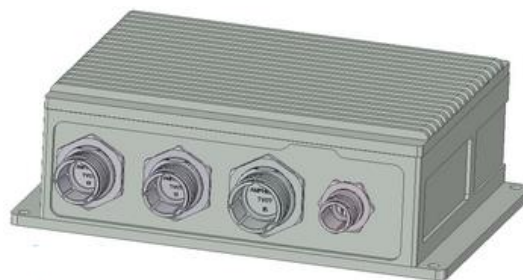


Small Form Factor Ethernet Switch

8 ports

**Managed L2+ or Fully Managed L2 – L3 with
PRP and HSR Redundancy protocols**

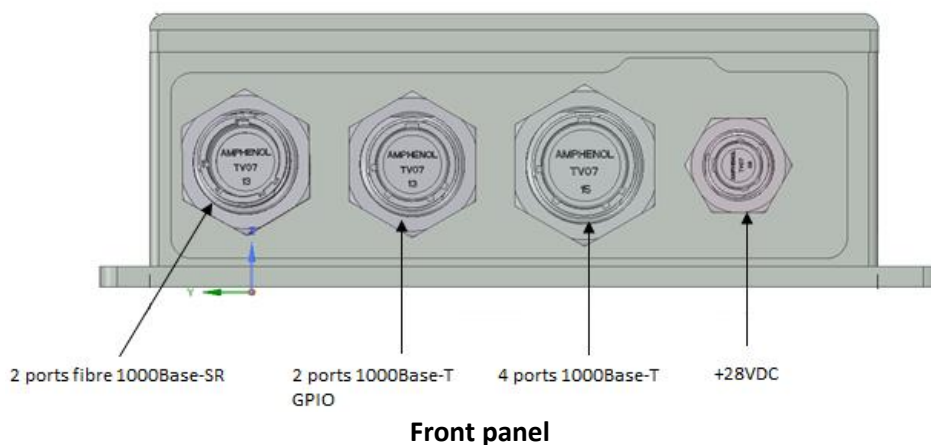


Main features	
Ethernet Ports	6 ports 10/100/1000-BaseT 2 ports 1000-Base-SX/LX Fiber
Processor	System-on-Module (SoM) board on carrier board Managed L2 version: Xilinx Zynq-7000 SoC Fully Managed L2 – L3: Xilinx Zynq Ultrascale+ MPSoC XCZU3EG
Switch main features	Managed L2 version or Fully Managed L2 – L3 version Full IEEE 1588 (PTP) Support High availability for Mission critical Applications - High availability Seamless Redundancy (HSR) - Parallel Redundancy Protocol (PRP) Multilayer management, security monitoring CLI, SMTP, ...
Miscellaneous	Auxiliary RS 232 console port
	Up to 6 GPIO
	Temperature sensors
CyberSecurity – With L2-L3 version	
	Anti-Tampering capability and embedded crypto engines
	Integrated Built In Test
	Secure Boot capability
	Trusted Platform Module (TPM) 2.0
	Secure CLI, SSH, SNMP v3
	Selective ports / Unsecure ports disabling capability
	Syslog Common Event Format (CEF) extension for SIEM interoperability
	Integrated security services: Firewall, VPN
	Hardware protection against Denial of Service
Layer 2 General Functionalities	
	IEEE 802.3 2000
	Automatic MAC address learning and aging
	Static MAC Table
	Port Based Virtual LANs (VLANs)
	IEEE 802.1Q for VLAN tagging
	IEEE 802.1Q for VLAN based Ethernet priorities
	Ethertype based switching
	IEEE 802.1p for Class of Service (CoS)
	IEEE 802.1ab for Link Layer Discovery Protocol (LLDP)
	Priority Modes: PCP (802.1p), Etherbyte (Up to 16)
	Broadcast protection configurable via register
	Layer 2 multicast filtering
	Jumbo frame support
	IEEE 1588 StateLess TC (Transparent Clock)
	802.1s/w for (M)RSTP (Rapid Spanning Tree Protocol)

SFF Ethernet Switch

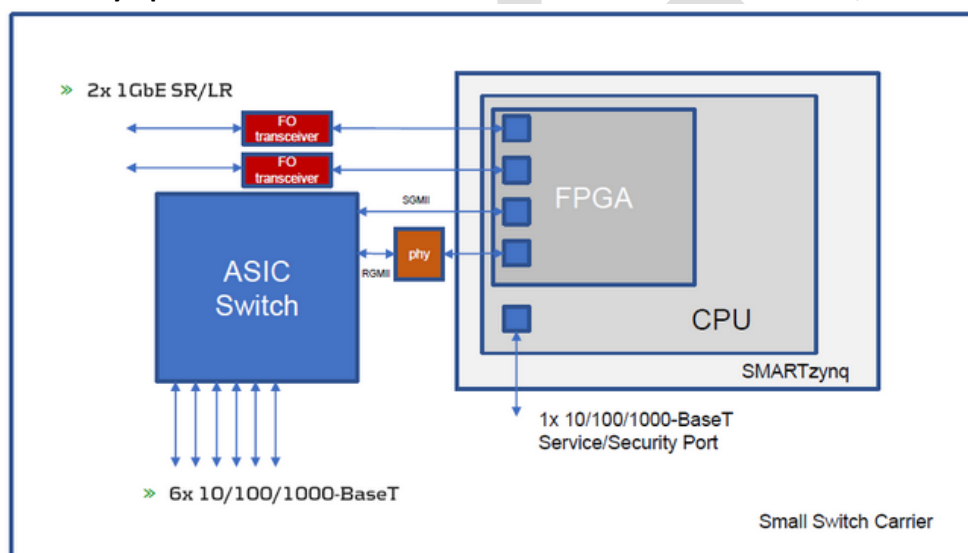
Layer 3 General Functionalities	
	IPv4/IPv6 Multicast IP Routing
	IGMP Snooping
	DSCP TOS
	Dynamic Routing: BGPv4, BGPv6, OSPFv2, RIPv2
Equipment Management and Monitoring	
	HTTPS Web GUI interface with secure firmware/bitstream update
	Graphic representation of Network status (HSR DANs & VDANs)
	Statistics independent per port
	SNMP RFC 1157/RFC
	DHCP (Client and Server)
	System Syslog
	MIB support
	Console port
Power Supply	
Power Input	+28VDC (+12VDC up to +36VDC)
Filtering	EMI filtering according to DO-160 / MIL-STD-461 / MIL-STD-704 / MIL-STD-1275
Power consumption	TBD Watts
Mechanical specifications	
Size (WxDxH)	175mm x 136mm x 65mm (TBC)
Weight	1.5kg (TBC)
Connectors	MIL-DTL-38999 connectors series III
Environmental specifications	
	Fully qualified product
Temperature	- 40 to +71°C according to DO160, and depending on the external cooling solutions
Shocks	40g@11m according to MIL-STD-810
Vibrations	According to DO160 Section 8 Category U
Altitude	From 752mbar (8000ft) to 116mbar (50000ft), according to DO160
EMI / EMC	According to MIL-STD-461 and DO160
Ingress protection	IP67
Other specifications	
Rugged design	Cable free, Corrosion-resistant, aluminium chassis, Fanless
Export Control	ITAR Free (European design)
Life cycle	15 years, thanks to the System-on-Module (SoM) board based on FPGA and MPSOC
Development Board	Development Board available with 4x 1000Base-T and 1x 1000Base-SX (Fiber)
Customization (On request)	
Software	Custom software on request
Connector	Specific front panel with M12 connectors or standard RJ45

SFF Ethernet Switch



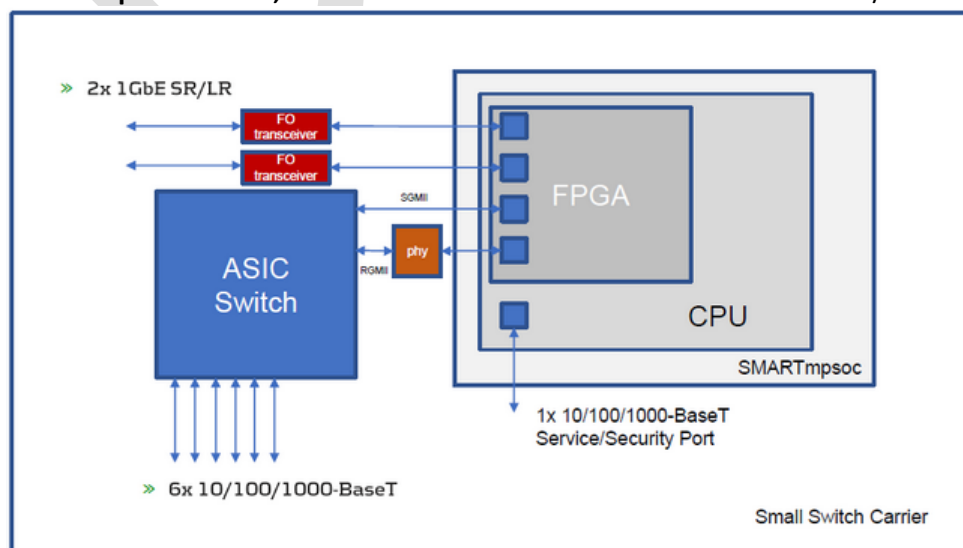
Bloc diagram of the L2+ version

Based on **SMART Zynq** module. Same carrier board and same enclosure as the L2/L3



Bloc diagram of the L2/L3 version

Based on **SMARTmpsoc** module; Same carrier board and same enclosure as the L2/L3



Development Board

The development board offers the same features as the rugged switch but it is dedicated to a lab environment, allowing to start benches and developpements.

It consists on the following package:

SMARTzynq module or SMARTmpsoc module

Module carrier:

4x SFP cages for 10/100/1000Base-T, 100Base-FX or 1000Base-X

1x RJ45 for 10/100/1000Base-T

UART console (USB)

6V-30V DC (Power supply included)

2x PMOD connectors

SD Card with the Reference Design

Power Supply

USB B cable

Fiber/Copper SFP modules (optional)



SMARTzynq development board
Managed Switch L2+



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