

» ESC1600/ESC2404 «



1/10 Gigabit Ethernet Switch Core Module

» **High Performance**

Managed Layer 2/3 1/10Gb Ethernet switch module including firmware

» **Flexible & Scalable**

Standardized SGMII & XAUI interfaces, alarm & status ports, single voltage

» **Rugged**

Highly shock and vibration resistant, extended temperature range

ESC1600/ESC2404

Fully Managed Ethernet Switch Core Module

The Kontron ESC is a modular non blocking fully managed L2/L3 1/10Gb Ethernet Switch module that provides a rich and versatile feature set to integrate Ethernet switching functions on custom base board designs. Whatever you need to integrate, the ESC is the ideal fit for all kinds of high performance Ethernet switching, either in military, avionics or industrial applications.

Bandwidth

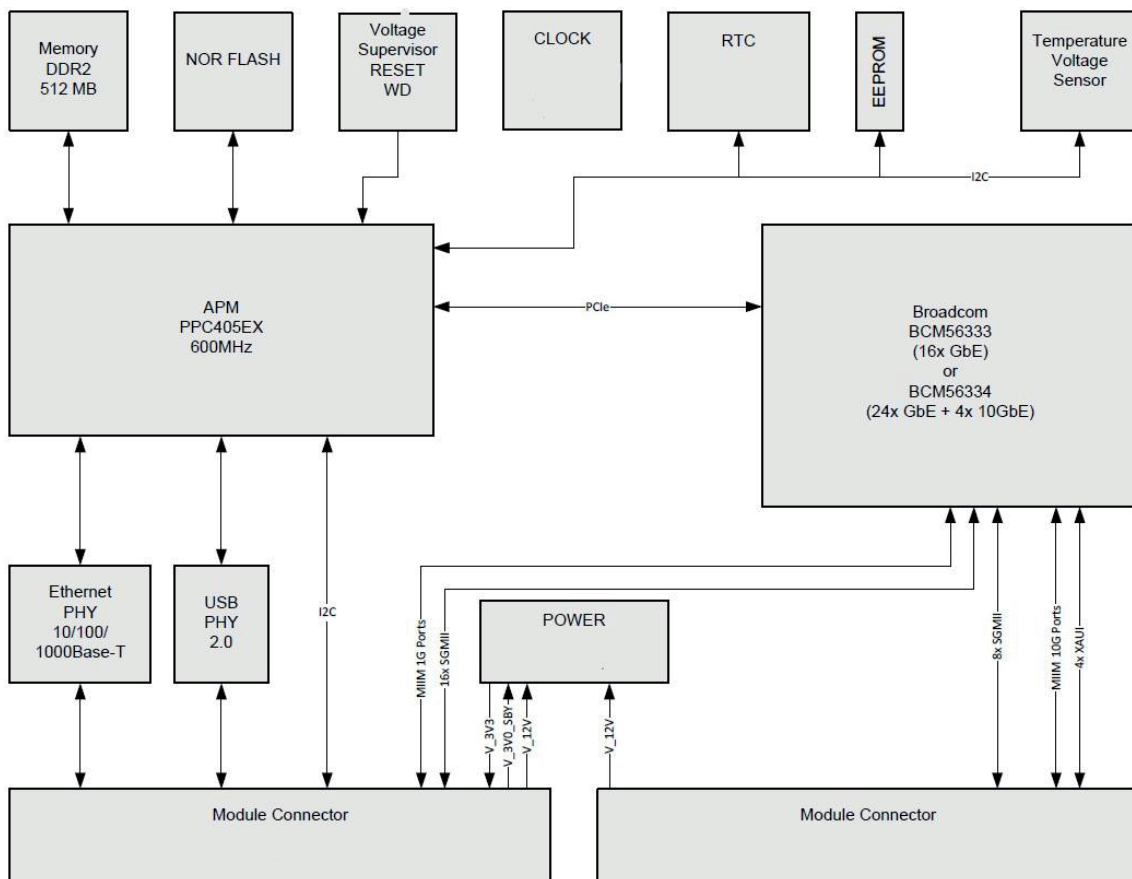
The ESC is designed for future oriented applications requiring outstanding bandwidth and communication safety. Up to 4 ports running at 10Gb/s full line speed and up to 24 ports providing 1Gb/s support gives flexibility and an intrinsic value for today's investments.

Reliability

The robust design including components for extended temperature range provides the basis for rugged Ethernet switching devices. A 12V single supply voltage gives the option for a broad portfolio of power supplies. Built-In test capabilities enable effective switch maintenance.

Management

The ESC module can be monitored via SNMP over serial line or Ethernet. Web based management and a comprehensive command line interface enable layer 2/3 management including full IPv6 support. Features like IP forwarding & Multicast, Routing & Switching, Quality of Service, VLANs etc. enable complex network routing.



Technical Information

Interfaces

ESC2404

- » 4x XAUI including MIIM management interfaces for 10GbE physical layers
- » 24x SGMII including MIIM management interfaces for 1GbE phys

ESC1600

- » 16x SGMII including MIIM management interfaces for 1GbE physical layers

Both versions:

- » 1x 10/100/1000Base-T for Management
- » 1x RS232 for Management
- » USB for software feature updates, boot images
- » Reset input
- » Status LED signals
- » Alarm contacts
- » 12V DC supply input
- » PoE signalling

Controller & Switch

Broadcom 1/10G Ethernet Switch 5633x
PowerPC APM405 600 MHz with 512MB memory

Management

Management via SNMP, Command Line (Telnet, SSH)

- » In-band
- » Out of band via Ethernet or RS232

Power On Self Test

DHCP server, relay and Boot media support
Reliable software, field upgradable
Advanced management monitoring features

Ethernet/Bridging protocols include

- » Link aggregation (802.3ad)
- » VLANs (802.1Q)
- » QoS (IEEE 802.1p)
- » Spanning tree (802.1D, 802.1w)
- » Flow control (802.3x)
- » GARP/GVRP, GMRP

IPv4/IPv6 routing features:

- » ARP, ICMP, OSPF, RIP, VRRP, DVMRP

Enhanced Features are

- » Egress ACLs, IP ACL support
- » Auto VoIP
- » IGMP snooping & proxy support
- » Startup configuration configurable
- » Watchdog
- » Cable test

Power Consumption

12VDC, max. 24.5 W (ESC2404), max. 18W (ESC1600)

Dimensions

95x95 mm

Weight

Approx. 200gr

MTBF

354834h [MIL-HDBK-217 FN1 ; Method I Case 3; 25°C; GB]

Temperature Range

-40°C to +85°C (max. surface temperature)

Humidity

93% RH at 40°C, non-condensing (acc. to IEC 60068-2-78)
93% RH at 40°C, non-condensing (acc. to IEC 60068-2-78)

Ordering Information

Article	Description
ESC1600	Fully managed L2/L3 Ethernet switch module, 16x 1G (SGMII), 1x ETH management port, serial line, USB -40°C to +85°C operating temperature
ESC2404	Fully managed L2/L3 Ethernet switch module, 4x 10G (XAUI), 24x 1G (SGMII), 1x ETH management port, serial line, USB, -40°C to +85°C operating temperature
Options	Reference Design with 4x10G SFP+, 24x 1G RJ45, serial and Ethernet management port, USB, Alarm contacts, status LEDs, DIP switch for configuration management

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