**KY-3170™EM4-Pbt / DYMEC 3170bt™ Series**

**6 x 4 Port PSE, Managed, Gigabit, Power over Ethernet (IEEE 802.3 af / at, bt), 30 / 60 / 95 - Watt, Temperature Hardened, ITS, Industrial, Input File, Ethernet Switch – Low Power / NSA Endpoint Certified with ERPSv2 Redundant Fiber Technology**



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|  | * **Security Certified – IEC 62443 Compliant**
* **2 x 10/100/1000 - (60 / 95-Watt bt) PSE Ports**
* **4 x Gigabit Ethernet (30 Watt) PSE Ports**
* **4 x 1000 Mbps SFP Slot (Mini Gbic) / ERPS Multi Ring**
* **Power over Ethernet Plus / IEEE 802.3 af/at (30 Watt)**
* **New IEEE 802.3bt 60 / 95 Watt PoE++ standard**
* **NSA Network Endpoint Guideline Certified for Console Port Shutdown and Chassis Full Security**
* Built for harsh environments and wide temperature range applications / Edge Computing
* RSTP, MSTP, ERPS, LACP for Network Redundancy
* QoS CoS/DSCP to increase determinism
* Input File / Low Power Industrial Ethernet Switch
* 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)
* Supports PoE PD Alive Check Function for PoE Device Power Recycle

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|  **Specifications** |

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| **Technology** |
| **Standards** | IEEE 802.3 10BaseTIEEE 802.3u 100BaseTXIEEE 802.3ab 1000BaseTIEEE 802.3z 1000BaseXIEEE 802.3x Flow ControlIEEE 802.3af Power over EthernetIEEE 802.3at PoE+IEEE 802.3bt PoE++IEEE 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** | 9216 bytes |
| **MAC Table Size** | 16K |
| **VLAN Table Size** | 4094 |
| **IGMP Group** | 1023 |
| **Packet Buffer** | 12Mbits |
| **Software Features** |
| **Network Redundancy** | RSTP, MSTP, G.8032 ERPSv2, Port Trunking with LACP |
| **Security** | 802.1X, RADIUS, TACACS+, SSL, SSH, ACL / Security ACL Package |
| **Management** | IPv4, IPv6, Web, Telnet, Serial Console, CLI, SFTP, SNMP v1/v2c/v3, uPnP |
| **Diagnostics** | RMON, SNMP Inform/Trap, Syslog, SMTP, Port Mirroring, LLDP, DDMI, Cable Diagnostic\* |
| **Configuration** | DHCP Server/Client, Relay Option 82, TFTP, SFTP, 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, Broadcast Control |
| **Industrial Profiles** | Ethernet/IP, Modbus TCP |
| **Switch Interfaces** |
| **RJ45 Port** | 6x 10/100/1000T(x) with 4x PoE+ and 2x PoE++, auto negotiation speed duplex mode, auto MDI/MDI-X |
| **Fiber Port** | 4 x 1000 Mbps Fx SFP Slots |
| **PoE Pin Out** | V+, V+, V-, V-, for pin 1, 2, 3, 6, End-span, MDI Mode AV+, V+, V-, V-, for pin 4, 5, 7, 8, End-span, MDI Mode B4-pair mode for 802.3bt |
| **LED Indicators** | **Per unit:** PWR1, PWR2, Fault, Ring Master, Ring State**Ports:** Link/Active with highest speed (Green), low speed (Amber)**PoE:** Output Power |
| **Button** | Multiple functions 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 ~ 24 ~48 Volts DC |
| **Connection** | PCB Golden Finger |
| **Power Consumption****\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_****PoE Power Budget** | 0.82A@24 Volts DC without PD’s Consumption\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_48~57 Volts DC /300 Watts Maximum for Total PD Consumption. Maximum **30 / 60 95 Watts per PoE Port** |
| **Protection** | Overload Current Protected, Reverse Polarity Protected |
| **Mechanical Construction** |
| **Enclosure** | Metal / Military - Structural Grade |
| **Protection Class** | IP30 |
| **Dimensions** | 58 x 114 x 205 mm (W x H x D) |
| **Weight** | 0.87 kg |
| **Mounting** | Input File / Rack Mount with Rail Slots |
| **Environmental Limits** |
| **Operating Temperature** | Extended: -40°C ~ 85°C (-40°F ~ 185°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 |
| **Security** | IEC62443 |
| **Shock** | IEC60068-2-27 |
| **Vibration** | IEC60068-2-6 |
| **Green** | RoHS Compliant |
| **Certifications** | UL 60950-1/62368 / EN50155 IEC 61000-6-2 / NEMA TS-2IEC 61000-6-4, IEEE, ITUTEN 50121-4 |
| **MTBF****MIL-HDBK-217****IEC 62380** | >171,000 hours |
| **Warranty****TAA Compliant** | 5 Years / Limited LifetimeTAA Certified 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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**DYMEC 3170 Supports: 2 & 4 Wire LONG RANGE ETHERNET / VDSL2 SFP Modem**

With long reach coverage, high noise immunity, and compact board size, **DYMEC KY-Pro-180-CRD Ruggedized** SFP modem is an ideal upgrade for your Enterprise or Industry applications. Used in Pairs.

**VDSL2 – Long Range Ethernet Application (KY-Pro-180-CRD)**

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| MECHANICAL DIMENSIONS  | Copper Ring Fiber Ring Indu |

**DYMEC KY-SFP-T**

Copper SFP Transceiver – Used to Add Additional RJ-45 Copper Ports to your KY-3170 Series Switch

Easy to Install & Configure – GUI Selectable

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|  **Ordering Information** |
| **KY-3170™EM4-Pbt****DYMEC 3170bt™ Series** | 6+4 Port, Industrial, Managed, PoE+, Gigabit Ethernet ITS Switch - 6 x 10/100/1000T(x) PSE + 4 x 1000 SFP Slots / ERPS - Operating Temperature: -40°C ~ 85°C (-40°F ~ 185°F)- 400 Watts PoE Maximum**NSA Guideline Certified for Console Port Shutdown and Chassis Full Security****Made in USA** |

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| **KY-3170™EM4-Pbt / 2****DYMEC 3170bt™ Series** | 8+2 Port, Industrial, Managed, PoE+, Gigabit Ethernet ITS Switch (Configured 8 Copper RJ45 Ports) - 6 x 10/100/1000T(x) PSE + 2 x 10/100/1000 Copper SFP + 2 x 1000 SFP Slot / ERPS - Operating Temperature: -40°C ~ 85°C (-40°F ~ 185°F)- 400 Watts PoE Maximum**NSA Guideline Certified for Console Port Shutdown and Chassis Full Security****Made in USA** |



**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. Uses SFP’s / BiDi SFP’s / Mini Gbic & VDSL2 Industrial SFP for Long Range Ethernet.**

