



## DPCOM7000-CA04000024 Series Industrial Switches



- ◆ Layer 3 managed Ethernet switches 4 Gigabit SFP and 24 10/100 Base-TX ports
- ◆ DPRing (recovery time < 5ms @ 250 switches), RSTP/ STP, and MSTP for network redundancy
- ◆ 96 Gbps Non-Blocking, switch backplane 16K MAC address table
- ◆ Supports console CLI , Web, SNMP V1/V2c/V3, RMON, HTTPS, SSH for remote management
- ◆ Dual 100-240VAC power inputs
- ◆ IP41 rugged aluminum case
- ◆ -40-85°C operating temperature

DPCOM7000-CA04000024 series modular industrial Ethernet switches are specially designed for industry. DPCOM7000-CA04000024 provides multiple slots and various integrated forms, including gigabit network, content exchange and PRP/HSR module, all the modules support online upgrade. DPCOM7000-CA04000024 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<sup>®</sup> technology ensures less than 5ms. DPCOM7000-CA04000024 also supports DPRing<sup>®</sup> Media Redundancy Protocol (compliant with IEC62439) and PRP/HSR (compliant with IEC62439-3). DPCOM7000-CA04000024 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 DPCOM7000-CA04000024 one of the top choices for harsh industrial environments.

### Features and Benefits

- Modular industrial switches with 7 slots for flexible configuration and high performance, all modules support online upgrade
- Support DPRing<sup>®</sup> network redundancy for < 5 ms recovery time
- Support DPRing<sup>®</sup> Media Redundancy Protocol (compliant with IEC62439)
- Support PRP/HSR redundancy for zero recovery time (compliant with IEC62439-3)
- Any two ports can establish a self-recovery ring and support multiple independent self-recovery rings
- 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
- IP41 protection, aluminum metal case
- Fanless, -40 to 85°C wide operating temperature range
- MTBF >800, 000 hours



## DPCOM7000-CA04000024 Series Industrial Switches

### 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 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)
- RFC 1388 RIP Version 2 Carrying Additional Information
- RFC 1403 BGP OSPF Interaction
- RFC 1519 CIDR (Classless Inter-domain Routing)
- RFC 1587 OSPF NSSA



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### Technical Specifications

- RFC 1765 OSPF Database Overflow
- RFC 1812 Requirements for IP Version 4 Routers
- 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

**DPCOM7000-CA04000024 Series Industrial Switches****Hardware Description**

Backplane Bandwidth:	96Gbps
CPU:	600MHz RISC
Switch Architecture:	Store-and-Forward
MAC Table Size:	16K (Maximum)
Packet Buffer Size:	1.5MB (Maximum)
Exchange Rate:	148, 800 pps/100M ports; 1, 488, 000 pps/1000M 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 <sup>®</sup> , HSR, PRP, 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):	1U; depth: 330mm
Protection Grade:	IP41
Weight:	3.7KG (Maximum)
Power Consumption:	70W (Maximum)

**Mechanical Characteristics**

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



## DPCOM7000-CA04000024 Series Industrial Switches

### 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

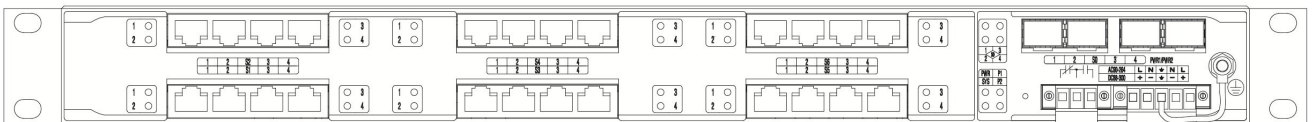
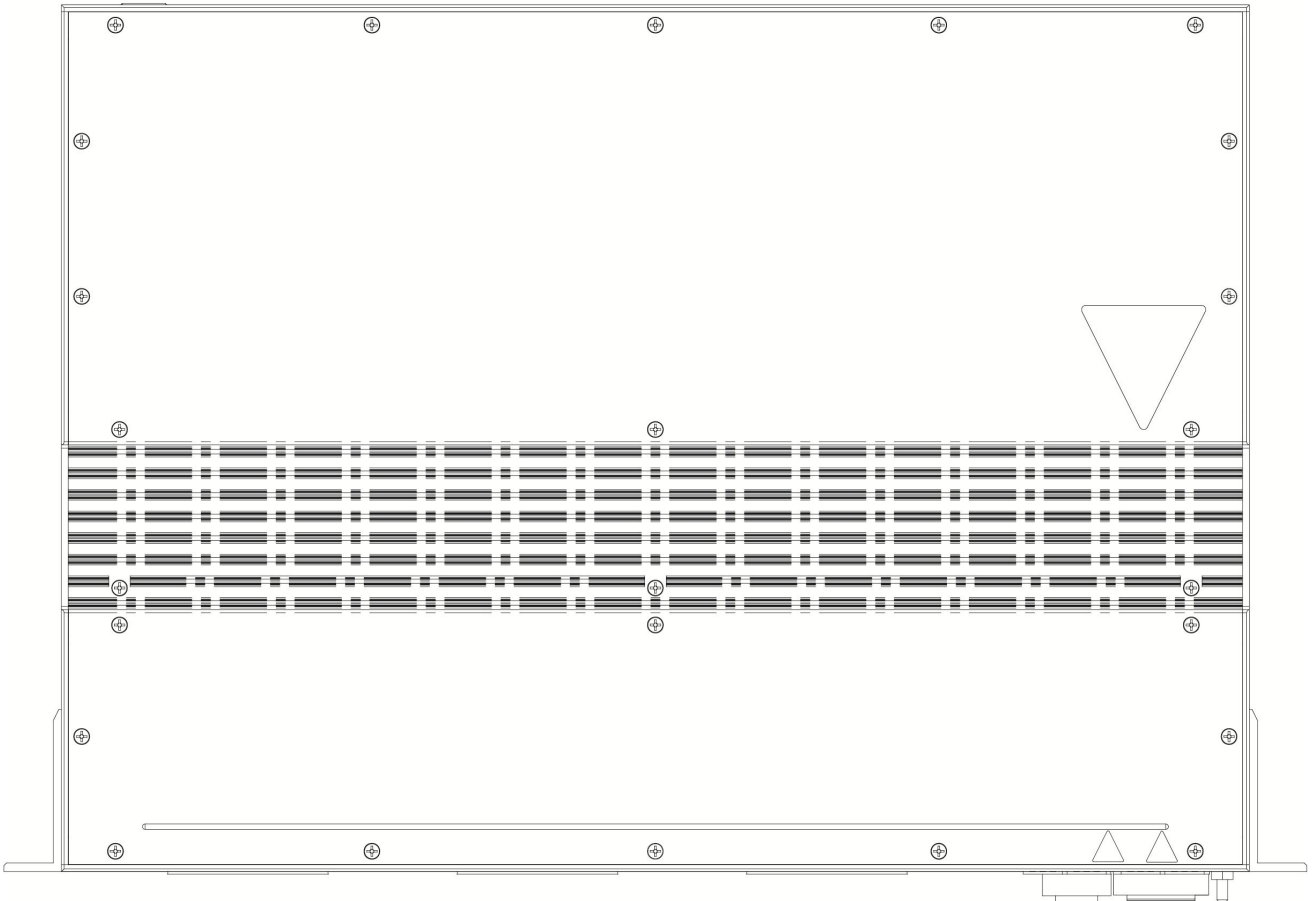
### Industrial Certification and Testing

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)



# DPCOM7000-CA04000024 Series Industrial Switches

## Dimensions



**DPCOM7000-CA04000024 Series Industrial Switches****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