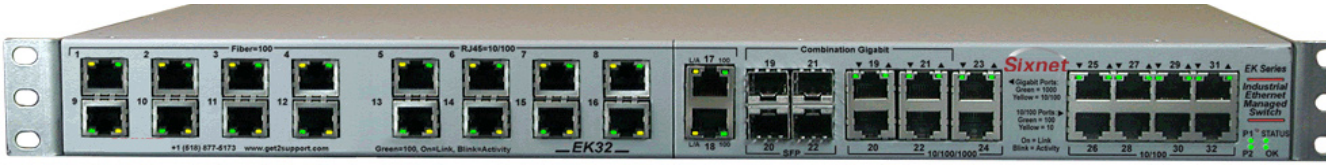
EK32/EF32 Industrial Ethernet Switch

Sixnet Networking Series

▶▶▶ 32 Port Industrial Ethernet Switch

The Sixnet EK32 is an industrial Ethernet switch offering 32 total Ethernet ports including up to 6 super fast Gigabit ports and up to 4 noise-immune fiber optic ports. Its rugged and compact 1U case fits into standard EIA, WECO and ETSI racks from 19" to 24".



PRODUCT HIGHLIGHTS

- 32 total Ethernet ports including
  - Up to 6 Gigabit ports including 4 combination ports
  - Up to 4 fiber optic ports for noise-immune links
- Designed to meet industrial standards

REAL-TIME SECURE PERFORMANCE

- Real-Time-Ring™ or Rapid Spanning Tree (RSTP) for fast redundant ring or mesh networks
- SNMPv1 and v2 network management
- SNMPv3 authentication & encryption for security
- SNMP notifications (traps) for report on event
- Priority Queuing (QoS/CoS) for real-time operation
- IGMP for Multicast filtering (snooping & querying)
- VLAN for convenient traffic segregation
- Broadcast & multicast storm protection
- RMON & port mirroring for advanced diagnostics
- Security with HTTPS, SSL, SSH, SNMPv3 & more
- Easy configuration via Web, Telnet or CLI
- Free field-installable firmware upgrades forever

RUGGED & RELIABLE HARDWARE

- Space efficient 1U rack-mount design
- Redundant AC and DC power options
- Relay output contact to signal alarms
- RS232 and USB console ports for local management
- Rugged corrosion-resistant aluminum enclosure
- Wide temperature -40 to +85 °C operation
- Sealed IP50 option protects against ingress

ORDERING GUIDE

- ***EK/EF32 PART NUMBER = Ea32bcddd-1***
  - a = Model Options
    - K = 26 fast Ethernet (FE) and 6 Gigibit (GE) ports
    - F = 32 fast Ethernet (FE) ports (no Gigabit)
  - b = Style Options
    - F = front style; Ethernet in front; power & console in back
  - c = Case / Cooling Options
    - S = sealed IP50 (no fans) (see derating)
    - T = fan cooled IP30 (no derating)
  - ddd = Power Options
    - D6N = dual inputs for +/-24/48/60 VDC (+/-18-75 VDC)
    - A0N = single input for VAC/VDC (90-264 VAC or 130-370 VDC)
    - AAN = dual VAC/VDC with redundant internal supplies

PART NUMBER EXAMPLE:



EK32FSD6N-1 with dual 24 VDC inputs and sealed IP50 (no fans!)

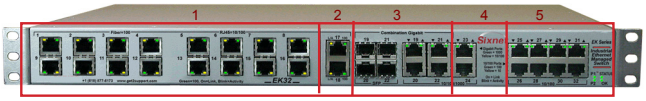
For accessories see next page.

industrial networking

EK32/EF32 Industrial Ethernet Switch Specifications

ETHERNET PERFORMANCE

- 32 Ethernet ports with up to 6 Gigabit
- Managed, store & forward, wire-speed
- All IEEE 802.3 Ethernet protocols supported
- RJ45 port speed auto-negotiation
- RJ45 MDI/MDIX auto-crossover
- RJ45 TD and RD auto-polarity
- Typical latency (varies on load & settings)
  - @ 100 Mbps: 5 us + frame time
- Full or half duplex operation configurable per port
- MAC addresses supported 8192
- Memory bandwidth 32 Gbps
- Ethernet isolation 1500 VRMS 1 minute
- Console ports – USB and RS232 (RJ45)



ETHERNET PORTS

- Port Group 1
  - 16 ports of 10/100 RJ45
- Port Group 2
  - 2 bonus 10/100 RJ45 ports
- Port Group 3
  - EK model: 4 combination GE ports for copper or fiber links
  - EF model: 4 combination FE ports for copper or fiber links
- Port Group 4:
  - EK model: 2 Gigabit 10/100/1000 RJ45 ports
  - EF model: 2 fast Ethernet 10/100 RJ45 ports
- Port Group 5
  - 8 fast Ethernet 10/100 RJ45

ETHERNET COMPLIANCE

- IEEE 802.3z (Gigabit 1000 Mbps Ethernet connections)
- IEEE 802.3u (Fast Ethernet 100Mbps for newer devices)
- IEEE 802.3 (10Mbps Ethernet supports legacy devices)
- IEEE 802.3x (Full-Duplex with Flow Control)
- IEEE 802.1D/w (Rapid Spanning Tree for redundant rings and Spanning Tree for interoperability)
- IEEE 802.1p (Priority Queuing – QoS, CoS, ToS/DS)
- IEEE 802.1Q (VLAN for traffic segregation)
- And more

REAL-TIME-RING™

- Link loss recovery: 30 mS plus 5 mS per hop
- Switches in a ring: <50 for best performance
- Multiple rings supported

"OK" ALARM OUTPUT

- Indicates power & operational status
- Max. ratings
  - 250 VAC or 220 VDC
  - 2 A @ 30 VDC or 0.25 A @ 250 VAC
- Minimum load 10 mVDC, 10 µA

POWER INPUT

- Input voltage standard options
  - 18-36 VDC (24 VDC nominal)
  - 36-75 VDC (+/-48 VDC nominal)
  - 90-264 VAC (110/220 VAC nominal)
  - 130-370 VDC (250 VDC nominal)
- Power options
  - Dual inputs or redundant supplies
- Input power consumption 35 W maximum

ENVIRONMENTAL

- Operating temperature range:
- T option (fan cooled): -40 to +85 °C (no derating) (cold startup at -40 °C)
- S option (sealed IP50): -40 to +85 °C w/all ports linked at 10/100 or derate
  - to +75 °C with 2 Gigabit links
  - to +70 °C with 4 Gigabit links
  - to +65 °C with 6 Gigabit links
- Storage temperature range -40 to +85 °C
- Humidity (non-condensing) 5 to 95% RH (optional conformal coating is available)

STANDARDS COMPLIANCE (PENDING)

- Electrical safety – EN61010-1, CE
- EMC – FCC part 15, ICES-003; EN61000-6-4, -2, CE
- RoHS and WEEE compliant

PHYSICAL

- Mounting – 19" to 24" racks, EIA/WECO/ETSI supported
- Case – corrosion-resistant heavy-gauge aluminum
- Egress protection IP50 with S option or IP30 with T option
- Weight (typical) 5.5 lbs (2.5 kg) – varies slightly by model
- Dimensions – 1.75 x 17.3 x 12" (44.5 x 439.4 x 305.0 mm)

ACCESSORIES

EK1-BRCKT-19	Set (2) of 1U 19" brackets (one set included)
EK1-BRCKT-23	Set (2) of 1U 23" EIA/WECO
EK1-BRCKT-2324	Set (2) of 1U 23/24" EIA/WECO
EK1-BRCKT-ETSI	Set (2) of 1U 536 mm ETSI brackets
EK1-BRCKT-WALL	Set (2) of wall brackets
RJ45-PLUG-16	Dust plugs for unused RJ45 port (16 pieces)
EK-CCOAT-1	Conformal coating – contact Sixnet for details
GMFIBER-SFP-500	Gigabit SFP fiber transceiver, mm, 550 m
GMFIBER-SFP-2K	Gigabit SFP fiber transceiver, mm, 2 km
GSFIBER-SFP-10K	Gigabit SFP fiber transceiver, sm, 10 km
GSFIBER-SFP-30K	Gigabit SFP fiber transceiver, sm, 30 km
GSFIBER-SFP-50K	Gigabit SFP fiber transceiver, sm, 50 km
GSFIBER-SFP-80K	Gigabit SFP fiber transceiver, sm, 80 km
FMFIBER-SFP-4K	100Mb SFP fiber transceiver, mm, 4 km
FSFIBER-SFP-30K	100Mb SFP fiber transceiver, sm, 30 km
FSFIBER-SFP-60K	100Mb SFP fiber transceiver, sm, 60 km
FSFIBER-SFP-100	100Mb SFP fiber transceiver, sm, 100 km

(Contact Sixnet for other fiber distances or special application fiber optic transceivers.)

All specifications are subject to change. Consult factory for latest info.

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