



- 16x 40/56/100GbE Ports
- Up to 32x 50GbE or 64x 10/25GbE Ports
- Layer 3 Managed, Non-blocking
- Automotive Certified
- Liquid Cooled
- Compact & Lightweight
- Easy to Deploy and Maintain
- Customizable

Features

16 Port 100GbE Switch - Delivers 16x 40/56/100GbE ports over QSFP28, and with breakout cables up to 32x 50GbE or 64x 10/25GbE ports for a total throughput of 3.2Tb/s and 2.38Bpps processing capacity and zero packet loss

Layer 3 Managed - Provides flat latency across L2 and L3 forwarding, 300ns for 100GbE port-to-port latency with Software Defined Networking support

Automotive Certified - Comes with ECE R10, ISO 50498, ISO 16750-3/LV-142-2 (Shock & Vibration), VDA320, LV-142 (Electrical Tests) certification for use on traditional, electric and autonomous vehicles

Liquid Cooled - Interfaces with the vehicle liquid cooling infrastructure and Eurotech liquid cooled systems, delivering the highest level of energy efficiency and ruggedness

Compact & Lightweight - Saves precious space and weight thanks to liquid cooling: direct heat removal does not require bulky and heavy heatsinks

Easy to Deploy and Mantain - Can be installed in any recess and does not require airflow for cooling; quick disconnects allow fast and secure integration with the vehicle cooling infrastructure and simple removal for maintenance

Customizable - Flexible: personalization and full customization options are available, ranging from branding ("skin" and color) to deep hardware configurations

Description

The DynaNET 100G-01 is a high performance switch for Automotive and rugged applications, where extreme levels of performance, reliability and compactness are required.

Featuring a total of 16x 40/56/100GbE QSFP28 ports, the DynaNET 100G-01 is the ideal solution as a high performance backbone in high performance applications, such as in Autonomous Driving, Artificial Vision and HPEC. When a high port count is needed, it is also possible to use breakout cables to reach up to 32x 50GbE or 64x 10/25GbE ports.

With a total throughput of 3.2Tb/s, a processing capacity of 2.38Bpps and 300ns port-to-port latency, the DynaNET 100G-01 can be used as a spine switch to implement a spine-leaf rugged switch architecture, delivering significant benefits in terms of data traffic predictability at a very low latency.

Layer 3 switching allows great control over traffic, and makes it possible to manage services and data streams in a much more deterministic way. This is a very important feature in all those applications where it is necessary to avoid data starvation and preserve the deterministic behavior of the network.

The DynaNET 100G-01 is certified for Automotive applications and can be easily integrated in traditional combustion, hybrid, electric and autonomous vehicles. It is available with a 12VDC or 48VDC automotive-grade power supply.

The DynaNET 100G-01 is liquid cooled and has no vents nor moving parts, dramatically increasing reliability. Since it does not require any ventilation, the DynaNET 100G-01 is extremely compact and lightweight, making it simple to fit it in any recess. The liquid cooling infrastructure of the vehicle may be used to feed the DynaNET 100G-01, delivering significant savings in integration cost and complexity. Field-proven quick disconnects provide a fast and safe interface to the vehicle cooling system and greatly enhance deployment and maintenance procedures.

Ordering code: DYNET-100G-01-XX

| XX | | -01 | -02 |
|-----------------------|------------------|---|---|
| NETWORK | Performance | Throughput: 3.2Tb/s, Processing Capacity: 2.38Bpps, Port-to-Port Latency: 300ns, Zero Packet Loss | |
| | Interfaces | 16x 40/56/100GbE QSFP28 Ports - Up to 32x 50GbE Ports - Up to 64x 10/25GbE Ports | |
| MANAGEMENT | Management Ports | 1x 10/100/1000 BASE-T RJ45 (Out-of-band) - 1x USB - 1x RS-232 RJ45 | |
| LAYER 2 | Flow Control | 802.3ad Link Aggregation (LAG) & LACP: 16 Ports/Channel – 64 Groups Per System, Multi chassis LAG (MLAG), MLAG with STP support | |
| | Spanning Tree | 802.1W Rapid Spanning Tree: BPDU Filter, Root Guard, Loop Guard, BPDU Guard, RSTP, MSTP and PVRST | |
| | Link Aggregation | 802.1AX Link Aggregation (Max. 32 Groups per Device, 8 Ports per Group) | |
| | VLAN | 802.1Q Multiple STP, VLAN 802.1Q (4K) - Q-In-Q | |
| | L2 Multicast | IGMPv2/v3, Snooping, Querier | |
| | Other | LLDP, Store & Forward / Cut-through Mode, HLL, 1/10/25/40/50/56/100GbE, Jumbo Frames (9216 Bytes) | |
| LAYER 3 | General | User and Management VRFs, IPv4 & IPv6 Routing Including Route Maps, MP-BGP, OSPFv2 - PIM-SSM, PIM-SM, BFD (BGP, OSPF, Static Routes), VRRP, DHCPv4/v6 Relay - Router Port, int VLAN, NULL Interface for Routing, ECMP, 64-way, IGMPv2/v3 Snooping Querier | |
| | Synchronization | PTP IEEE-1588 (SMPTE Profile), NTP | |
| | QoS | 802.3X Flow Control, WRED, Fast ECN & PFC, 802.1Qbb Priority Flow Control, 802.1Qaz ETS - DCBX – App TLV Support, Advanced QoS – Qualification, Rewrite, Policers – 802.1AB - Shared Buffer Management | |
| OTHER | Management | ZTP, Ansible, Puppet, FTP / TFTP / SCP - AAA, RADIUS / TACACS+ / LDAP - JSON & CLI, Web UI, SNMP v1,2,3 - In-band Management, DHCP, SSHv2, Telnet, SYSLOG | |
| | SDN | OpenFlow 1.3: Hybrid, Supported Controllers: ODL, ONOS, FloodLight, Ryu, etc. | |
| | Monitoring | sFlow, Real time Queue Depth Histograms & Thresholds, Port Mirroring (SPAN & ERSPAN) - Enhanced Link & Phy Monitoring, BER Degradation Monitor, Enhanced Health Mechanism - 3rd Party Integration (Splunk, etc.) | |
| | Display | OLED Display with Protection | |
| | LEDs | 1x PSU Power Good LED, 1x System Health LED, 1x Switch Power LED, 1x Bad port LED, 1x Identifier LED | |
| | Maintenance | Remote Eurotech Protection Systems Monitoring, FW Upgrade | |
| POWER | Input | 48VDC Nom. (20 to 58VDC, 13A Max) | 12VDC Nom. (9 to 18VDC, 25A Max) |
| | Protection | Integrated Inrush Protection and Ignition Key Sense | |
| | Consumption | 210W Peak | |
| COOLING | Coolant | Flow: 75lph, 35°C Tinlet, 30% v/v Antifrogen L Coolant - Max Inlet Temperature: +45°C | |
| | Filter | Integrated Mesh Protection Filter | |
| | Protection | Eurotech Protection Systems: Condensation Detection, System Watchdog, Flow Rate, Internal Temperature, Inlet/Outlet Temperature, Humidity, Input Voltage/Current/Energy | |
| ENVIRONMENT | Operating Temp | 0 to +45°C | |
| | Storage Temp | -40 to +70°C (No Coolant) | |
| CERTIFICATIONS | Regulatory | EN 50498 | |
| | Automotive | ECE ONU Reg.10, ISO 16750-3/LV-124-2 (Shock & Vibration), VDA320 | ECE ONU Reg.10, ISO 16750-3/LV-124-2 (Shock & Vibration), LV-124 (Electrical Tests) |
| | Environmental | RoHS2, REACH | |
| MECHANICAL | Weight | 6Kg (Including Coolant) | |
| | Dimensions | 206x380x83mm (WxDxH) - Excluding Connectors | |

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