



* Certified Cisco Replacement (CCR)

KY-3000EM (with CYBER-SECURE VIDEO)

Industrial 10-port managed Ethernet switch with 8x10/100Base-T(X) and 2x100/1000Base-X, SFP socket



Features: CYBER-SECURE VIDEO with Clean Code Technology

- Fastest Redundant Ethernet Ring: (recovery time < 10ms over 300 connected switches)
- Precision Clean Code Technology for Cyber-Secure Video
- **Open-Ring** supports the other vendor's ring technology.
- **RSTPe** supports applications with complex topologies
- MSTP/RSTP/STP(IEEE 802. s/w/D)
- Supports **PTP Client** (Precision Time Protocol) clock synchronization
- IGMP v2/v3 (IGMP snooping support) for filtering multicast traffic
- Port Trunking for easy bandwidth management
- SNMP v1/v2c/v3 support for secured network management
- RMON for traffic monitoring
- Event notification through Syslog, Email, SNMP trap, and Relay Output
- Windows utility supports centralized management and configuration by Web-based ,Telnet, and Console (CLI)
- Supports two SFP slots for 100/1000Base-X SFP Fiber
- Rigid IP-30 housing design
- DIN-Rail and wall mounting enabled
- Supports LLDP Protocol

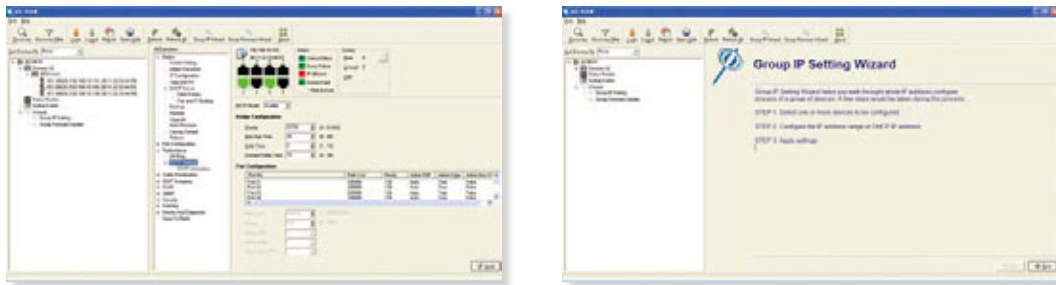


** Cyber-Secure Video (CSV) with Clean Code Technology

Introduction

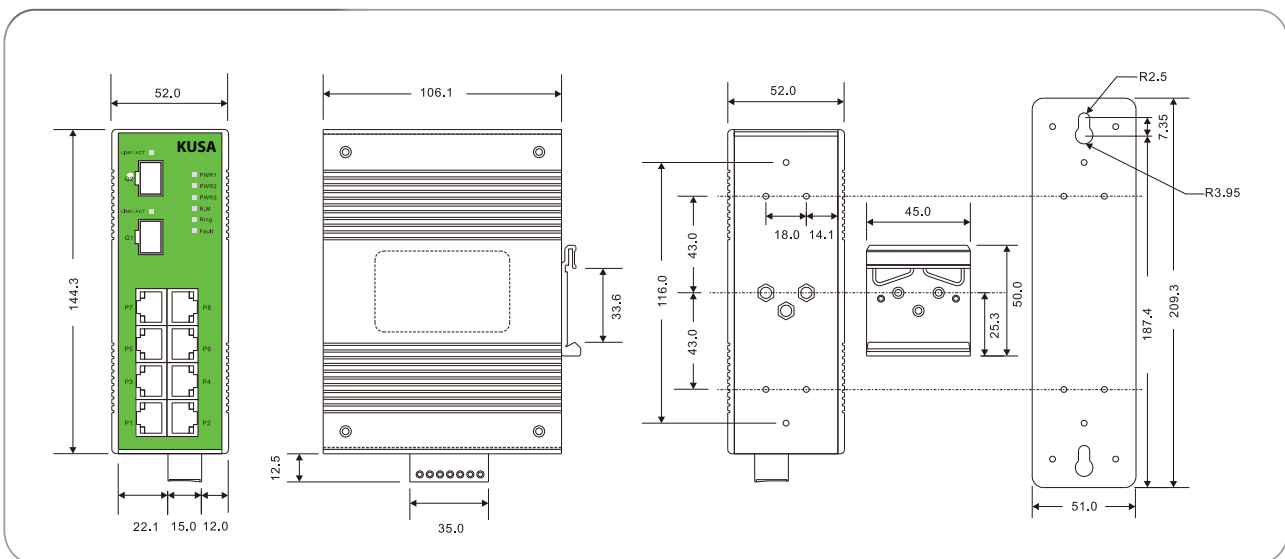
The KY-3000EM is a fully managed, Redundant Ring Ethernet switch with 8x10/100Base-T(X) and 2x100/1000Base-X SFP ports. The switch comes complete with MSTP / RSTP / RSTPe / Ring and Open Ring protocol technology. We can achieve a network recovery time of < 10ms over 300 connected switches. Our product is designed and coded to protect your mission-critical applications from network interruptions, incidents or temporary manfunctions. Utilizing our "**Clean-Code**" technology combined with our precision coding techniques, the switch is resistant to contaminated code and BOT intrusions. Our security starts at the silicon level and is designed into all our code, making this switch a **CYBER-SECURE Video (CSV)** device. The switch delivers unadulterated video and data streams quickly, reliably and securely. Security - you can rely on. Management is accomplished via a centralized, convenient, and powerful windows utility - Network Commander. All our switches are temperature hardened: -40c to +80c for demanding environments such as yours. Our products are built to last a long time - 24hours a day, 7 days a week. 52 weeks a year. Reliably and Consistently.

Don't risk your reputation by using 20th century technology - move up to the 21st century with **CYBER-SECURE Video** using "**Clean Code**" technology with silicon enhancements. Hardened switches with hardened - clean code is what your customer demands. **KUSA = Security for the 21st Century**



Monitoring and Configuration interface

Dimensions



(Unit=mm)

KUSA - Network Security for the 21st Century

KUSA Industrial Ethernet Switch

Specifications

KUSA Switch Model	KY-3000EM
Physical Ports	
10/100Base-T(X) Ports in RJ45 Auto MDI/MDIX	8
100/1000Base-X SFP Port	2
Technology	
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX and 100Base-FX IEEE 802.3z for 1000Base-X IEEE 802.3x for Flow control IEEE 802.3ad for LACP (Link Aggregation Control Protocol) IEEE 802.1D for STP (Spanning Tree 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)
MAC Table	8192 MAC addresses
Priority Queues	4
Processing	Store-and-Forward
Switch Properties	Switching latency : 6 μ s Switching bandwidth : 5.6Gbps Max. Number of Available VLANs : 4096 IGMP multicast groups : 1024 Port rate limiting : User Defined
Security Features	Enable/disable ports, MAC based port security // CYBER-SECURE Video Port based network access control (802.1x) VLAN (802.1Q) to segregate and secure network traffic Supports Q-in-Q VLAN for performance & security to expand the VLAN space Radius centralized password management SNMP v1/v2c/v3 encrypted authentication and access security
Software Features	STP/RSTP/MSTP (IEEE 802.1D/w/s) Redundant Ring with recovery time less than 10ms over 300 switches TOS/Diffserv supported Quality of Service (802.1p) for real-time traffic VLAN (802.1Q) with VLAN tagging and GVRP supported IGMP v2/v3 (IGMP snooping support) for multicast filtering Port configuration, status, statistics, monitoring, security SNTP for synchronizing of clocks over network Supports PTP Client (Precision Time Protocol) clock synchronization DHCP Server / Client support Port Trunk support MVR (Multicast VLAN Registration) support, Protocol 41 (IPv6 and IPv6 Secure)
Network Redundancy	Ring Open-Ring RSTPe STP RSTP MSTP
Warning / Monitoring System	Relay output for fault event alarming Syslog server / client to record and view events Include SMTP for event warning notification via email Event selection support
RS-232 Serial Console Port	RS-232 in RJ45 connector with console cable. Baud rate setting: 9600bps, 8, N, 1
LED Indicators	
Power Indicator	Green : Power LED x 3
R.M. Indicator	Green : Indicates that the system is operating in Ring Master mode
Ring Indicator	Green : Indicates that the system is operating in Ring mode
Fault Indicator	Amber : Indicates unexpected events occurred
10/100Base-T(X) RJ45 Port Indicator	Green for port Link/Activity Amber for Duplex/Collision
100/1000Base-X SFP Port Indicator	Green for port Link/Activity

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Industrial Ethernet Switch

Fault Contact	
Relay	Relay output to carry capacity of 1A at 24VDC
Power	
Redundant Input Power	Triple DC inputs. 12~48VDC on 7-pin terminal block, 12~45VDC on power jack
Power Consumption (Typ.)	9 Watts
Overload Current Protection	YES
Reverse Polarity Protection	Present on terminal block
Physical Characteristics	
Enclosure	IP-30
Dimensions (W x D x H)	52(W)x106.1(D)x144.3(H) mm (2.05 x 4.18 x 5.68 inch.)
Weight (g)	730 g
Environmental	
Storage Temperature	-40 to 85°C (-40 to 185°F)
Operating Temperature	-40 to 80°C (-40 to 176°F)
Operating Humidity	5% to 95% 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), EN61000-4-11. EN61000-4-6 (CS), EN61000-4-8
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Vibration	IEC60068-2-6
Safety	EN60950-1
MTBF (Hours) (MIL-HDBK-217F2, GB, GC, 25°C)	294,689
Warranty	5 years
Cryptologic	
Cyber-Secure Video with Clean Code Technology	NSA / CSS Coding Guidelines / with Silicon Enhancements
Exceeds NEMA TS-2 for Traffic Control Equipment	



ORDER Model	Model Name	Description
	KY-3000EM	Industrial 10-Port Managed Ethernet Switch with 8 x 10/100Base-T(X) and 2 x 1000Base-X, SFP Sockets, CYBER-SECURE Video & Clean Code Technology
Packing List <ul style="list-style-type: none"> • KY-3000EM • DIN-Rail Kit • Wall-mount Kit • Console Cable • KUSA Tool CD • Quick Installation Guide 		Optional Accessories (Can be purchased separately) <ul style="list-style-type: none"> • Network Commander, Network Management Windows Utility Suite, 500 IP devices • Gigabit SFP's - Single-Mode, Multi-Mode, Copper • Fiber or Copper Cables • KY-120-48 120Watt Power Supply

KUSA
 1107 SE Willow Place
 Blue Springs, Missouri 64014

www.KUSA1.co



Telephone: (219) 595 - 2631
 (816) 988 - 7861
 FAX: (480) 287 - 8605
 EMAIL: SALES@KUSA1.co

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