**KY-MSX0802 / DYMEC X Series**

**8+2 Port Industrial, Ethernet - Secure, Managed, Temperature Hardened, Ethernet Switch with 10GbE Uplinks**



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|  | * **8 x 10/100/1000 TX RJ-45 Gigabit Ethernet Ports**
* **2 x 10 Gigabit Ethernet SFP+ Slots with ERPS**
* **NSA Endpoint Certified**
* **NSA Network Endpoint Guideline Certified for Console Port Shutdown and Chassis Full Security (Patent Pending)**
* Built for harsh environments and wide temperature range applications / Edge Computing
* RSTP, MSTP, ERPS, LACP for Network Redundancy
* QoS CoS/DSCP to increase determinism
* Supports IGMP Snooping v1/v2/v3, up to 1024 groups
* DHCP Relay Option 82 IP address assignment
* SNMP v1/v2c/v3 for network management
* Supports Storm Protection / Broadcast Control
* USB storage for configuration-free replacement
* Supports industrial automation protocols Ethernet/IP & Modbus TCP
* Secure File Transfer Protocol (SFTP) & Trivial File Transfer Protocol (TFTP)

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|  **Specifications** |

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| **Technology** |
| **Standards** | IEEE 802.3u 100BaseTXIEEE 802.3ab 1000BaseTIEEE 802.3ae 10GBase over FiberIEEE 802.3x Flow ControlIEEE 802.3ad/802.1AX LACPIEEE 802.1D Spanning Tree ProtocolIEEE 802.1w Rapid STPIEEE 802.1s Multiple STPITU-T G.8032 / Y.1344 ERPSIEEE 802.1Q VLAN TaggingIEEE 802.1ad Stacked VLANsIEEE 802.1p Class of ServiceIEEE 802.1X Network AuthenticationIEEE 802.1AB LLDP |
| **Processing Type** | Store and Forward |
| **Switch Properties** |
| **Priority Queues** | 8 Queues |
| **Jumbo Frame** | 16000bytes |
| **MAC Table Size** | 16K |
| **VLAN Table Size** | 4094 |
| **IGMP Group** | 1024 |
| **Packet Buffer** | 12Mbits |
| **Software Features** |
| **Network Redundancy** | RSTP, MSTP, G.8032 ERPSv2, Port Trunking with LACP |
| **Security** | 802.1X, RADIUS, TACACS+, SSL, SSH |
| **Management** | IPv4, IPv6, Web, Telnet, Serial Console, CLI, SNMP v1/v2c/v3, uPnP |
| **Diagnostics** | RMON, SNMP Inform/Trap, Syslog, SMTP, Port Mirroring, LLDP, DDMI |
| **Configuration** | DHCP Server/Client, Relay Option 82, TFTP, USB |
| **Filter** | 802.1Q VLAN, Q-in-Q, IGMP Snooping v1/v2/v3, IGMP Querier, Independent Vlan Learning |
| **Time Sync.** | NTP |
| **QoS** | CoS, DSCP, WRR/SPQ Queuing, Storm Protection |
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| **Industrial Profiles** | Ethernet/IP, Modbus TCP |
| **Interface** |
| **RJ45 Port** | 8 x 10/100/1000T(x), auto negotiation speed duplex mode, auto MDI/MDI-X |
| **Fiber Port** | 2 x 10 Gigabit Ethernet SFP+ Slots |
| **LED Indicators** | **Per unit:** PWR1, PWR2, Fault, Ring Master, Ring State**Ports:** Link/Active with highest speed(Green), low speed(Amber) |
| **Alarm Contact** | 1 x relay output with current carrying capacity of 1A @ 24 VDC |
| **Digital Inputs** | 1 x isolated input from the electronics.+13 to +30 Volts for state "1"-30 to +3Volts for state "0"Maximum input current: 8mA |
| **Button** | Multiple function reset button |
| **Serial Console** | 1 x RS232 in RJ45 connector with console cable, 115.2Kbps, 8N1 |
| **Storage** | 1 x USB 2.0 storage for firmware update, configuration backup, restore, boot up and syslog |
| **Power Requirements** |
| **Operation Voltage** | 12-48 Volts DC, redundant dual inputs |
| **Connection** | 1 x removable 4-contact terminal block |
| **Power Consumption** | 0.63A@24 Volts DC |
| **Protection** | Overload Current Protected, Reverse Polarity Protected |
| **Mechanical Construction** |
| **Enclosure** | Aluminum – Military Grade |
| **Protection Class** | IP30 |
| **Dimensions** | 72 x 145 x 118 mm (W x H x D) |
| **Weight** | 0.88 kg |
| **Mounting** | DIN-Rail Mounting, Optional Wall Mounting Kits |
| **Environmental Limits** |
| **Operating Temperature** | Extended: -40°C ~ 80°C (-40°F ~ 176°F) |
| **Storage Temperature** | -40°C ~ 85°C (40°F ~ 185°F) |
| **Ambient Relative Humidity** | 5 to 95%, (Non-Condensing) |
| **Regulatory Approvals** |
| **Altitude Certified****GB4943.1-2011** | 0 ~ 5000 Meters |
| **EMI** | FCC Part 15 Subpart B Class ACE EN 55032 Class A |
| **EMS** | IEC61000-4-2 (ESD)IEC61000-4-3 (RS)IEC61000-4-4 (EFT)IEC61000-4-5 (Surge)IEC61000-4-6 (CS)IEC61000-4-8 (Magnetic Field) |
| **Free Fall** | IEC60068-2-32 |
| **Shock** | IEC60068-2-27 |
| **Vibration** | IEC60068-2-6 |
| **Green** | RoHS Compliant |
| **Certifications** | UL 60950-1/62368 (Pending)61000-6-2 / FCC / IEEE / ITUT61000-6-4 / NEMA TS-2 |
| **MTBF****MIL-HDBK-217****IEC 62380** | >150,000 hours |
| **Warranty****TAA Compliant** | 5 Years / Limited LifetimeCertified TAA Compliant |

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| **Note from DYMEC Development** **In a continuing effort of improvement and updated technology, product specifications are subject to change without notice** |
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|  **Dimensions (unit = mm)** |
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|  **Ordering Information** |
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| **KY-MSX0802****DYMEC X****Series** | 8+2 Port Industrial, Managed, Temperature Hardened, Ethernet Switch with 10G Uplinks - 8x 10/100/1000T(x) + 2x 10 Gigabit Ethernet SFP+ Slots - Operating Temperature: -40°C ~ 80°C (-40°F ~ 176°F)**NSA Guideline Certified for Console Port Shutdown and Chassis Full Security** |
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| **Optional Accessories** |
| **KY-PS24-40W** | Industrial Sealed Block Supply with 24 Volts DC Output, provides a maximum of 40 Watts Power. Teflon Shielding includes AC Cord, Temperature Hardened, Military Grade |
| **KY-PS24-45W/2A/DR** | Industrial DIN-Rail Power Supply with 24 Volts DC Output, provides a maximum of 45 Watts Power. Temperature Hardened, Military Grade |
| **KY-PS48-120W/2.5A/DR** | Industrial DIN-Rail Power Supply with 48 Volts DC Output, provides a maximum of 120 Watts Power. Temperature Hardened, Military Grade |



**DYMEC – Temperature Hardened, American Made, Ruggedized, NSA Certified Endpoint, Industrial Ethernet Switches / Routers for SCADA, ITS, Transportation, Automation, Power Utilities, Edge Computing, AI and Industrial Control Systems. Made in USA. Cyber-Secure. TAA Compliant**

