

# DG-A8/A16



## Industrial Rackmountable Gateway for Smart Grid

- Special designing based on ARM Cortex-A8 architecture
- High performance yet ultra low power consumption
- Easy IEC 61850 SCL(CID/ICD) import and configuration process
- Configurable MMS (IEC 61850-8-1) server & client application  
Support GOOSE publish and subscribe
- Built-in SoftPLC calculating task
- Configurable hardware watchdog
- Full functional NTP for time synchronization
- Support IRIG-B DC time synchronization
- Dual mode of RS232/RS485 isolated serial ports
- Remote diagnosis or maintenance by network
- Compliant to IEC 61850-3, IEEE 1613 standards

## ➤ Overview

As the 1U, 19 inch standard rack-mount data concentrating unit for system,DG-AX series are designed in conformity with the IEC 61850 standards. It can be deployed to be an intelligent unit to collect data by all its RS232/RS485 serial ports and Ethernet ports. By importing any pre-specified IEC 61850 SCL(.icd/.cid) template file and after mapping the data to internal VMD model with the configuration tool - ICE, the unit can be viewed just as the standard IEC 61850 IED from the master station.

With powerful data communication and process function, high reliability, low power consumption, flexible and easy installation advantages, DG-AX series are the ideal intelligent device choice for any kinds of system integrated solutions.

## ➤ Features & Benefits

### Hardware Parameters

Performance: ARMv7 800MHz Core  
RAM: 512M DDR2-333  
Build-in storage: 512M Nand Flash  
Extra storage: 8G/64G Micro SD(Optional)  
Ethernet: 10/100Base-T  
Serial Ports: RS232/RS485(Isolated)

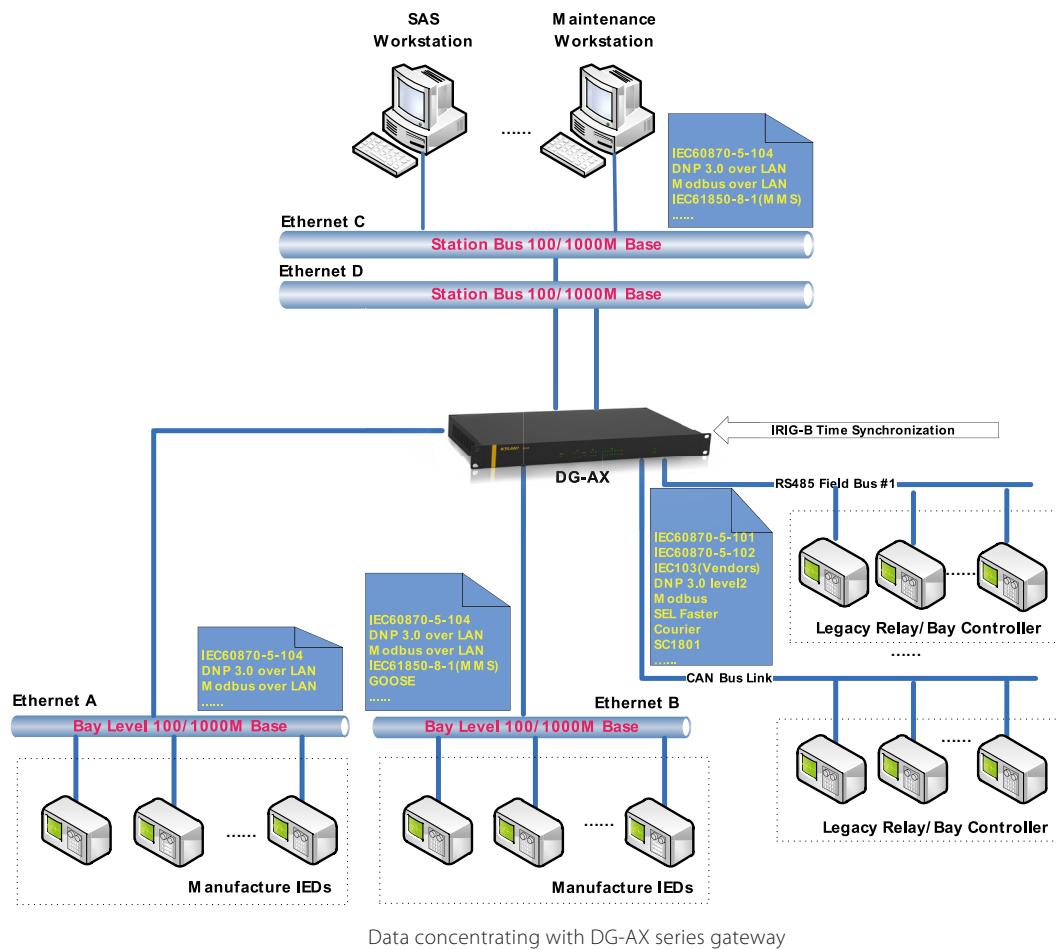
### Firmware

DNP 3.0 Level-2 over serial port or LAN  
Modbus(RTU/ASCII)/Modbus over serial port and LAN IEC 60870-5-101/103/104 slave/master  
IEC 61850 MMS/GOOSE  
SoftPLC calculator  
Customer specified

### Technical Benefits

Easy framework configurable by all-in one integration tools  
Later data binding & mapping technology without needing change SCL modeling file  
Advanced data internal processing functionality

## ➤ Typical Application



## ➤ Technical Parameters

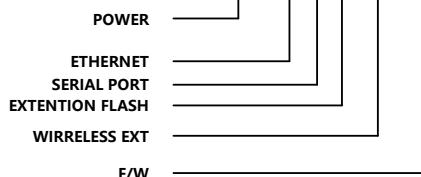
Item	DG-A8	DG-A16
Console port	RS232, RJ45	RS232, RJ45
Serial ports	8 x RS232/RS485 (Isolated)	8 x RS232/RS485 (Isolated) + 8 x RS485 (Isolated)
Ethernet	4 x 10/100M RJ45	4 x 10/100M RJ45
Build-in storage	512M Nand Flash	512M Nand Flash
Extra storage	8G/64G Micro SD	8G/64G Micro SD
Hardware Watchdog	Configurable	Configurable
Time Synchronization	NTP	NTP and IRIG-B DC
Power Supply	85-264VAC	85-264VAC
Power Consumption	<8W	<8W
Weight	3kg	3kg
Dimension (WxHxD)	483x45x200 mm	483x45x200 mm
Mounting	1U, 19 inch rack-mount	1U, 19 inch rack-mount
Operating Temperature	-40 to 85°C	-40 to 85°C

## ➤ Electrical Parameter

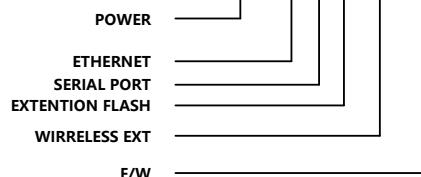
- ▼ Input: 85 ~ 264V AC
- ▼ Average power consumption: 8W
- ▼ Relative humidity : 5%~ 95% (no condensation)
- ▼ Electrostatic discharge immunity test: GB/T 17626.2-1998 IEC 61000-4-2-1995 class 4
- ▼ Transient immunity: GB/T 17626.4-1998 IEC 61000-4-4-1995 class 4
- ▼ Surge immunity: GB/T 17626.5-1998 IEC 61000-4-5-1995 class 4
- ▼ Power frequency magnetic fields immunity: GB/T 17626.8-1998 IEC 61000-4-8-1995 class 5
- ▼ Ring waves immunity: GB/T 17626.12-1998 IEC 61000-4-12-1995 class 4
- ▼ Pulse magnetic field immunity: GB/T17626.9-1998 IEC 61000-4-9-1995 class 5
- ▼ Damped oscillatory magnetic field immunity: GB/T17626.10-1998 IEC 61000-4-10-1995 class 4
- ▼ Voltage dips and short interruptions and voltage variations immunity: GB/T 15153.1-1998 IEC 61000-4-11 2004 Δ U-100% , Δ t = 0.5s
- ▼ Insulation resistance: >5MΩ
- ▼ Insulating strength: no breakdown when applying 500V and 1500V to the communication ports and power supply ports respectively
- ▼ Dry heat test: GB/T2423.2-2001 IEC 60068-2-2 75°C, 24 hours
- ▼ Cold test: GB/T2423.1-2001 IEC 60068-2-1 -25°C, 24 hours
- ▼ Damp heat: GB/T2423.3-1993 IEC 60068-2-3 +40°C ± 2°C, 93% ± 3%, insulation resistance: >1MΩ

## ➤ Ordering Information

### DGW-A8X-P-11CDEG



### DGW-A16X-P-12CDEG



#### EQUIPMENT

TYPE	DG-AX(1U,19"Rack Mount)
POWER	85~264V AC/100~300V DC
ETHERNET	4 x 10/100M BASE-T
SERIAL PORT	8 x RS232/RS485 SERIAL PORTS
EXTENTION FLASH STORAGE	N/A
WIRELESS EXT	N/A
F/W	DEFAULT(IEC 101/104/DNP 3.0/Modbus S/M) DG-A4(MMS Sever) DG-A5(MMS Client) DG-A6(MMS Client/Sever) DG-C0(COMMON PROTOCOL) DG-C4(MMS Sever) DG-C5(MMS Client) DG-C6(MMS Client/Sever) DG-P0(PRIVATE PROTOCOL) DG-P4(MMS Sever) DG-P5(MMS Client) DG-P6(MMS Client/Sever)

#### EQUIPMENT

TYPE	DG-AX(1U,19"Rack Mount)
POWER	85~264V AC/100~300V DC
ETHERNET	4 x 10/100M BASE-T
SERIAL PORT	8 x RS232/RS485+8 x RS485 SERIAL PORTS
EXTENTION FLASH STORAGE	N/A
WIRELESS EXT	N/A
F/W	DEFAULT(IEC 101/104/DNP 3.0/Modbus S/M) DG-A4(MMS Sever) DG-A5(MMS Client) DG-A6(MMS Client/Sever) DG-C0(COMMON PROTOCOL) DG-C4(MMS Sever) DG-C5(MMS Client) DG-C6(MMS Client/Sever) DG-P0(PRIVATE PROTOCOL) DG-P4(MMS Sever) DG-P5(MMS Client) DG-P6(MMS Client/Sever)