KY-3100Tx Router Layer 3, 10 Gigabit

10 Port, Layer 3, 10 Gigabit, Managed MRP, with Ring Protection (ERPS) IP Routing & Cyber-Secure IIOT



Not Actual Picture



Supports the New KY-1-Button Easy Backup /Restore

IPv6

- 6 X 10/100/1000Base(T)X RJ-45 & 2 x 100/1000 SFP Slots
  2 X 1000/10000Base(X) 10 GbE SFP Slots - Layer 3 Router
- Supports Cyber Secure Video, Device Binding, IP Source Guard & Clean Code Technology, ACL's
- SNMPv3, HTTPS, SSH security features, TACACS+, IEEE1588v2 Timing, 802.1x, Cyber-Locking & DDMI
- EMC performance: Industrial level 4 / JUMBO FRAME
- Wide Range Power Input: 12 ~ 48 Volts DC
- High Security Cyber-Lock Device - Qualified for
- Used for Military ICS, & ITS Applications

MADE IN USA
Cyber-Secure IIOT

Overview

The KY-3100Tx is a Layer 3 / Layer 2 Routing Traffic switch. Designed for Cyber-Secure Industrial Internet Networks and ITS Applications. Equipped withERPS Ring Protection Technology, this Gigabit Port switch has a 500 MHz CPU for full wirespeed services capability on all ports, all the time. Designed for the "Connected Cities" of the future, this switch delivers high capacity bandwidth, with ultimate reliability.

Low Power, with a wide temperature range - the new KY-3170T Heavy Transport Switch with 2 x 10 GbE - Ten Gigabit Ports will allow netwok designers to install ample bandwidth to all infrastructure nodes. Supports KY-1-Button

Features & Benefits

1. Redundancy Technology: supports Ring / Switching Protocols, MRP (recovery time<25ms) and MSTP
2. Multicast Protocol: supports IGMP Snooping, GMRP and static multicast
3. Network Partition: supports VLAN, PVLAN
4. Service Quality: supports QoS
5. Bandwidth Management: supports port trunking, port speed limit, broadcast storm control
6. Network Management and Monitoring: supports CLI, Telnet, WEB management methods,SNMPv1/v2/v3,
RMON, LLDP, SNTP, DHCP, SSH, SFTP, editable Html / Ascii Files
7. Network Security: supports: SSH, SSL, ACL
8. Device Management: supports FTP upgrade
9. Device Maintenance: supports port mirroring
10. Alarm Output: supports IP/MAC conflicts, power, port and ring alarms
11. MVR - MultiCast VLAN Registration, IEEE 802.1Q with GVRP

Technical Specifications

Standards:
IEEE 802.3, IEEE 802.3i, IEEE 802.3u, IEEE 802.3x, IEEE 802.3z, IEEE 802.1D, IEEE 802.1p, IEEE 802.1Q, IEEE 802.1s, IEEE 802.1w, IEEE 802.3x, IEEE 802.1AB, IEEE 802.z, IEEE 802.3ad, IEEE 801.1ae
NEMA TS-2

Protocols:
IEEE 1588v2 Timing, Device Binding, TACACS+, MultiCast, PIM, SIM, Black List, IPv6, TACACS+, & Cyber-Lock
Ring, Ring+, VLAN, PVLAN, MSTP, IGMP Snooping, GMRP
IEC 62439-2 MRP (Media Redundancy Protocol);
Telnet, HTTP, HTTPS, SNMPv1/v2/v3, RMON, LLDP, SNTP, DHCP server;
Sec, SSH, SSL, ACL, IP Source Guard, Authorization (15 Levels);
FTP; Cyber-Secure Routing (CSR), LLDP, Jumbo Frame
ARP, QoS, MVR, SysLog, Clean Code Technology (CCT),
Cyber-Secure Video

Router Properties:
Priority Queues: 8
Number of VLANs: 4094
VLAN ID: 1-4094
Security Queues: 16 Per VLAN
Number of Multicast Groups: 256
MAC Table: 8K
Packet Buffer: 64 Mb
Packet Forwarding Rate: 96.2 Gbps Fabric, Wire Speed -All Ports
Switching Delay: < 2µs

Interface :
Gigabit SFP Ethernet Ports: max: 2 X 1000/10000 GbE (10 gigabit) Ports
Gigabit Ethernet RJ45 Ports: 8 X 10/100/1000Base-TX RJ45 ports
Console Port: RS232 (RJ45 connector)
Filtered Ground with ESP

DYMEC - American Industrial

10/100/1000Base-T(X) Ports in RJ45 Auto MDI/MDIX	**6**
1000 / 10000 GbE SFP Ports	**2 & 2 (2 x 1GbE & 2 x 10GbE)**
Technology	
Ethernet Standards	IEEE 802 3i for 10Base-T IEEE 802 3u for 100Base-TX and 100Base-FX IEEE 802 3ab for 1000Base-T IEEE 802 z for 1000Base-X IEEE 802 3x for Flow Control IEEE 802 3ad for LACP (Link Aggregation Control Protocol) IEEE 802 1p for COs (Class of Service) IEEE 802 1Q for VLAN Tagging IEEE 802 1w for RSTP (Rapid Spanning Tree Protocol) IEEE 802 1s for MSTP (Multiple Spanning Tree Protocol) IEEE 802 1x for Authentication IEEE 802 1AB for LLDP (Link Layer Discovery Protocol) IEEE 802.3a e - 10 Gigabit RFC1887 - IPv6 Architecture RFC2460 - IPv6 Protocol Specification RFC2464 - IPv6 Transmission RFC2246 - SSH FTP RFC4250 - SSH PAN SFTPv4 SFTPv6 (soon to be released) RFC4253 - SSH Transport IEEE 802 1AE-2013 (MACsec) MAC Security IEEE 802 1AEbn (GCM-AES-256 Cipher Suite) IEEE 802 1AEbw-2013
MAC Table	8K Entries
Priority Queues	8
Processing	Store-and-Forward
Switch Properties	Switching Latency: < 2 us Switching Bandwidth: 64 Gbps Maximun # of Available VLANS: 4094 IGMP Multicast Groups: 128 for each VLAN Port Rate Limiting: User Defined Security Queues: 16 Per VLAN
Jumbo Frame	Up to 9 6 K Bytes
Security Features	Device Binding Security Feature with Silicon Enhancements Enable / Disable Ports, MAC Based Port Security Port Based Network Access Control (802 1x) Single 802 1x and Multiple 802 1x MAC Based Authentication IP Address Based Authentication QOS Assignment Flow-Check Guest VLAN MAC Address Limit TACACS+ Keep-Alive Check VLAN (802 1Q) Segregate and Secure Network Traffic Radius Centralized Password Management SNMPv3 Encrypted Authentication and Access Security WEB and CLI Autentication and Authorization Security (Access) 15 Security Levels of Authorization IP Source Guard HTTPS / SSH Enhanced Network Security SSH FTP / Advanced Encryption Selectable Backup Security Defaults
Software Features	DoS / DDoS Auto-Prevention: Port & Flow Security IEEE 1588v2 Clock Synchronization IEEE 802 1D Bridge, Auto MAC Address learning / aging and MAC Address (Static) Multiple Registration Protocol: (MRP) RSTP / MSTP (IEEE 802 1w/s) Per Port Power Saving Feature Redundant Ring (RING) // with a recovery time of less than 20ms over 300 units TOS / DiffServ Supported QOS Qual ty of Service (IEEE 802 1p) for real time traffic VLAN (IEEE 802 1Q) with VLAN Tagging Voice VLAN Guest VLAN IGMP v2 / v3 Snooping IP-Based Bandwidth Management Application Based QOS Management Port Configuration , Status Statistics, Monitoring & Security DHCP Server / Client / Snooping DHCP Relay ModBUS TCP DNS Client Proxy ARP Inspection SMTP Client IP Policing / Protocol 41 (IPv6 & IPv6 Secure) Clean Code Technology (CCT) Cyber-Secure Video (CSV) Media Redundancy Protocol **(MRP: IEC 62439-2 Media Redundancy Protocol)** Ultra-fast Ring Broadcast Storm Control SSH / FTP / AES / SHA2 Encryption
Network Redundancy	Ring and Ring+, Open Ring VRRP, ERPS Chain MRP MSTP (RSTP/STP compatible)

RS-232 Serial Console	RS-232 Serial with RJ45 Connector (Console Cable / 115,200bps, 8, N, 1) Supports KY-1-Button
LED Indicator Lights	
Power LED (PWR)	Green Lower LED x 2
Ring Master LED (RM)	Green Indicates the system is operating in Ring Master mode
Ring LED (Ring)	Green Indicates that the system is operating Green Blinking Indicates the Ring is Broken
Fault LED (Fault)	Amber Indicates an Unexpected Event has Occurred
10/100/1000Base-T(X) RJ45 LED	Dual Color LED Green for 1000 Mbps Link / Activity & Amber for 10/100 Mbps Link /Activity
100/1000Base-X SFP Port LED	Green For Port Link / Activity
10/100/1000Base-T(X) PoE+ LED	Blue LED Green for 100/1000 PoE Link
Fault Contact	
Relay	
Power Specifications	
Redundant Input Power	Supports 12 ~48 Volts DC
Power Consumption (Typical)	<12 Watts
Overload Current Protection	Yes
Reverse Polarity Protection	Yes
Physical Characteristics	
Enclosure	IP-30
Dimensions (W x D x H)	58.0 (W) X 114.0 (D) X 205.0 (H) // Millimeters (mm)
Weight (g)	1450g
Environmental Specifications	
Storage Temperature	-40 C ~ +85 C (-40 ~ +185 F)
Operating Temperature	-40 C ~ +85 C (-40 ~ +185 F)
Operating Humidity	5% ~ 97% Non-Condensing
Regulatory Approvals	
EMI	FCC Part 15, CISPR (EN55022) Class A
EMS	EN61000-4-2 (ESD) EN61000-4-3 (RS) EN61000-4-4 (EFT) EN61000-4-5 (Surge) EN61000-4-6 (CS) EN61000-4-8 EN61000-4-11
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Vibration / Safety	IEC60068-2-6 / EN60950-1, NEMA TS-2
Backplane Contacts	Pin A = DC Logic Ground // Pin B = + DC Voltage // Pin L = Chassis Ground ///
Warranty	Limited Lifetime



Supports: KY-1-Button
Easy Maintenance
Lowers Cost
Full Backup / Restore (Optional)
No PC Required !

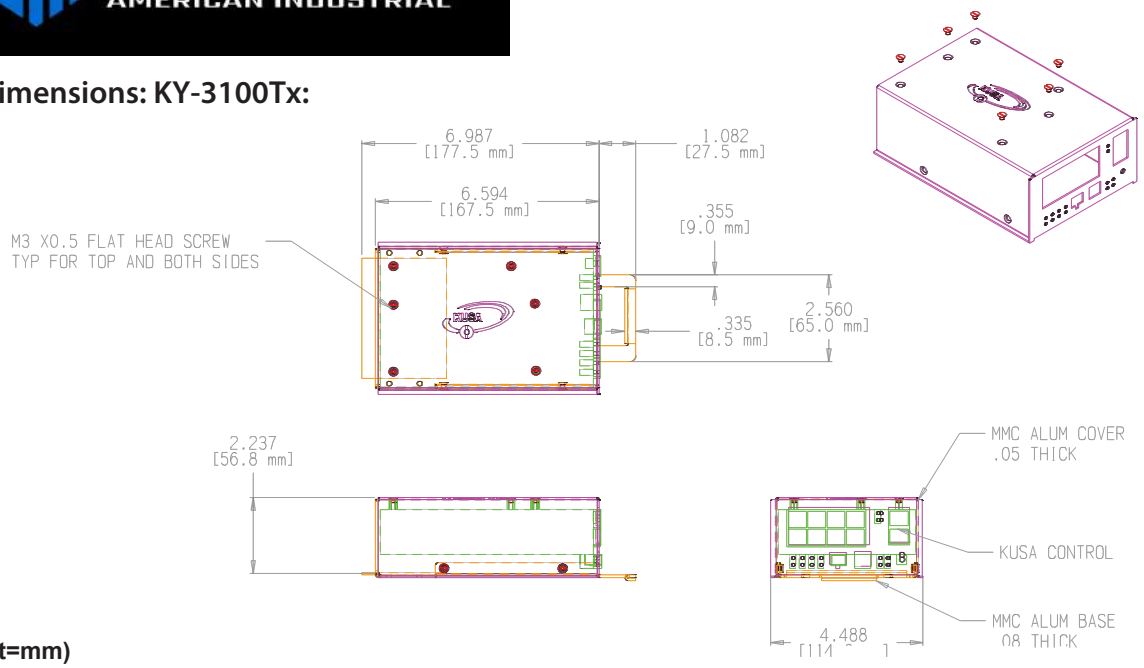
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VETERAN-OWNED

Dimensions: KY-3100Tx:



(Unit=mm)

Network Security For The 21st Century

MTBF

(Mean Time Between Failure)

>87,725 Hours

Limited Lifetime Warranty

Approvals & Certifications

NEMA TS 1 and TS 2 Certified Device
IEC61000-4-2(ESD): ±8KV contact discharge, ±15KV air discharge
IEC61000-4-3(RS): 10V/M (80-1000MHz)
IEC61000-4-4(EFT): ±4KV power line, ±2KV data line
IEC61000-4-5(Surge): power line ±4KV CM/ ±2KV DM, data line ±2KV IEC61000-4-6(CS): 3V(10KHZ-150KHZ),10V(150KHz-80MHz)
IEC61000-4-8(Power frequency magnetic field): 100A/m cont. 1000A/m, 1s to 3s
IEC61000-4-12/18(Damped oscillatory wave): 2.5KV CM, 1KV DM
IEC61000-4-10(Damped oscillatory): 30A/m
IEC61000-4-16(Common mode conduct): 30V cont. 300V, 1s
FCC CFR47 Part 15/EN55022: Class A&B
IEC61000-6-2(Industrial Standards), IEC61850-3(Substations), IEEE1613(Electric Power Substations), EN50121-4(Railway Applications)
Multi-Cast Certified for High Definition Video, Electro-Magnetic Pulse (EMP) Non-Nuclear Electro-Magnetic Pulse (NNEMP)

Ordering Information & Description

MODEL	Description	Power
KY-3100Tx	(2 & 2) 1 /10 GbE SFP Ports (1) Console Management Port (6) 10/100/1000Base(T)X Ports	Powered by plugging into a standard Input File Rack (12, 24, or 48 Volt DC

Optional Gigabit SFP Modules

Model	Description
KY-SGSFP-LX550M	SFP module, 1 x 1000M Multi Mode, LC Connector, 1310nm, 550m
KY-SGSFP-LX10K	SFP module 1 x 1000M Single Mode, LC Conne ctor, 1310nm , 10km
KY-SGSFP-LX20K	SFP module, 1 x 1000M Single Mode, LC Connector, 1310nm, 20km
KY-SGSFP-LX40K	SFP module, 1 x 1000M Single Mode, LC Conne ctor, 1550nm , 40km
KY-SGSFP-ZX80K	SFP module, 1 x 1000M Single Mode, LC Connector, 1550nm, 80km

DYMEC Authorized Distributor

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