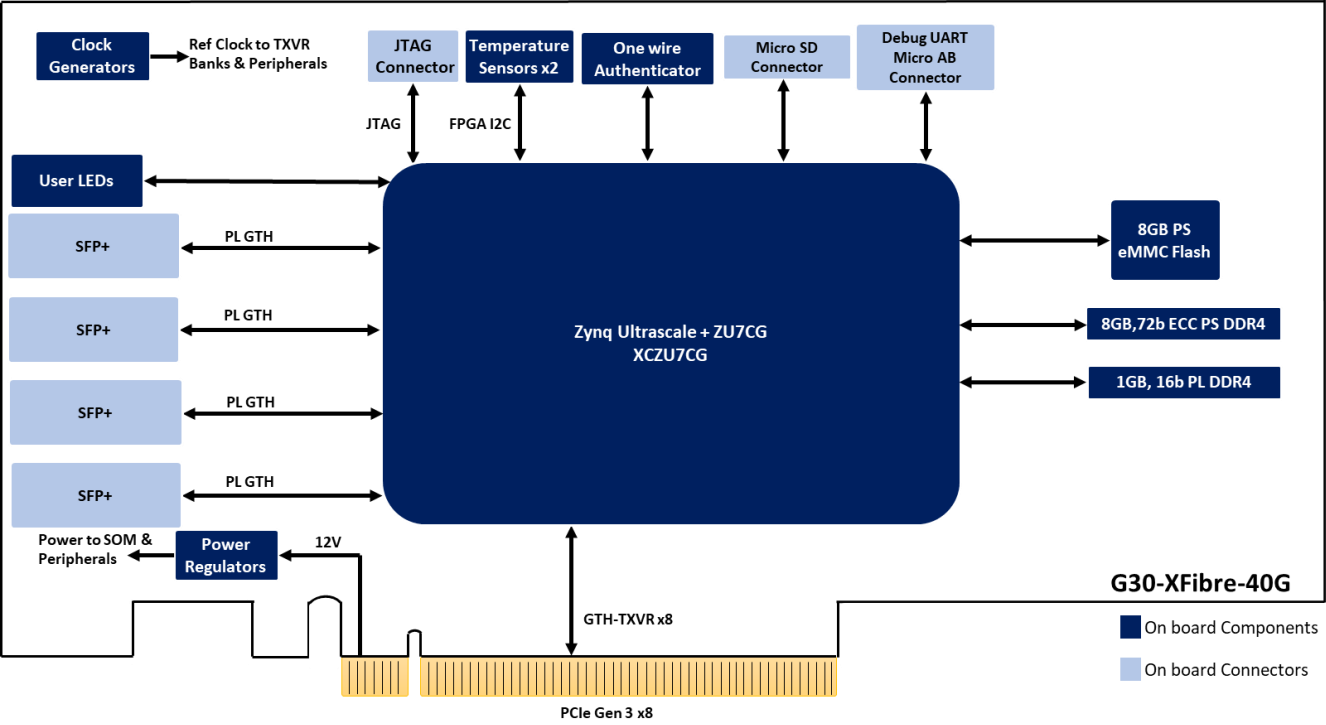
The design integrates high-speed PCIe Gen3 x8 connectivity, dedicated DDR4 memory channels, and support for up to 40Gbps aggregate throughput. A quad-core 64-bit Arm Cortex-A53 processing subsystem, paired with ECC-enabled DDR4, provides robust control and flexible programmability for custom networking applications.



Highlights

- ❖ PCIe Gen3 x8 Host Interface
- ❖ 1/2 Length, Full Height, Single Slot with Active Cooling
- ❖ 4x 10GbE SFP+ Cages
- ❖ PS – Single 8GB, 64b + 8b ECC DDR4 Channel @2133Mhz
- ❖ PL – Single 1GB, 16b DDR4 Channel @2133Mhz
- ❖ 8GB eMMC Flash + microSD Expansion Slot
- ❖ Micro-USB (UART) and JTAG Debug Interface
- ❖ Dual onboard Temperature sensors
- ❖ One wire Authenticator

Block Diagram



Technical Specifications

FPGA	• Zynq UltraScale+ MPSoC ZU7CG • 230K LUTs • PL: 16× GTH transceivers up to 16.3 Gbps • PS : 4× GTR transceivers up to 6 Gbps • 504K Logic Cells	Processor System	• Quad Arm Cortex-A53 @1.5GHz • Dual Cortex-R5 @600MHz
Memory	• PS – Single 8GB, 64b +8b ECC DDR4 Channel @2133Mhz • PL – Single 1GB, 16b DDR4 Channel @2133Mhz	Storage Media	• 1 x 8GB eMMC- expandable up to 128GB
PCIe Host Interface	• Gen3 x8	Host Software	• Linux OS • *DPDK
PCIe Bracket Connectors	• 4 × 10GbE SFP+ • User LED	PS Operating System	• Linux
Network Interfaces	• 4 × 10GbE SFP+	Operating Temperature	• 0°C to 45°C
Line rates (Ethernet)	• 4 × 10G, 1 × 10G	Power Input	• 75W max from PCIe finger
		Cooling	• Active cooling
		Form Factor	• Full Height,Half Length Single Slot PCIe Card
		Enclosure	• Aluminum alloy 5052- H32
		Compliance	• REACH & RoHS Compliant * • CE*

Ordering Information

G30-XFibre 10/40G

Zynq Ultrascale+ MPSOC (XCZU7CG), Full Height, Half Length, Single Slot, Active cooling - 10/40G SmartNIC Card

Product accessories

Thermal Solutions

For any highly integrated SmartNIC product, thermal design is a very important factor. iWave supports Heat/Fan Sink for Card.

PCIe Bracket

Facilitates secure SmartNIC installation, ensures compatibility with standard chassis, and withstands mechanical stress.

Card Backplate

Facilitates secure SmartNIC installation, ensures compatibility with standard chassis, and withstands mechanical stress.

Applications

- **Network Security**

Fortifies network defenses and ensures the integrity, confidentiality, and availability of critical data and resources.

- **Cloud and Data Center**

data processing, Network management, security

- **Network Traffic Management**

Directing flows, balancing loads, and filtering packets.

Additional Services

- **Custom hardware integration**

Expanded specs and add-ons designed to meet your needs

- **Preloaded Servers**

Ready-to-deploy in servers with flexible configurations

- **IP and Solutions**

We reduce risk in both development and deployment with proven IP and solutions

- **Service**

Documentation and issue tracking made easy at the iWave Support Center

A Global Leader in Embedded Systems Engineering and Solutions

Since 1999, we have pioneered leadership in embedded systems technology, establishing ourselves as a strategic embedded technology partner for advanced solutions. Our comprehensive portfolio encompasses ARM and FPGA System on Modules, COTS FPGA solutions, and ODM solutions which include Telematics, Gateways & HMI Solutions.

Beyond our robust product ecosystem, we provide comprehensive ODM support with specialized custom design and manufacturing capabilities, enabling customers to accelerate and optimize their product development roadmaps. With a strategic focus on industrial, automotive, medical, and avionics markets, we deliver innovative technology solutions to global clients.

mktg@iwave-global.com

iWave Global

Bangalore, India

iWave USA

Campbell, California

iWave Global East Coast LLC

New Jersey, USA

iWave Global

Ras Al Khaimah, UAE

iWave Global GmbH

Ratingen, Germany

iWave Europe

Rotterdam, Netherlands

iWave APAC

Taipei City, Taiwan

iWave Korea

Gyeonggi,-do, Korea

iWave Japan

Yokohama, Kanagawa

**iWave
Global**