



PART NUMBER: ESG301, ESG302

LINQ/GbE series of products offers 12 or 24 Ethernet ports of 10/100/1000 Mbps. Using the Vitesse switch engine VSC7429, users have access to a wide range of Layer 2+ Switching features including but not limited to VLAN support, IPv4/IPv6 multicast, QoS, link aggregation and more. Management access is available via web interface, software API, SNMP or command line interface which is ideal for remote multi-unit updates.



LINQ/GbE uses a rugged enclosure design that is rated IP68 using solid Aluminum Alloy construction ideal for harsh high-shock and vibration environments.

FEATURES

- ✓ 12 and 24 Port 10/100/1000 Mbps Managed Switch
- ✓ Layer 2+ Carrier Ethernet Management
- ✓ Ruggedized Sealed RJ-45 Acclimate Connector Series
- ✓ IP68 Dust and Waterproof Solid Aluminum Enclosure
- ✓ +9V to +36V Wide Input Voltage Range (28V DC Nominal)
- ✓ Ruggedized Design to meet Environmental and EMI standards MIL-STD-810G, DO-160, MIL-461F

SPECIFICATIONS

Ethernet Switch Engine	<ul style="list-style-type: none"> Vitesse VSC7429 Carrier Grade Ethernet Switch Chipset A powerful embedded 416 MHz RISC 32-bit CPU with DDR2 external memory and DMA-based frame extraction and insertion supports timing over packet, Ethernet OAM, and performance monitoring 	Ethernet PHYs	12 x Cu PHY Ports from Vitesse VSC7429 Switch Engine 12 x Cu PHY Ports from Vitesse VSC8512 External PHY
Memory	1Gb DDR2 SDRAM 128Mb Serial NOR Flash	Ports	ESG301: 12 x Gigabit Ethernet (10/100/1000 Mbps) ESG302: 24 x Gigabit Ethernet (10/100/1000 Mbps)
Connectors	<p>Ethernet:</p> <ul style="list-style-type: none"> Ruggedized RJ-45 Connectors (Samtec RPBE Series) <p>Power and Management Ports:</p> <ul style="list-style-type: none"> Bayonet Sealed Circular Connectors (Samtec ACR Series) All connectors meet IP68 requirements for dust and waterproof sealing when mated or with dust cap 	Layer 2+ Switching	<ul style="list-style-type: none"> 802.1Q VLAN switch with 8K MACs and 4K VLANs Push/pop up to two VLAN tags IPv4/IPv6 multicast Policing with storm control and MC/BC protection RSTP and MSTP support Hardware and software-based learning Link aggregation (IEEE 802.3ad) Independent and shared VLAN learning (IVL, SVL) Jumbo frame support
Management Access	<ul style="list-style-type: none"> Web Interface RS-232 Serial Interface (CLI) Software API SNMP 	Indicator LEDs	<ul style="list-style-type: none"> Speed and Activity LEDs for each port Power Indicator System Status Indicators
Input Voltage	<ul style="list-style-type: none"> +9V to +36V DC Galvanic Isolation: 1.5kV DC Active Input Protection and Surge Suppression 	Power Consumption	Idle: 0.7A, 8.4W Typical: 0.85A, 10W Max: 1.15A, 14W (with +12V input)



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SPECIFICATIONS (cont'd)

Dimensions ESG301: 10.500" x 5.000" x 2.375" (266.70mm x 127.00mm x 60.33mm) ESG302: 18.250" x 5.000" x 2.375" (463.55mm x 127.00mm x 60.33mm)	Mechanical Enclosure Details <ul style="list-style-type: none"> • Complete IP68 rated • 6061-T6 Aluminum Alloy construction • Type II, Class 2 Black Anodize per MIL-A-8625 finish • Sealed with Form-In-Place/Cure-In-Place (FIP/CIP) Gasket • Stainless Steel hardware utilized throughout entire assembly
Weight ESG301: 4.5lbs / 2041g ESG302: 7.35lbs / 3333g	Operating Temp -40°C to +85°C (-40°F to +185°F)

SOFTWARE SPECIFICATIONS

Port control <ul style="list-style-type: none"> • Port Speed/Duplex Mode/Flow Ctrl • Port Frame Size (Jumbo frames) • Port State (administrative status) • Port Status (link monitoring) • Port Statistics (MIB counters) • Port VeriPHY (cable diagnostics) 	Power Saving <ul style="list-style-type: none"> • Cold start • Cool start • ActiPHY • PerfectReach • EEE Power Management • LED Power Management • Thermal Protection
QoS <ul style="list-style-type: none"> • Traffic Classes (8 active priorities) • Port Default Priority • QoS User Priority • Input priority mapping • QoS Control List (QCL Mode) • Storm Control for UC, MC and BC • Port policers • Global/VCAP (ACL) policers • Port egress shaper • Queue egress shapers • TRTCM (two rate three color market) • Scheduler mode (Strict or Weighted Fair Queuing) 	Management <ul style="list-style-type: none"> • DHCP Client • HTTP Server • CLI - Console Port • Industrial Standard CLI • Industrial Standard Configuration • Management access filtering • HTTPS • System Syslog • Software Upload via web • SNMP v1 / v2c / v3 Agent • SNMP multiple trap destinations • IEEE 802.1AB-2005 Link Layer Discovery – LLDP • Configuration Download/Upload - XML • Configuration Download/Upload - Industrial Standard • Loop detection restore to default • Symbolic Register Access
L2 Switching <ul style="list-style-type: none"> • Auto MAC addr. Learning/Ageing • MAC Addresses – Static • Virtual LAN • Private VLAN – Static • Port Isolation – Static • IEEE-802.1ad Provider Bridge (Native or Translated VLAN) • Rapid Spanning tree – RSTP, STP • Loop Guard • Link Aggregation – Static • Link Aggregation – LACP • IGMPv2 snooping • Port Mirroring (Ingress and Egress Mirroring) 	MIBs <ul style="list-style-type: none"> • RFC 1213 MIB II • RFC 1215 TRAPS MIB • RFC 4188 Bridge MIB • RFC 3635 Ethernet-like MIB • RFC 3411 SNMP Management Frameworks • IEEE 802.1 MSTP MIB • IEEE 802.1AB LLDP-MIB (LLDP MIB included in a clause of the STD) • RFC 3621 LLDP-MED Power (POE) (No specific MIB for POE+ exists) • Private MIB framework
L3 Switching IPv4 Unicast: RIPv1/RIPv2	Synchronization SNMP & client
Security <ul style="list-style-type: none"> • Port-Based 802.1X • Multiple 802.1X • Web & CLI Authentication • ACLs for filtering/policing/port copy 	

