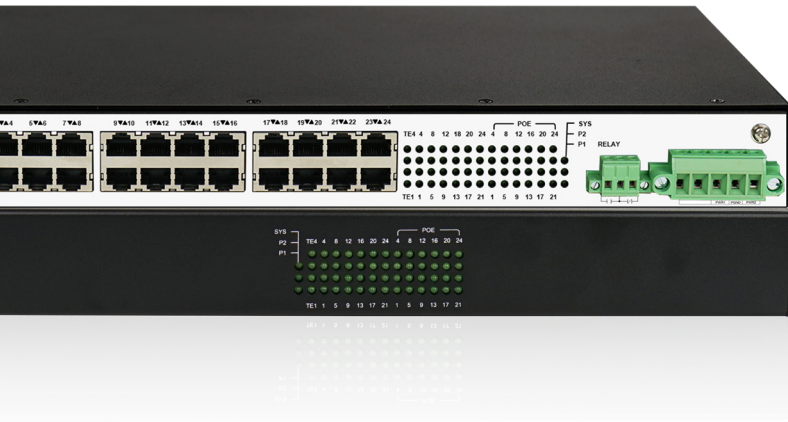


IES2000 SERIES

L3-lite Rack-mount Industrial PoE Switch



Wide-range working
temperature 80,000
hours MTBF



Advanced Hardware
Architecture and
Industry-leading Port
Density



Varied Service
Characteristics Versatile
IPv6 Solution Complete
Security Mechanism



IP40 protection 6KV
lightning protection

Product Overview

BDCOM IES2000 series, based on the brand-new high-performance hardware and BDROS software system of BDCOM's independent intellectual property rights, supports rich Layer-2/Layer-3 routing and industrial ring network protocols. IES2000 series adopts die-casting aluminum housing and standard 19-inch rack-mounted installation, and provides redundant wide-voltage industrial power supplies. With the reliable industrial Ethernet ring technology, its hardware-based algorithm can ensure node self-healing time less than 5 milliseconds, and the ring network self-healing time less than 50 milliseconds (typical value).

BDCOM IES2000 series, with fanless design, low power consumption, wide temperature and wide voltage in compliance with strict industry standards, can adapt to harsh environment requirements for EMC, anti-vibration and shock-proof capabilities, IP40 protection level. It is widely used in energy, transportation, industrial production, environmental protection, military industry.

Product Characteristics

- Lightning protection level: 6KV
- IP40 protection, industrial fanless thermal conduction.
- Supports dual DC wide-voltage industrial power input.
- Supports relay alarm, Phoenix terminal output.
- Business ports, management ports, power input terminals, and relay terminals are located on the front panel, complying with industrial operation specifications.
- Supports STP/EAPS/ERPS.
- Supports node self-healing time less than 5 milliseconds, and ring network self-healing time less than 50 milliseconds (typical value).
- Supports layer-3 static routing, dynamic routing (RIP, OSPF), Virtual Router Redundancy Protocol (VRRP).
- Supports virtual stacking.
- Supports to form a self-healing ring between any two ports, and supports multiple independent self-healing rings.
- Provides Data Leakage Prevention (DLP), to quickly recover from network failures.
- Supports simple network management protocol (SNMP) and Pallas cloud operating platform.
- The mean time between failures (MTBF): more than 800,000 hours.

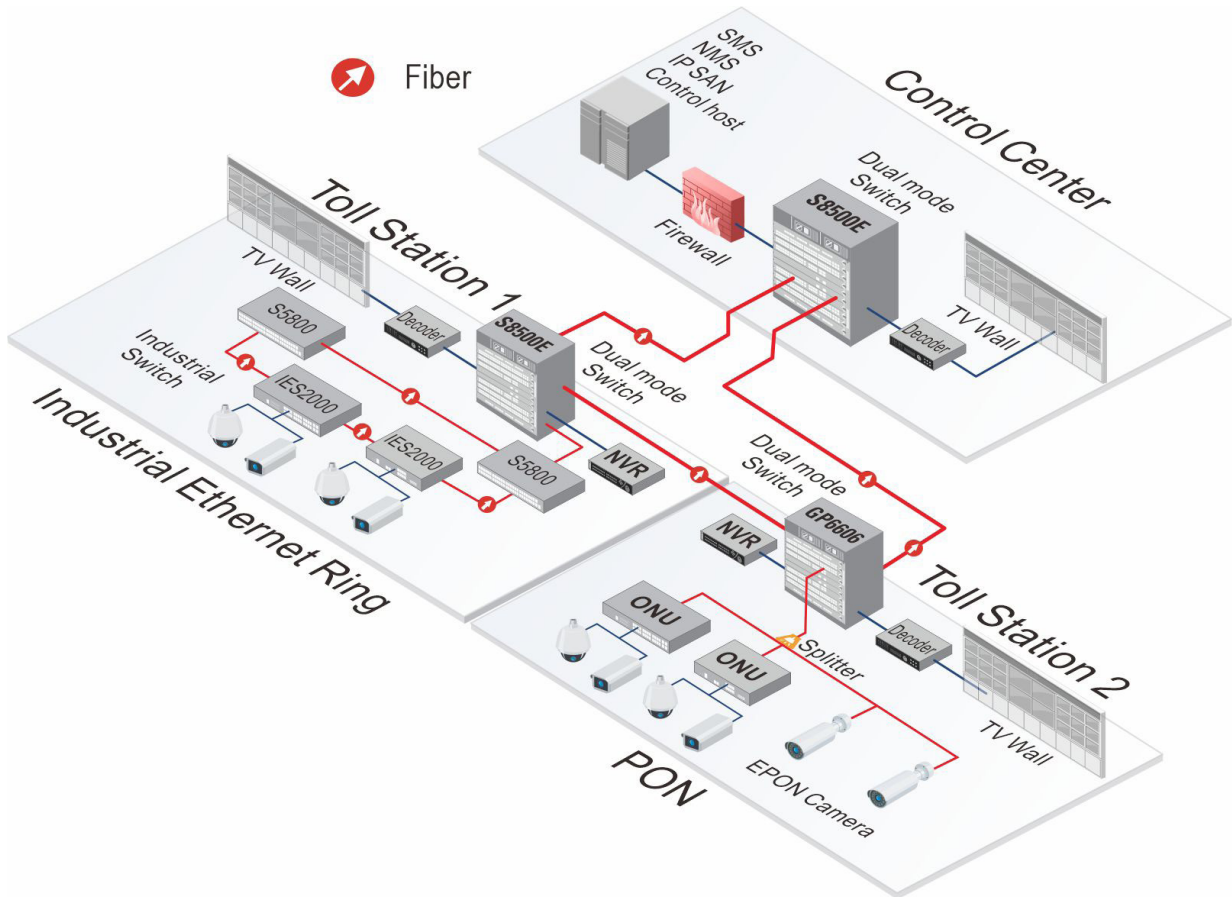
Model Lists



IES2000-5024P4X

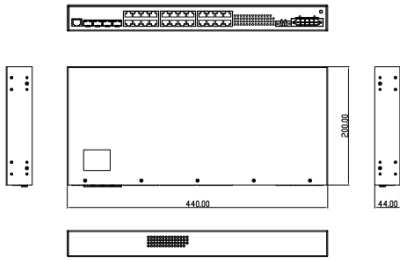
- 24-port Gigabit PoE+
- 4-port 10G SFP+

Application Diagram



Panel Diagram

IES2000-5024P4X



Product Specifications

Item	IES2000-5024P4X	
Gigabit Interface	RJ45	24 PoE+
	SFP	/
10G/GE SFP+		4
Console (RJ45)		1
Backplane (Gbps)		128
Forwarding rate (Mpps with 64 bytes)		96
Chassis	Dimensions (WxDxH)(mm)	440x200x44
	Weight (KG)(empty)	2.2
Package	Dimensions (WxDxH)(mm)	500x320x80
	Weight(KG)	3.1
Power consumption	no-load	15.5W
	full-load(without PoE)	33.25W
PoE budget		720W
Power supply		Dual DC 48-57V
Total output BTU (1000BTU/H=293W)		113.48
MTBF(H)		>800,000
Operating temperature		-40-75°C
Operating Humidity		5-95% (non-condensing)
Forwarding mode		Store-forward
Flash (MB)		16
DRAM (MB)		256
MAC		16K
Buffer size(Mb)		12
Jumbo frame		9K
Total SVI		64

Features

Standards

- IEEE 802.1 Working Group
- IEEE 802.3 Working Group
- IEEE 802.3 10BASE-T
- IEEE 802.3u 100BASE-TX
- IEEE 802.3z Gigabit 1000BASE-SX/LX
- IEEE 802.3ab Gigabit 1000BASE-T
- IEEE 802.3ae 10Gb/s Ethernet
- IEEE 802.3af PoE
- IEEE 802.3at PoE+
- IEEE 802.3x flow control and back pressure
- IEEE 802.3ad port trunk with LACP
- IEEE 802.1D Spanning Tree Protocol
- IEEE 802.1w Rapid Spanning Tree Protocol
- IEEE 802.1s Multiple Spanning Tree Protocol
- IEEE 802.1p Class of Service
- IEEE 802.1Q VLAN tagging
- IEEE 802.1ad Q-in-Q
- IEEE 802.1X port authentication network control
- IEEE 802.1ab LLDP and LLDP-MED
- IEEE 802.3ah OAM
- IEEE 802.3az EEE(Energy Efficient Ethernet)
- RFC 768 UDP
- RFC 793 TFTP
- RFC 791 IP
- RFC 792 ICMP
- RFC 2068 HTTP
- RFC 1112 IGMP v1
- RFC 2236 IGMP v2
- RFC 3376 IGMP v3
- RFC 2710 MLD v1
- RFC 2328 OSPF v2
- RFC 1058 RIP v1
- RFC 2453 RIP v2
- ITU-T G.8032 ERPS

Management

- CLI: Console, Telnet, SSHv1/2
- Web-GUI: HTTP, HTTPS/SSL
- SNMP v1/v2c/v3, RMON, SNMP alarm/inform/traps
- MIB-I, MIB-II
- Upload and download of FTP/ TFTP files
- Debugging
- Syslog for alarm/notification/ command/debug
- NTP-4
- SPAN, RSPAN (1:1 and N:1 port mirror)
- LLDP, LLDP-MED
- ZTP (Zero Touch Provisioning)
- Optical DDM
- Ethernet cable diagnosis

MAC switching

- Static configuration and dynamic MAC learning(16K)
- MAC browsing and removal
- Configurable aging time of the MAC address
- Limited number of learnable MAC addresses
- MAC filtration
- Black-hole MAC list

VLAN

- 4K VLAN IDs, 4094 active VLAN, 64 SVI
- GVRP
- 1:1 and N:1 VLAN Mapping
- QinQ and selective QinQ
- Private VLAN
- Voice-VLAN
- Port-based VLAN
- MAC-based VLAN
- Protocol-based VLAN

STP

- 802.1d STP, 802.1w RSTP, 802.1s MSTP
- BPDU protection, root protection and ring protection
- L2PT for BPDU

Multicast

- IGMP v1/v2/v3(1024 groups)
- IGMP Snooping
- IGMP Fast Leave
- Multicast group policy and multicast number limit
- Multicast filtering
- MVR
- Support for transparent passing of multicast traffic without IGMP snooping in certain port and VLAN

IPv4

- Static routing, RIP, OSPF, VRRP

Reliability

- Static and LACP link aggregation, 64 groups, up to 8 ports in one group
- Load-balance based src-MAC/ src-IP/dst-MAC/dst-IP/src-port/ dst-port and any combination
- EAPS, ERPS(recovery time≤50ms)
- ERPS revertive and non-revertive operation mode
- ISSU
- Loopback-detection

IPv6

- ICMPv6, DHCPv6, ACLv6, IPv6 Telnet, IPv6 QoS
- IPv6 Neighbor Discovery
- Path MTU Discovery
- MLD Snooping
- RIPng, OSPFv3

DHCP

- DHCP server, client, relay, snooping

QoS

- Traffic classification of port/L2~4 protocol headers/VLAN/CoS/DSCP
- CAR traffic control
- 802.1P/DSCP priority mapping and remark
- Multiple queuing algorithms such as SP, WRR or SP+WRR
- Tail-Drop, WRED
- Traffic supervision and traffic shaping
- 8 queues per port
- Rate-limit based on MAC/IP/COS/DSCP/TOS/EXP/any

Security

- L2~L4 ingress/egress ACL (895 IPv4 FP, 384 IPv6 FP)
- Anti-DOS/IP spoofing/TCP/ping/SYN/ICMP flood attacks
- CPU protection
- Broadcast/multicast/unknown-unicast storm-control
- Port isolation
- Port Security, MAC address limitation, IP+MAC+port binding
- DHCP Snooping, DHCP Option 82
- DAI(Dynamic ARP Inspection)
- IPSG(IP Source Guard)
- PPPoE-IA(including hostname/port/vlan/switch-MAC/client-MAC/user-defined circuit-ID and client-MAC/switch-MAC/user-defined remote-ID)
- IEEE 802.1x authentication
- MAC-based authentication
- AAA
- Radius, TACACS+
- Multiple user privileges

Ordering Information

Item	Description
IES2000 Series Layer-3 Rack-mount Industrial Switch	
IES2000-5024P4X	24-port Gigabit PoE+ 4-port 10G SFP+ Managed L3-Lite Industrial Switch, supports industrial ring protection protocol, operating temperature: -40~75°C, relative humidity: 5~95% (non-condensing); dual industrial DC power supply (48~57V), 19-inch rack-mount installation.

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