KPS2204
KPS1000

6 Port Managed Din-Rail Serial Device Server

- 2 10/100Base-TX RJ45 ports and 4 RS232/422/485 serial ports
- Supports Reset button
- Serial ports have 15KV ESD protection circuit
- Supports secondary development on Linux system
- Interfaces and power cable offer surge protection
- EMC performance reaches industrial level 4
- IP40 protection class

CE FC

⟫ Overview

KPS2204 is a programmable serial server developed for the network applications of serial devices. KPS2204 combines Ethernet and serial data communication, and offers protocol transition between Ethernet and serial protocol. KPS2204 is specially designed for harsh and dangerous industrial environments. It has solid and closed enclosure, fanless design with single rib heat dissipation surface, EMC protection properties for power supply over current or over voltage, EMC protection properties for RJ45 and RS232/422/485 data ports. Dual power inputs also ensure the reliability of device.

KPS2204 supports 2 10/100Base-TX RJ45 ports and 4 DB9 serial ports which can be RS232, RS422 or RS485. It is a managed device which supports TELNET, WEB and SNMP based management software. The serial device server inside the KPS2204 is based on ARM embedded platform.

KPS1000 is the embedded board of serial device server which is the part of KPS2204. This embedded serial device server card can be installed in other devices enriching the serial server functionalities.

⟫ Features & Benefits

- Transmission Protocol: supports TCP and UDP protocols
- Network Management and Monitoring: supports Telnet, WEB management methods, SNMPv1/v2, DHCP
- Network Security: supports SSH, SSL
- Device Management: supports FTP/TFTP upgrade

⟫ Technical Specifications

Standard
IEEE 802.3i, IEEE 802.3u, IEEE802.3x

Protocol
TCP, UDP; FTP, TFTP;
Telnet, HTTP, SNMPv1/v2, DHCP;
SSL, SSH; ARP, TCP/IP, ICMP

Interface
Fast Ethernet RJ45 Ports: 2 10/100Base-TX RJ45 ports
Serial Ports: 4 RS232/RS422/RS485 ports with DB9 connector
Bit error rate of data transmission: 0
Electrical characteristic: compliant with 3-wire RS232, 4-wire RS422 and 2-wire RS485 standards
Data bits: 5, 6, 7, 8 (Default: 8)
Stop bits: 1, 1.5, 2 (Default: 1)
Parity bit: None, Even, Odd, Space, Mark (Default: None)
Flow control: XON/XOFF (Default: XOFF)
Baud rate: 50bps-1000Kbps (Default: 9600)

LED
LEDs on Front Panel:
Running LED: Run
Power LED: PWR1, PWR2
Interface LED: Link, ACT, copper ports; T1-T4, R1-R4 serial ports

Reset Button
Reboot and load default configuration

Transmission Distance
Serial Cable: RS232: 15m; RS422/485: 1200m
Twisted Pair: 100m (Standard CAT5, CAT5e network cable)

Power Requirements
Power Input:
KPS2204: 24DC (18-36VDC), 48DC (36-72VDC)
KPS1000: 3.3DC (3.15-3.45VDC)
Power Terminal: 5-pin 5.08mm-spacing plug-in terminal block
Power Consumption: 3W

Overload Protection: Support
Reverse Connection Protection: Support
Redundancy Protection: Support

Physical Characteristics
Housing: Aluminum, fanless
Protection Class: IP40
Dimensions (W×H×D): 55.4×139×119.5 mm (2.18×5.47×4.70 in.)
Weight:
KPS2204: 0.5kg (1.102 pound)
KPS1000: 0.05kg (0.11 pound)
Mounting: DIN-Rail or Panel mounting

Environmental Limits
Operating Temperature: -40 to 85℃ (-40 to 185°F)
Storage Temperature: -40 to 85℃ (-40 to 185°F)
Ambient Relative Humidity: 5 to 95% (non-condensing)

MTBF
333,755 hrs

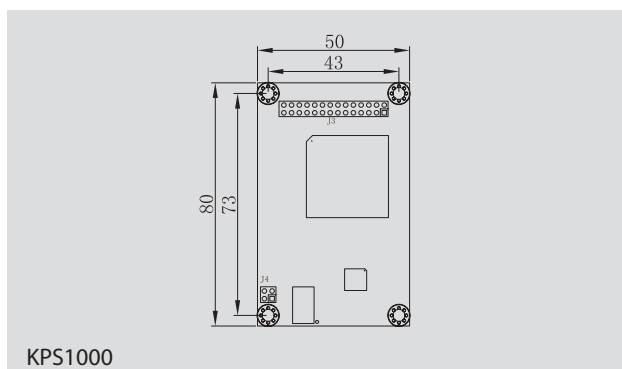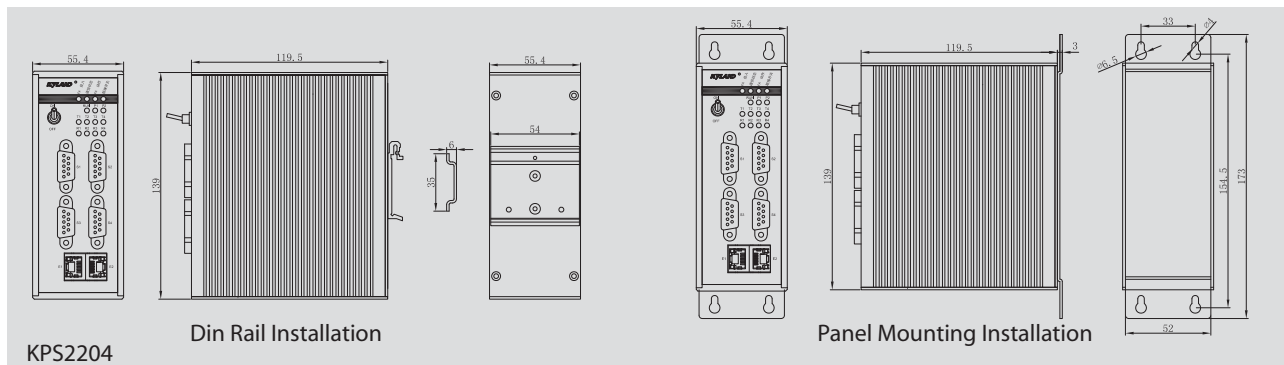### Warranty
5 years

Approvals
CE, FCC

Industrial Standard
EMI:
FCC CFR47 Part 15, EN55022/CISPR22, Class A

EMS:
IEC61000-4-2 (ESD): ±8kV (contact), ±15kV (air)
IEC61000-4-3 (RS): 10V/m (80MHz-2GHz)
IEC61000-4-4 (EFT): Power Port: ±4kV; Data Port: ±2kV
IEC61000-4-5 (Surge): Power Port: ±2kV/DM, ±4kV/CM; Data Port: ±2kV
IEC61000-4-6 (CS): 3V (10kHz-150kHz); 10V (150kHz-80MHz)
IEC61000-4-16 (Common mode conduction): 30V (cont.), 300V (1s)

Machinery:
IEC60068-2-6 (Vibration)
IEC60068-2-27 (Shock)
IEC60068-2-32 (Free Fall)

Industry: IEC61000-6-2
Power: IEC61850-3, IEEE1613
Railway: EN50155, EN50121-4
Traffic Control: NEMA TS-2

Mechanical Drawing

KPS2204 — Din Rail Installation

Panel Mounting Installation

KPS1000

Ordering Information

KPS2204-2T-4D-232/422/485-24DC = 2 10/100Base-TX RJ45 ports, 4 RS232/433/485 serial ports, 18-36VDC power supply

KPS2204-2T-4D-232/422/485-48DC = 2 10/100Base-TX RJ45 ports, 4 RS232/433/485 serial ports, 36-72VDC power supply

KPS1000-EM-C-1T-4D-232/485-3.3DC = Embedded serial device server, 1 10/100Base-TX RJ45 ports, 4 RS232/485 serial ports, 3.15-3.45VDC power supply, PCB coating