Connect Tech Inc.
Embedded Computing Experts

LINQ/GbE

Product Name: LINQ/GbE
Part Numbers: ESG301, ESG302

LINQ/GbE is a Rugged Managed Ethernet Switch Box. **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 is a natural progression to an extensive line of small form factor embedded Managed Ethernet Switches readily available from Connect Tech.

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

Specifications	
Ethernet Switch Engine	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	**Ethernet:** Ruggedized RJ-45 Connectors (Samtec RPBE Series) **Power and Management Ports:** 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	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	Web Interface RS-232 Serial Interface (CLI) Software API SNMP
Indicator LEDs	Speed and Activity LEDs for each port Power Indicator System Status Indicators
Input Voltage	+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)
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	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

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*

✓*Extended Operating Temperature Range -40°C to +85°C*

RoHS

Specifications subject to change without notice.

LINQ/GbE

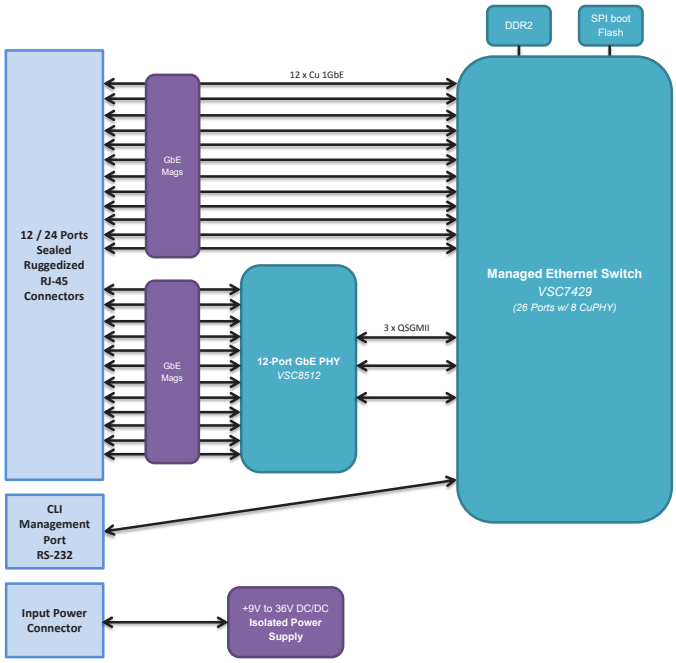
Software Specifications

Port control	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)
QoS	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)
L2 Switching	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)
L3 Switching	IPv4 Unicast: RIPv1/RIPv2
Security	Port-Based 802.1X Multiple 802.1X Web & CLI Authentication ACLs for filtering/policing/port copy

Software Specifications Continued

Synchronization	SNTP & client
Power Saving	Cold start Cool start ActiPHY PerfectReach EEE Power Management LED Power Management Thermal Protection
Management	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
MIBs	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

RoHS



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