

DGCOM3000

Gateways & switches All-in-One



» Overview

DGCOM3000 is Kyland's latest generation of intelligent gateway and switch All-in-One devices which are specially designed to meet the demand of data collecting and switching under harsh environment.

The Din Rail devices support maximum 2 1000M/100M SFP fiber ports for the redundant ring connection and 6 100Base-TX RJ45 ports. They support up to 8 RS232/422/485 serial ports and 16 DI and 8 DO ports.

DGCOM3000 series support multiple data switching function including network redundancy, multicast, security, QoS, device status monitoring and maintenance, time synchronization, DGCOM3000 support multiple protocols, data collecting/processing/ forwarding, digital calculation and IEC61850 MMS/GOOSE service.

DGCOM3000 series support NTP/SNTP. DGCOM3000 can be deployed in multiple applications such as the distributed PV power plant automation system, wind farm management system, micro network system, integrated energy-saving system, and automation systems.

» Key Features

Supports 1000M/100M SFP ports, 100M copper ports

Supports Layer 2 switching, redundant ring protocol (DRP, STP/RSTP, DT-Ring), multicast, QoS service

Supports broadcast storm control

Supports RS232/422/485 serial ports

Supports DI/DO input & output, SOE reaches 1ms

Supports IEC61850 MMS server or client application

Supports IEC61850 GOOSE publishing and subscribing

Supports advanced online calculation function

Supports real-time online communication diagnostics and maintenance of acquisition/forward protocol communication

Supports NTP/SNTP

Configurable hardware watchdog

Product Specifications

>Software Functions

-Gateway Functions

IEC 61850 MMS Server/Client

IEC 61850 GOOSE Subscriber/Publisher

DNP 3.0/DNP 3.0 Over TCP/IP Master/Slave

Modbus RTU /Modbus over TCP/IP Master/Slave

IEC 60870-5-101 Master/Slave

IEC 60870-5-104 Master/Slave

Advanced online calculation of digital logic

NTP/SNTP network time synchronization

Third party software development interface

Maintenance tool

-Switching Functions

Supports VLAN,PVLAN

Supports GVRP

Supports port aggregation.

Supports flow control.

Supports port rate limit

Supports broadcast storm suppression.

-Redundancy

Supports DRP and the recovery time<20 ms

Supports STP/RSTP

Supports DT-Ring, DT-Ring+, and DT-VLAN and the recovery time<50 ms

-Multicast

Supports IGMP snooping

Supports static multicast

-Security

Supports user grading

-QoS Management

Supports ACL

Supports SP, WRR queueing

-Management & Maintenance

Supports Console, Telnet, and Web management methods.

Supports SNMPv1/v2c/v3 and can managed by Kyvision.

Supports file transfer and software update over HTTP.

Supports the IP/MAC address conflict alarm, power alarm, port alarm, ring alarm

Supports port mirroring.

Supports Syslog.

Supports LLDP.

Supports Link-check.

>Technical Specifications**-Standards**

IEEE 802.3i(10Base-T)

IEEE 802.3u(100Base-T)

IEEE 802.3ab(1000Base-T)

IEEE 802.3ad(port aggregation)

IEEE 802.3z(1000Base-SX/LX)

IEEE 802.3x(flow control)

IEEE 802.1p(priority)

IEEE 802.1Q(VLAN)

IEEE 802.1w(RSTP)

IEEE 802.1s(MSTP)

-Switch properties

Priority Queue: 8

VLAN: 4K

VLAN ID: 1-4093

Multicast: 256

MAC Table: 8K

Packet buffers: 4Mbit

Packet forwarding rate: 3.8Mpps

Switching capacity: 5.2Gbps

Switching latency: <10us

-Interface

Optical ports: 1000Base-X or 100Base-FX, SFP ports

Copper ports: 10/100Base-T(X), RJ45 port

Serial ports: RS232/422/485, 3.81mm space plug-in terminal

DI ports: Idle contact, 5.08mm space plug-in terminal, supports 24V/48V DC or 110V/220VDC contact power inputs

DO ports: Relay control contact, 5.08mm space plug-in terminal, 250VAC Max, 3A Max

Alarm contact: NC and NO relay alarm contact, 3-pin 5.08mm-spacing plug-in terminal block, 250 VAC Max, 3 A Max

Console port: RS232, RJ45

-LED

LED on front panel

Run LED: RUN

Alarm LED: ALARM

Ring Role LED: RING

Interface LED: Link

Serial LED: Tx/ Rx

DI status LED: On/Off

DO status LED: Open/Close

-Power Requirements

Power input: 110-240VAC, 50/60Hz; 110-220VDC (85-264VAC / 77-300VDC)

24-48VDC (18-72VDC)

Power terminal: 3-pin 7.62 mm-spacing plug-in terminal block

Power Consumption: < 25 W

Overload Protection: Support

Reverse Connection Protection: Support

-Physical Characteristics

Housing: Metal

Cooling: Natural cooling, fanless

Protection Class: IP40

Dimension (W×H×D): 140mm×139mm×145mm

Weight: 3.5Kg

Mounting: Din Rail

-Environment Limits

Operating temperature: -40 to +85°C

Storage temperature: -40 to +85°C

Ambient Relative Humidity: 5% to 95% (non-condensing)

-Quality Assurance

MTBF: 350877h

Warranty: 5 years

-Approvals

CE, FCC

IEC 60950-1, EN 60950-1

-Industry Standards

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-1GHz)

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) 10V(9kHz-50kHz)

IEC61000-4-8(power frequency magnetic field) 100A/m(cont.), 1000A/m(1s-3s)

IEC61000-4-9(pulsed magnetic field) 1000A/m

IEC61000-4-10(damped oscillation) 100A/m

IEC61000-4-12(oscillatory wave) 2kV/CM, 1kV/DM

IEC61000-4-16(common mode conduction) 30V(cont.), 300V(1s)

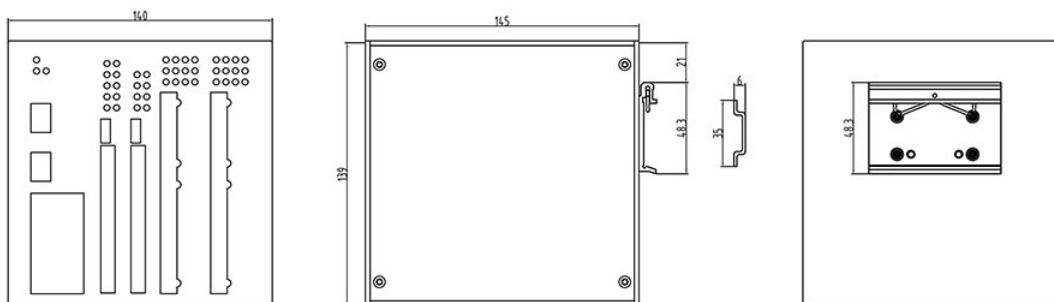
Machinery

IEC60068-2-6 (vibration)

IEC60068-2-27 (shock)

IEC60068-2-32 (free fall)

» Mechanical Drawing



» Ordering Information

DGCOM3000-Ports-WS-ES-PS-SW

Ports

2GX6T4D	2*1000Base-X,SFP;6*10/100Base-T(X);4*RS232/RS422/RS485
2GX6T8D	2*1000Base-X,SFP;6*10/100Base-T(X);8*RS232/RS422/RS485
2GX6T4D8DI4DO	2*1000Base-X,SFP;6*10/100Base-T(X);4*RS232/RS422/RS485; 8*DI;4*DO
2GX6T8D8DI4DO	2*1000Base-X,SFP;6*10/100Base-T(X);8*RS232/RS422/RS485; 8*DI;4*DO
2GX6T4D16DI8DO	2*1000Base-X,SFP;6*10/100Base-T(X);4*RS232/RS422/RS485; 16*DI;8*DO
2GX6T8D16DI8DO	2*1000Base-X,SFP;6*10/100Base-T(X);8*RS232/RS422/RS485; 16*DI;8*DO
2SFP6T4D	2*100Base-FX,SFP;6*10/100Base-T(X);4*RS232/RS422/RS485
2SFP6T8D	2*100Base-FX,SFP;6*10/100Base-T(X);8*RS232/RS422/RS485
2SFP6T4D8DI4DO	2*100Base-FX,SFP;6*10/100Base-T(X);4*RS232/RS422/RS485;8*DI;4*DO
2SFP6T8D8DI4DO	2*100Base-FX,SFP;6*10/100Base-T(X);8*RS232/RS422/RS485;8*DI;4*DO
2SFP6T4D16DI8DO	2*100Base-FX,SFP;6*10/100Base-T(X);4*RS232/RS422/RS485;16*DI;8*DO
2SFP6T8D16DI8DO	2*100Base-FX,SFP;6*10/100Base-T(X);8*RS232/RS422/RS485;16*DI;8*DO

WS

W1	24VDC
W2	48VDC
W3	110VDC
W4	220VDC

NA:

No DI interface

ES

Extended Storage

E1	2G extended storage
NA:	No extended storage

PS

Power Supply

HV	110-240VAC,50/60Hz;110-220VDC(85-264VAC/77-300VDC)
L2	24-48VDC(18-72VDC)

SW

Firmware

A1	Serial server
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A3	IEC 101, IEC 104, DNP 3.0, Modbus Master/Slave
A4	IEC 101, IEC 104, DNP 3.0, Modbus Master/Slave, MMS Server
A5	IEC 101, IEC 104, DNP 3.0, Modbus Master/Slave, MMS Client
A6	IEC 101, IEC 104, DNP 3.0, Modbus Master/Slave, MMS Server/Client

Accessories

Gigabit SFP module	See the selection table of industrial gigabit SFP module
100M SFP module	See the selection table of industrial 100M SFP module.
CONSOLE cable	Standard accessory

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