



Industrial Ethernet Switches > DPCOM8000 Series

DPCOM8000 Series Industrial Switches



- ◆ Layer 3 modular managed Ethernet switches Up to 48 Gigabit Ethernet ports plus 4 10G Ethernet ports
- ◆ DPRing (recovery time < 5ms @ 250 switches), RSTP/ STP, and MSTP for network redundancy
- ◆ Supports console CLI , Web, SNMP V1/V2c/V3, RMON, HTTPS, SSH for remote management
- ◆ Dual 100-240VAC power inputs
- ◆ IP40 rugged aluminum case
- ◆ Fanless, -40-85°C operating temperature range

DPCOM8000 series modular industrial Ethernet switches provide multiple slots and various integrated forms, including 10G network, gigabit network, all the modules support online upgrade. All models of DPCOM8000 series are equipped with unified optical modules and operating system software, forming a system that can adapt to future development. Due to the operating consistency, the utilization is greatly improved as well. With hardware-based algorithm, the patented DPRing® technology ensures less than 5ms . DPCOM8000 also supports standard xSTP, therefore, it can form redundant structure with products from different vendors and ensure its rapid self-recovery. High backplane bandwidth and various interface modules ensure the exchange and routing of layer 2 network traffic. DPCOM8000 series utilize FPGA and CPLD dynamic reconfiguration and replicate programming technology for high stability and reliability, various key operating parameters can be monitored locally and remotely. Advanced solution, extended industrial design, and patented technologies make DPCOM8000 one of the top choices for harsh industrial environments.

Features and Benefits

- Modular industrial switches with multiple slots for flexible configuration and high performance, all modules support online upgrade
- Support DPRING® network redundancy for < 5 ms recovery time
- Any two ports can establish a self-recovery ring and support multiple independent self-recovery rings
- Built-in unified MicOS real-time operating systems for all DUPO™ switches
- With functions of data packet dropout protection and quick recovery from network failure
- Multi-Protocol layer 3 routing meets the requirement of private network and provides smooth transition
- Support various multicast protocols and strong safety protection mechanism
- Provide bandwidth service with different levels in Ethernet service by speed limiting and traffic shaping in QoS of layer 2
- Support function of the static and dynamic allocation as well as limitation of CPU and real-time monitor the key operating parameters, including CPU utilization rate, RAM, supply voltage and mainboard voltage.
- Provide a full set of professional network management, monitoring and alarm system and support OPC
- Dual redundant power supplies design
- IP40 protection, aluminum metal case
- Fanless, -40 to 85°C wide operating temperature range
- MTBF >800, 000 hours



Technical Specifications

- IEEE 802.3 CSMA/CD method and physical Layer specifications
- IEEE 802.1p Priority Queuing
- IEEE 802.1q VLAN tagging
- IEEE 802.1d Spanning Tree Algorithm
- IEEE 802.1w Rapid Spanning Tree
- IEEE 802.1s Multiple Spanning Tree
- IEEE 802.3ac VLAN Tagging
- IEEE 802.1x Authentication
- IEEE 802.3ad Link Aggregation
- IEEE 802.3x Flow Control
- IEEE 802.3 Ethernet
- IEEE 802.3u Fast Ethernet
- IEEE 802.3z Gigabit Ethernet
- IEEE 802 Networks
- RFC 768 UDP
- RFC 791 IP
- RFC 792 ICMP
- RFC 793 TCP
- RFC 826 ARP
- RFC 854 Telnet Client & Server
- RFC 904 Exterior Gateway Protocol Formal Specification
- RFC 1024,1035 Domain names
- RFC 1027 Using ARP to Implement Transparent Subnet Gateways
- RFC 1058 RIP
- RFC 1059, 1119 NTPv1/2
- RFC 1112 IGMP
- RFC 1191 Path MTU Discovery
- RFC 1256 ICMP Router discovery protocol
- RFC 1267 A Border Gateway Protocol 3 (BGP-3)



Technical Specifications

- RFC 1388 RIP Version 2 Carrying Additional Information
- RFC 1519 CIDR (Classless Inter-domain Routing)
- RFC 1542 Bootstrap Extensions & DHCP
- RFC 1587 OSPF NSSA
- RFC 1765 OSPF Database Overflow
- RFC 1812 Requirements for IP Version 4 Routers
- RFC 1851 The ESP Triple DES Transform
- RFC 1866 HTML
- RFC 1994 PPP Challenge Handshake Authentication Protocol (CHAP)
- RFC 2068 HTTP
- RFC 213 DHCP Server
- RFC 2138 RADIUS
- RFC 2139 RADIUS Accounting
- RFC 2236 IGMPv2
- RFC 2328 OSPF V2
- RFC 2338 VRRP
- RFC 2362 PIM-SM/DM
- RFC 2370 The OSPF Opaque LSA Option
- RFC 2453 RIPv2
- RFC 2474 DiffServ Precedence
- RFC 2475 DiffServ Core and Edge Router Functions
- RFC 2597 DiffServ Assured Forwarding
- RFC 2598 DiffServ Expedited Forwarding
- RFC 2644 Directed Broadcasts
- RFC 2865 Remote Authentication Dial In User Service (RADIUS)
- RFC 3046 DHCP Relay Agent Information Option
- RFC 3222 Forwarding Information Base (FIB)
- GMRP GARP
- GVRP GARP
- SSH2 Secure Shell 2
- IGMP snooping
- SNMPv3



Hardware Description

Max. Number of Ports	4 10G ports+48 Gigabit ports
CPU:	PowerPC
Switch Architecture:	Store-and-Forward
MAC Table Size:	32K
Packet Buffer Size:	2MB
Exchange Rate:	148, 800 pps/100M ports; 1, 488, 000 pps/1000M ports; 11,904,800 pps/10G ports

Software Functions

Management Mode:	Web, serial port, STD-17 MIB-II, STD-58 SMIV2, STD-59 RMON, STD-62 SNMPv3, SNMPv2c, SNMPv1, RFC2668 MAU, RFC2925 Ping MIB, Private MIBs
Diagnosis Mode:	Indicator light, journal file, relay, RMON, port mirroring, TRAP
Redundancy:	DPRING [®] , MSTP, RSTP, port trunking
Time Synchronization:	IEEE1588, NTP, SNTP
Others:	IPv4/IPv6 multicast, storm control, MC/BC protection, support Jumbo Frame

Physical Performance

MTBF:	> 800, 000 hours
Storage Temperature:	-40°C~ 85°C
Operating Temperature:	-40°C~ 85°C
Ambient Relative Humidity:	5% ~ 95% (non-condensing)
Dimensions (W x H x L):	6U
Protection Grade:	IP40
Weight:	16.7KG (Maximum)
Power Consumption:	150W (Maximum)

Mechanical Characteristics

Vibration:	IEC 60068-2-6
Shock:	IEC 60068-2-27
Freefall:	IEC 60068-2-32
Circuit Board:	Approved by IPC



Electromagnetic Characteristics

EMI:	FCC 47 CFR Part 15 Class A
	EN55022 Class A
EMS:	IEC (EN)61000-4-2, Class 4
	IEC (EN)61000-4-3, Class 4
	IEC (EN)61000-4-4, Class 4
	IEC (EN)61000-4-5, Class 4
	IEC (EN)61000-4-6, Class 4
	IEC (EN)61000-4-9, Class 4

Industrial Certification and Testing



Product Safety:	CE.IEC.IECEE
	IEC/EN60950-1
	FCC Part 15 Subpart B Class A
	IEC/EN55022 Class A
Hazardous Area:	UL/cUL1604 Class 1 Div 2 (pending)
Transportation Industry:	JT/T817-2011; NEMA-TS2
Rail Industry:	EN50121-4
Power Industry:	IEC61850-3
	IEEE1613 (C37.90.x)
Industrial Control Industry:	UL/cUL61010
Shipbuilding Industry:	GL (pending)



Ordering Information

DPCOM8000

Chassis	Description
DPCOM8000	Layer 3 modular + DPRing [®] +™ protection

Power Module	Description	
VPWR05	Single input; 100-240V, 60W Dual-power automatic current sharing	
VPWR06	Single input; 100-240V, 120W Dual-power automatic current sharing	

Service Module	Description
TNM-8GT	8 Gigabit TX Port (applicable to Slot 1 ~ 6)
TNM-8GX	8 Gigabit SFP Slots (applicable to Slot 1 ~ 6)
TNM-8FX	8 100M SFP Slots (applicable to Slot 1 ~ 6)
TNM-2XG	2 10G SFP+ Slots (applicable to Slot 7 ~ 8)



Accessories

SFP/XFP	Description
DPCOM-SFP-20	100M, single-mode (1310nm), LC connector, 20KM
DPCOM-SFP-40	100M, single-mode (1310/1550nm), LC connector, 40KM
DPCOM-SFP-80	100M, single-mode (1550nm), LC connector, 80KM
DPCOM-SFP-2	100M, multi-mode (850nm), LC connector, 2KM
DPCOM-SFP-2	100M, multi-mode (1310nm), LC connector, 2KM
DPCOM-SFP-20-13	100M, single fiber (1310nm TX/ 1550nm RX), LC connector, 20KM
DPCOM-SFP-20-15	100M, single fiber (1550nm TX/ 1310nm RX), LC connector, 20KM
DPCOM-SFP-40-13	100M, single fiber (1310nm TX/ 1550nm RX), LC connector, 40KM
DPCOM-SFP-40-15	100M, single fiber (1550nm TX/ 1310nm RX), LC connector, 40KM
DPCOM-GSFP-GTX	1000BASE-T SFP, RJ45 connector, 100M
DPCOM-GSFP-GTT	100/1000BASE-T SFP, RJ45 connector, 100M
DPCOM-GSFP-20	Gigabit single-mode (1310nm), LC connector, 20KM
DPCOM-GSFP-40	Gigabit, single-mode (1310/1550nm), LC connector, 40KM
DPCOM-GSFP-80	Gigabit, single-mode (1550nm), LC connector, 80KM
DPCOM-GSFP-GSX-850	Gigabit, multi-mode (850nm), LC connector, 550M
DPCOM-GSFP-GSX	Gigabit, multi-mode (1310nm), LC connector, 550KM
DPCOM-GSFP-20-13	Gigabit, single fiber (1310nm TX/ 1550nm RX), LC connector, 20KM
DPCOM-GSFP-20-15	Gigabit, single fiber (1550nm TX/ 1310nm RX), LC connector, 20KM
DPCOM-GSFP-40-13	Gigabit, single fiber (1310nm TX/ 1550nm RX), LC connector, 40KM
DPCOM-GSFP-40-15	Gigabit, single fiber (1550nm TX/ 1310nm RX), LC connector, 40KM
DPCOM-10GSFP-10	10G, single-mode (1310nm), LC connector, 10KM
DPCOM-10GSFP-40	10G, single-mode (1550nm), LC connector, 40KM
DPCOM-10GSFP-80	10G, single-mode (1550nm), LC connector, 80KM
DPCOM-10GSFP-GSX	10G, multi-mode (850nm), LC connector, 300M