



1GBPS MANAGED ETHERNET SPACE SWITCH

If you need a networking solution for mission-critical applications, COTS devices could put stress on your system and leave you open to hardware vulnerabilities.

DornerWorks 1Gb Ethernet Switch on a Chip IP can help your business develop a customized networking solution, primed and ready to enhance your applications.

DornerWorks 1Gbps Managed Ethernet Switch IP supports proven interoperability with Microchip FPGAs to reduce risk.

PRODUCT NAME:
1GBPS MANAGED ETHERNET SPACE SWITCH

PRODUCT ID:
1GSWITCHIP

LICENSING OPTIONS:
PROJECT, SOURCE CODE

KEY FEATURES



Interfaces

- Full-duplex 100/1000 Mbps Ethernet interfaces
- MII/RMII/GMII/RGMII physical interfaces
- MDIO PHY configuration interface

Switching

- 4 ports per RTG4 device
- High-speed chip-to-chip interface to support combining multiple RTG4 devices
- L2 and L3* routing (cut-through) completely in logic

Timing

- Grandmaster and slave boundary clock support*
- Hardware timestamping
- IEEE 1588-2008 (v2) peer delay (P2P) and path delay (E2E) and L2 (802.1) and L3 (UDP/IPv4)*
- IEEE 1588-2002 (v1)*
- NTPv4 client*

Hardware Support

- Currently targets MicroChip Rad-Tolerant RTG4
- Uses a RISC-V softcore making it very portable
- Can be ported to the MicroChip PolarFire family of devices

Advanced Routing

- Dynamic and static MAC-based routing
- IEEE 802.1Q VLAN support
- Configurable VLAN-based MAC addresses
- Layer 3 routing with frame rewriting in logic*
- L2 and L3* ACL for ingress and egress filtering
- Dynamic and static ARP with ARP proxy*
- IGMPv3 multicast, querier support, with snooping*
- MSTP and RSTP*
- PIM – Dense Mode

Management

- SNMPv3 and SNMPv2 with standard and vendor MIBs
- Human-readable configuration file (JSON)
- Bootloader Utility to update software and configuration via serial port

Diagnostics

- Serial (UART) command line interface
- Port mirroring (ingress and/or egress) of any port or VLAN to any port
- Trace logging to command line interface
- Logging to Flash
- Remote trace using standard syslog protocol
- ICMP (ping) support*

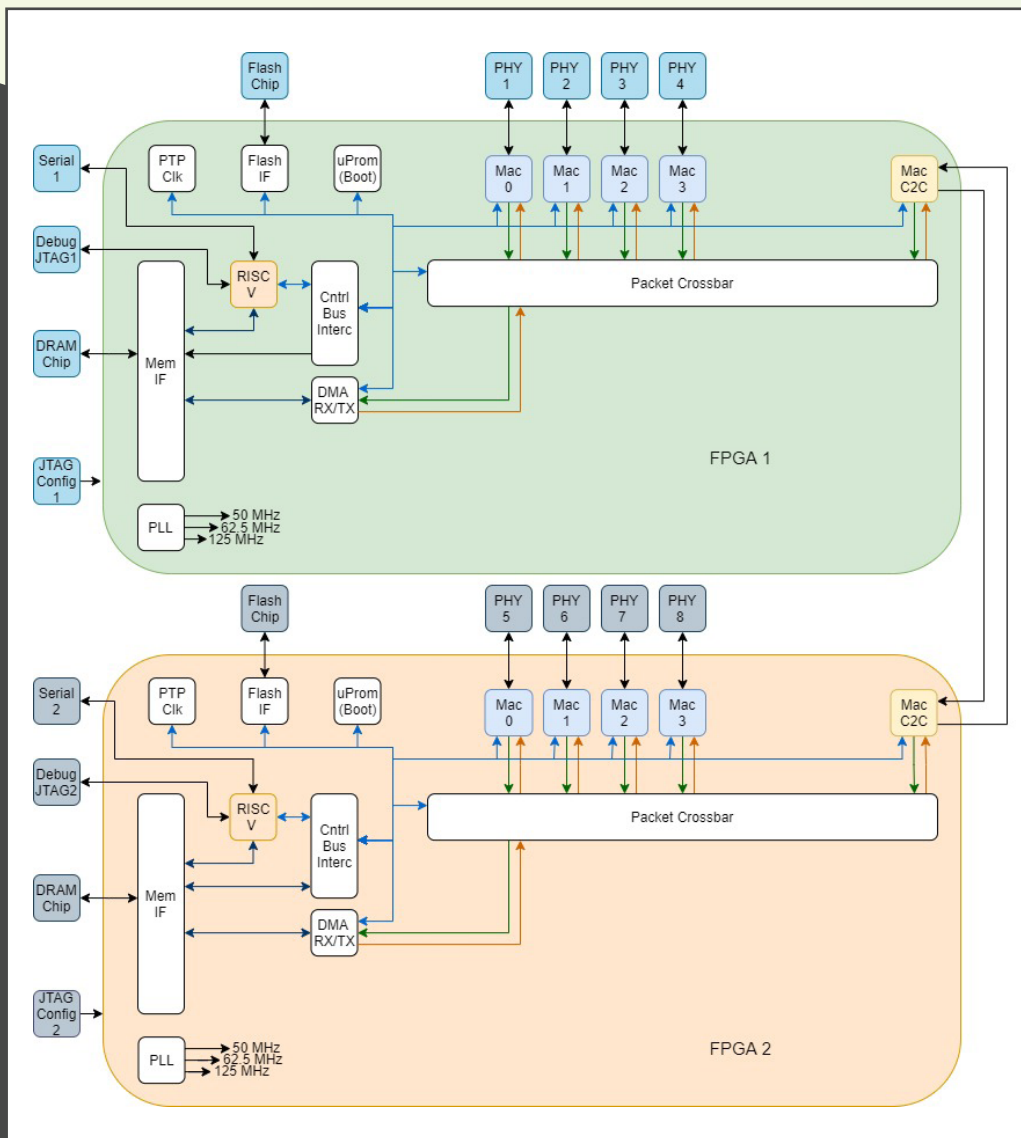
* Layer 3 functionality is an add-on to the base package.

DornerWorks.com | +1.616.245.8369

The FPGA logic in DornerWorks 1Gbps Managed Ethernet Switch was developed for Microchip FPGAs.



IP BLOCK DIAGRAM



GET THE 1GBPS MANAGED ETHERNET SWITCH IP TODAY

DornerWorks.com | +1.616.245.8369