

Opal5G

Preliminary



5G Port Entry-level Full Gigabit Unmanaged DIN-Rail Switch

- Support 5 10/100/1000Base-TX RJ45 ports
- Setting jumbo frame transmission function (up to 10KB) by DIP-Switch
- Both standard and wide operating temperature models are available
- IP30 protection class
- UL508 (Pending), Class I Div 2 (Pending), ATEX Zone 2 (Pending), IECEx (Pending), CE (Pending), FCC (Pending)

Overview

Opal5G series, Kyland produced 5-port unmanaged switches, are characterized by its full Gigabit interface, compact size, economical and plug-and-play design, generally used to connect the high bandwidth Ethernet in factory automation, petrochemical, ITS, and other applications. Opal5G support 5 10/100/1000Base-TX RJ45 ports, along with metal housing with IP30 protection class, thus ensuring fast and reliable data transmission in harsh industrial environments. The two DIP-switches located on the top of the device are used to enable/disable Broadcast Storm Protection (BSP) function and Jumbo frame transmission function, respectively. Opal5G provide both standard (-10°C to 60°C) and wide (-40°C to 75°C) operating temperature range models to meet different needs of applications.

Technical Specification

Technical Parameter

Standard

- ▼ IEEE 802.3i (10Base-T)
- ▼ IEEE 802.3u (100Base-TX)
- ▼ IEEE 802.3ab(1000Base-T)
- ▼ IEEE802.3x (Flow Control)

Switch Properties

MAC Table	8K
Packet Buffer	1Mbit
Packet Forwarding Rate	7.4 Mpps
Switching Delay	<5μs
Jumbo Frame Size	10KB

Interface

Gigabit Port	10/100/1000Base-T(X), RJ45 port
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LED

LEDs on Front Panel

- ▼ Power LED: PWR1, PWR
- ▼ Interface LED: Link/ACT, Speed (RJ45 port)

DIP-Switch

- Enable/Disable broadcast storm protection function
- Enable/Disable Jumbo frame transmission function (up to 10KB)

Power Requirements

Power Input	12-48VDC/18-30VAC
Power Terminal	4-pin 5.08mm-spacing plug-in terminal block
Power Consumption	<6W
Overload Protection	Support
Reverse Protection	Support
Redundancy Protection	Support

Physical Characteristics

Housing	Metal
Cooling	Natural convection, fanless
Protection Class	IP30
Dimension	30mm×115mm×68mm (W×H×D)
Weight	0.3Kg

Mounting

- DIN-Rail or Panel mounting
- Environmental Limit Operating Temperature
 - ▼ -10°C~+60°C(Opal5G-E)
 - ▼ -40°C~+75°C
- Storage Temperature -40°C~+85°C
- Ambient Relative Humidity 5°C 95% (non-condensing)

Warranty

MTBF	3,241,152 hrs
Warranty	5 years

Approvals

UL508 (Pending), Class I Div 2 (Pending), ATEX Zone 2 (Pending), IECEx (Pending), CE (Pending), FCC (Pending)

Industry Standard

EMI

- ▼ FCC CFR47 Part 15, EN55022/CISPR22, Class A

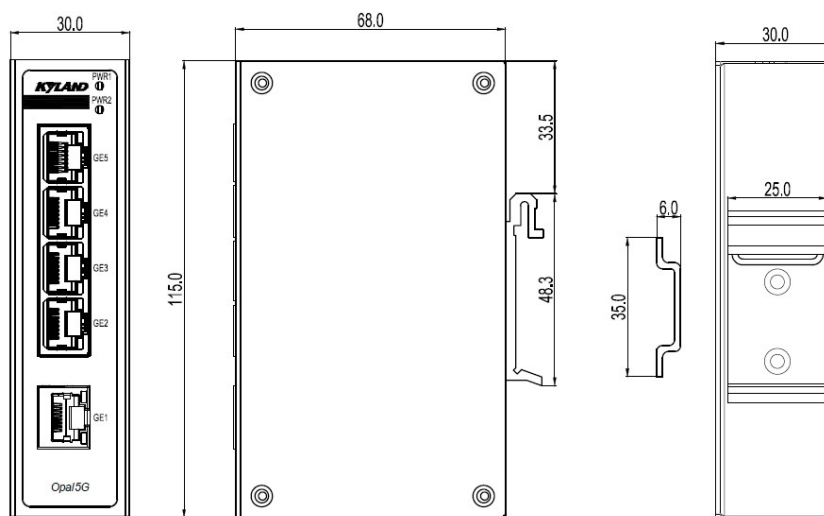
EMS

- ▼ IEC61000-4-2(ESD): ±6kV (contact), ±8kV (air)
- ▼ IEC61000-4-3(RS): 10V/m (80MHz ~ 2GHz)
- ▼ IEC61000-4-4(EFT): Power Port: ±2kV; Data Port: ±1kV
- ▼ IEC61000-4-5(Surge): Power Port: ±1kV/DM, ±2kV/CM; Data Port: ±1kV
- ▼ IEC61000-4-6(CS): 10V (150kHz ~ 80MHz)

Machinery

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

Mechanical Drawing



Ordering Information

Opal5G-X-Ports-PS	
X	Operating temperature range
E	-10°C+60°C operating temperature
None	-40°C+75°C operating temperature
Ports	
5GE	5X10/100/1000Base-T(X) RJ45 ports
PS	
LV-LV	12-48VDC/18-30VAC, redundant power inputs

Optional Accessories

Model	Description
DT-BGAZ-09	Panel for Panel mounting
DT-FCZ-RJ45-01	Dustproof cover for RJ45 port