EKI-9520H

EN50155 L2 20-port Managed Ethernet switch with up to 6 x 10G ports

Features

- 14 x 1G and 6 x 10G ports for high speed application.
- Up to 14 x IEEE802.3af/at PoE ports
- M12 connector with ruggedized metal housing
- DHCP relay and DHCP option 82 for flexible host configuration
- Provides M12-USB Dongle for quick configuration and backup
- Special mechanism design to save cabling space
- Wide operating power input rage: 16.8~137.5V$_{DC}$

Introduction

Advantech's EKI-9520H Ethernet switch is engineered with a ruggedized design and superior EMC performance, making it ideal for rolling stock, wayside control, and other railroad applications. Tailored to meet the demands of modern transportation systems, this next-generation EN50155 Ethernet switch enhances both new and existing trains. With 6 x 10Gbps uplink speeds, it efficiently handles large volumes of data traffic, while its 2.5/5G and multigigabit ports support cutting-edge Wi-Fi 6 technology. The EKI-9520H offers users a versatile solution for a wide range of applications, helping to build advanced and reliable transportation services.

Specifications

Interface description

- **Ethernet Ports**: M12 X-coded 1G (port 1-14)
  M12 X-coded 2.5G/5G/10G (port 15-20)
- **Console port**: M12 5pin A-coded
- **Relay output**: M12 5pin A-coded with 2relay outputs of 1A@24V$_{DC}$
- **Power Connection**: M12 5pin K-coded

Physical

- **Enclosure**: Extruded aluminum and metal chassis
- **Protection class**: IP20
- **Installation**: Wall mount
- **Dimensions (W x H x D)**: 350 x 148.7 x 96 mm
- **Weight**: 8kg

LED Display

- **System LEDs**: PWR1, PWR2, SYS, Alarm
- **Port LED**: Data, PoE

Environment

- **Operating temperature**: -40 ~ 70°C
- **Storage temperature**: -40 ~ 85°C (-40 ~ 185°F)
- **Ambient relative humidity**: 5~ 95% (non-condensing)

Power

- **Power consumption**: 50 Watts
- **Nominal input voltage**: 24/28/36/48/72/96/110V$_{DC}$
- **Operating range**: 16.8~137.5 V$_{DC}$
- **Over current protection**: Yes
- **Reverse polarity protection**: Yes
- **PoE**: IEEE802.3at/at
- **PoE Power budget**: 24V/60W, 110V/100W

Certification

- **Safety**: EN62368-1
- **EMI**: FCC Part 15 Subpart B Class A, CE EN55032/EN55035
- **EMS**: EN61000-4-2 (ESD); EN61000-4-3 (RS); EN61000-4-4 (EFT); EN61000-4-5 (Surge); EN61000-4-6 (CS)
- **Shock**: EN61373
- **Freefall**: IEC60068-2-32
- **Vibration**: EN61373
- **Railway**: EN50155, EN50121-3-2, 50121-1
- **Fire resistant**: EN45545-2
- **Other**: EN61000-6-4, EN61000-6-2

Switch Properties

- **DRAM**: 256MB
- **Flash**: 128MB
- **Max. IGMP group**: 1024
- **Max static VLANs**: 256
- **VLAN ID range**: 1-4094
- **MAC table**: 32K
- **Jumbo frame**: 10KB
- **Packet buffer**: 32Mbits
- **Max priority queues**: 8

L2 features

- **Link aggregate**: Static Trunk, 802.3ad LACP
- **VLAN**: 802.1Q Tag-based, 802.1v Protocol-based VLAN, 802.1ad VLAN stacking, GVRP, GMRP, MAC/IP subnet/Private
- **Port mirroring**: Per port, Multi-source port
- **IP multicast**: IGMP Snooping v1/v2/v3, MLD Snooping
- **Redundancy**: IEEE 802.1D-STP, IEEE 802.1s-MSTP, IEEE 802.1w-RSTP

Dimensions

Unit: mm
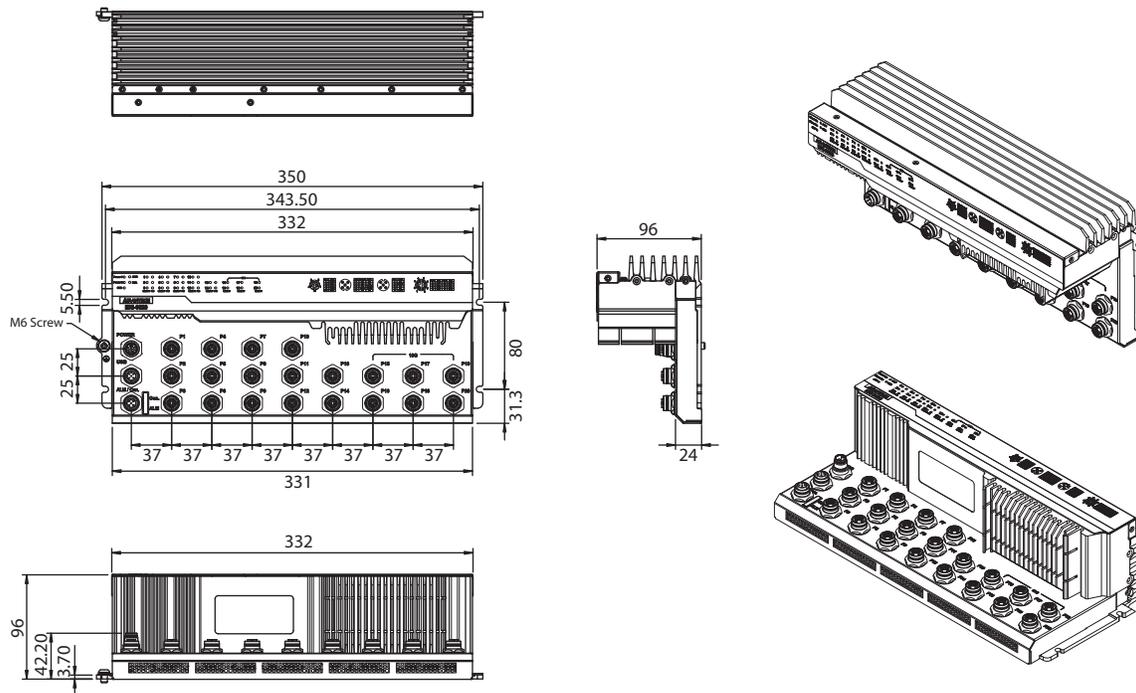
QoS

- **Priority queue** — Scheduling WRR (Weighted Round Robin), SP (Strict Priority)
- **Class of service** — IEEE 802.1p based CoS, IP TOS, DSCP, Port priority
- **Rate limit** — Ingress/Egress Rate limit

Security

- **Loop detection** — Port-based detection/ prevention
- **Storm control** — Broadcast, Unknown Multicast, Unknown unicast
- **Port security** — Static MAC, MAC Violation Notice
- **Authentication** — 802.1x (Port-Based, MAC-Based), RADIUS, TACACS+
- **Account manager** — Multiple Account, 0-15 User Privilege
- **IP security I** — P source guard, DHCP snooping, ARP spoofing
- **ACL** — L2, L3 Access Control List, Permit/Deny/Redirect

Management

- **OAM** — IEEE802.1ag, Continuity Check, IEEE802.3ah, Link Monitor, Remote Loopback, Diagnostic features
- **DHCP** — Client, Server, DHCP Relay, Option 82
- **Config & access** — IPv4/ IPv6, SNMP v1/v2c/v3, WEB GUI, Telnet, RMON,
- **SSH** — 2.0, SSL(TLSv1) Standard MIB, Private MIB
- **Upgrade/ backup** — TFTP, HTTP, SFTP; Firmware Dual Image
- **Others** — SNTP/NTP client, DNS client, Syslog

Accessories

PN		Description
OPT1-M12-CRP-8MX		Phoenix Contact M12 X-code 8 pin male crimp type connector
OPT1-M12-CRP-5MA		Phoenix Contact M12 A-code 5 pin male crimp type connector
OPT1-M12C-8MX-150R		M12 X-code 8 pin male to RJ45, cable length: 1.5 m (4.9 ft)
OPT1-M12C-5MA-DB9		M12 A-code 5 pin male to DB9 console, cable length: 1.5 m (4.9 ft)
OPT1-M12C-5FK-150		Phoenix Contact M12 K-code 5 pin female power cable 1.5 m (4.9 ft)

Ordering Information

Model name	Description	1GE M12 X-code	10GE M12 X-code
EKI-9520H-6XPW-A	Layer 2 management PoE switch with 6x10G port	14 PoE	6