




eLAN™ Universal DNP Gateway

The eLAN Universal DNP Gateway (UDG) is an off-the-shelf solution to a wide range of applications in systems using DNP 3.0, including:

- Data concentrator
- Serial to Ethernet (TCP/IP or UDP/IP) conversion
- Device proxy server
- Front end processor / sub master
- Poll acceleration
- Multi-master support
- DNP Router
- Encryption, using SSL
- Authentication, using PKI

The eLAN UDG is based on the robust, flexible Linux architecture, and is available on a variety of disk-less hardware platforms, and I/O configurations. The eLAN Configurator allows rapid configuration and deployment of UDG systems. The eLAN Universal DNP Gateway Application Guide provides additional details on applying the UDG in different real-world configurations.

Specifications and Model Information

	UDG-100	UDG-300	UDG-700
			
Ethernet ports	2	2 standard, more available	2 standard, more available
Serial Ports	4	8, 16, or 24	8 – 64, in increments of 8
Device capacity	100 RTUs/IEDs	300 RTUs/IEDs	300 RTUs/IEDs
Point capacity	20,000 points	50,000 points	100,000 points
Response time to poll	< 1 mS	< 1 mS	< 1 mS
Throughput	3,000 events/second	10,000 events/second	10,000 events/second
Dimensions	8.6" x 6.2" x 1.9"	2 rack units in 19" rack	4 rack units in 19" rack
Temp	-10 to +60 deg C	0 to +55 deg C	0 to +55 deg C

Ordering Information

UDG-aaa-b-c

Where:

a is Product Number model (100, 300, or 700, from above table)

b is quantity of serial ports (within ranges defined in above table)

c is power supply

For UDG-100: this is blank

For UDG 300: option 1 = external supply required, such as eLAN STM

option 2 = internal 120 VAC supply

For UDG-700 option 1 = external supply required, such as eLAN STM

option 2 = internal 120 VAC supply

option 3 = internal redundant 120 VAC supply

eg: UDG-300-16-2 is a 2 rack unit system, with 16 serial ports and an internal 120 VAC power supply.

Expansion Capabilities

The Universal DNP Gateway may be expanded by adding additional applications from Bow's eLAN family, including:

- **Additional RTU/IED protocols**

Bow's extensive experience with protocol development has resulted in an RTU/IED protocol library of over 50 protocols, supporting hundreds of device types. This is the core of the eLAN application family created to address specific protocol conversion and translation issues related to RTUs, protection relays, PLCs, DFRs and other utility IEDs. Typical protocol support includes all of the following, along with many lesser-known formats:

DNP 3.0

IEC 870-5-101/103

Modbus

Harris 5000/6000

Siemens Sinaut

SEL Fast Message

Telegyr 8979

- **Enterprise application interfaces (OPC, ODBC)**

The eLAN ODBC server provides open database connectivity to any ODBC compliant application. All current or historical data can be accessed from the eLAN server and brought directly into desktop applications such as Microsoft Access and Excel for trending and reporting.

The eLAN OPC server provides a standards-based mechanism for providing real-time substation data to any OPC client application, such as OSIsoft's PI data historian. eLAN's implementation of OPC facilitates a bi-directional interface to PI that is easily configured and maintained.

Bow Network's eLAN family includes a broad range of software applications to facilitate the connection of enterprise information systems to any device, anywhere, at any time. eLAN products may be deployed in the substation, at the control center, or elsewhere, to assist in accessing substation data. eLAN applications include protocol conversion, security, open data access (OPC, ODBC), and automation. Please visit www.bownetworks.com for more information.

About Bow Networks

Bow Networks was founded in 1986 to provide real-time computing expertise to utilities and electric industry vendors. Throughout these years of successful operations, the Company has established its reputation as a leader in applying to sophisticated network-based solutions and user applications, expert knowledge of protocol translation, security, enterprise networks, LAN/WAN technology, and communications media. Bow Networks is fully committed to the electric utility industry and has invested significantly in what is now the most advanced platform for substation communications and data management – eLAN.

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Revision date: January 2009
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