

Gateway 1000 Converter

JBM Electronics' Gateway 1000 (G1000) provides protocol and interface conversion for dissimilar networks in remote locations or at the central site. The G1000 provides a wide range of Legacy protocol support for LAN and WAN networks and supports the protocol and text manipulation for each device or user.

The G1000 offers a single cost-effective, unified solution to integrate currently installed Legacy protocol devices into new hybrid LAN/WAN network configurations. The Gateway can eliminate multiple circuits and improve the control of the devices in the network. The Gateway's flexible architecture allows an installation to intermix many types of protocols and connections in a single unit. The data from these protocols can be transferred to any other port connections through internal routing functions.

The G1000 supports protocol conversion and data format manipulation on a device or port basis. Special logic determines the association between each logical device and the physical port. The processing options, protocol conversion and port routing are assigned to an individual address or port through simple setup menus.

JBM can provide custom modifications to the protocols supported by the Gateway. We can provide text manipulation, custom data translations, unique network address mapping or specialized host application messages. These custom modifications can eliminate the requirement for changes in host application programs or network topologies; therefore, allowing you quick installation and ability to run production applications immediately.

Benefits

The G1000 is part of the JBM Electronics' Gateway family of scaleable data communications products that have been designed to meet the needs of customers' applications. From a remote office to a corporate campus environment, you now truly have a gateway into the future!

Control/Diagnostics

With the dynamic support offered through Telnet, SNMP and Console interfaces, users can maintain control and integrate command, control, and diagnostics using existing Network Management Systems.

Cost Reductions

Users will be able to reduce current operating costs through potential elimination of multiple or duplicate network circuits. In most cases, converting to Frame Relay or ISDN services will increase cost savings over analog or digital services in place today.

Software Support

In supporting a diverse set of Legacy protocols from either a host or terminal basis, users need not make any changes to existing or planned application(s) software. Text manipulation, unique character translation, local polling sequences, or special log-on sequences can all be handled.

Existing Devices

Except for selected network connection devices, users do not need to replace current terminals, control units, or host level controllers. The G1000 allows for their continued use, and in selected cases may increase their utilization across the network.

Applications

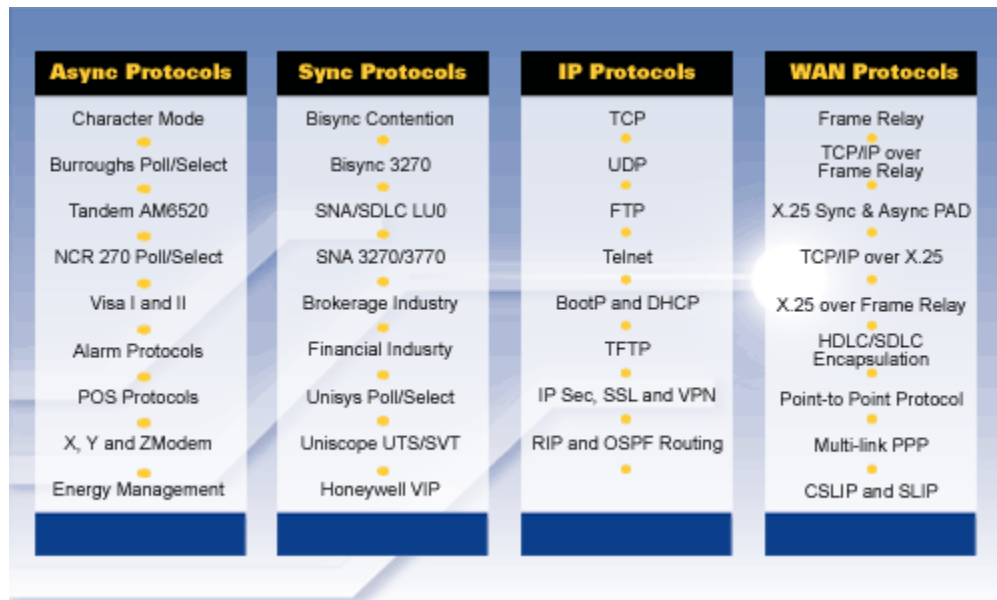
The G1000 offers several advantages in customer networks, including:

- Enable Ethernet or Token Ring LAN(s) and a diverse combination of terminals, PCs, workstations and controllers to connect to public and/or private network services such as Frame Relay, X.25, T1, or ISDN at both remote and host sites.
- Allows TCP/IP devices to access a Legacy protocol network.
- Eliminate need for remote router, or connect existing installed router for enhanced Legacy protocol(s) support and routing to a Frame Relay Network.
- Supports different types of Legacy Protocol data streams in a single unit, with ability to route data between different ports within the unit.

- Mix serial and LAN devices with stand-alone units like PCs or ATM (i.e., Branch Bank) connected to a Frame Relay Network.
- Concentrate multiple Legacy protocol applications from one location, without replacing existing devices. Support existing applications, perform protocol conversion, data format manipulation, text manipulation, custom data translation, unique network addressing, or specialized host or terminal messaging. The port routing features can enhance current applications support.
- Prevent unauthorized access or establish a Virtual Private Network (VPN) to connect separate locations into a secure network using Internet connections.
- Offer custom modifications to handle unique user requirements, such as text or data manipulation, special log-in commands, host application messages, or data translations.
- Converts data from TCP/IP to UDP.

Protocol Support

The G1000 supports many standard LAN, WAN and serial protocols and ships with the following:



The Gateway’s protocol support includes local polling (spoofing) of attached devices with full Host and terminal emulation for all protocols.

JBM Electronics Co. offers a variety of field-proven software protocols that support the vendor-defined standards. We can modify our software to meet unique customer requirements. Examples would be text or data manipulation, site-specific log-in commands, specialized host application messages, or custom data translations. We will assist you in adapting our standard protocol support to your particular needs on a custom basis.

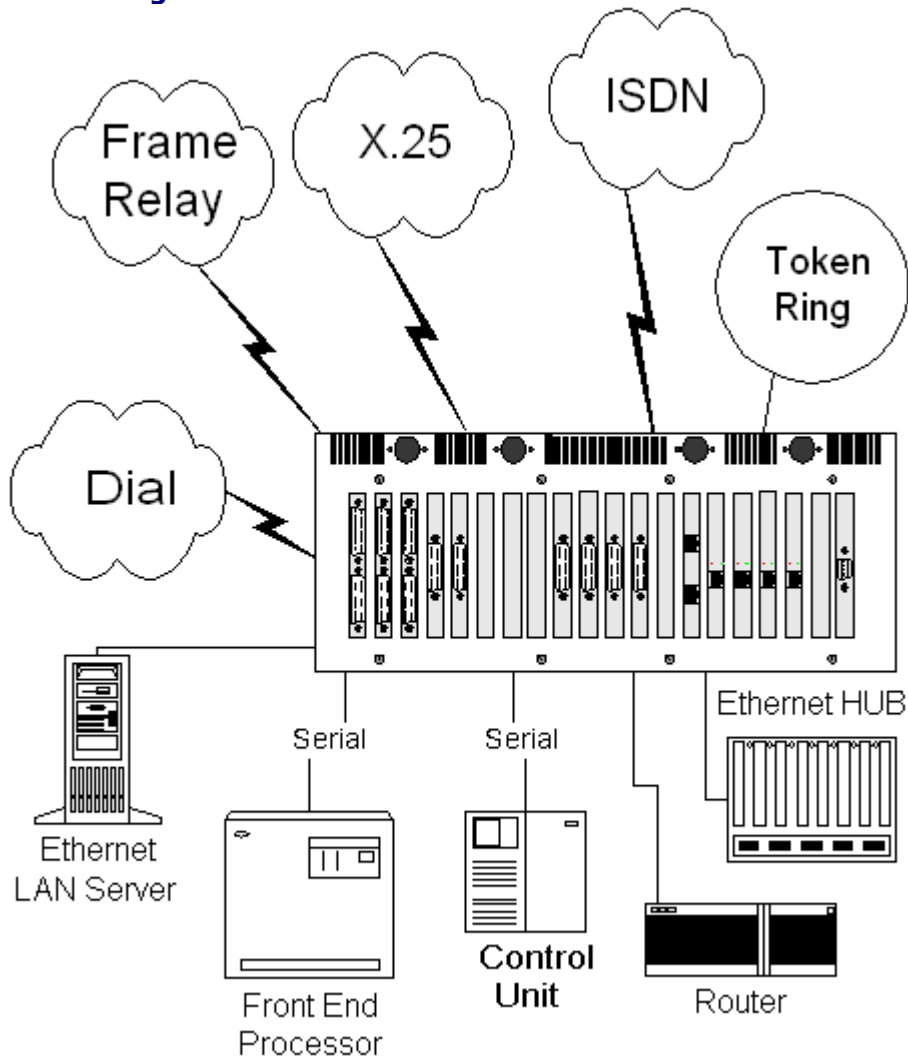
Our Frame Relay support is certified to ISO and ITU standards by major network laboratories. The X.25 protocol support is certified to European NET2 standards by the ROLAND Laboratory.

Diagnostics

The G1000 can be configured through the integrated Console Port or Telnet commands. The Console Port provides an async connection for a terminal or PC. The Console Port allows for alternate access by a remote technician so problems can be diagnosed and quickly addressed.

The G1000 offers several different types of maintenance and diagnostics features. All of the protocol-specific diagnostics are supported, such as LUSTATS, Notify and Status and Sense Bytes.

Network Configuration



G1000 Model Differences

There are eight Gateway 1000 models available. The major difference between these models is the number of expansion slots and processor type. All of the expansion cards are compatible with the different models (except as noted).

Model	Redundancy	Expansion Slots	Rack Mount	Height	Width	Depth	Weight
1000-A	None	4 ISA	No	7"	10.5"	16"	15 lbs.
1000-B	None	10 ISA	Yes	7"	17"	20"	36 lbs.
1000-C	Power Supply	18 ISA	Yes	7"	17"	27"	53 lbs.
These units contain a 486 processor, 16 MB RAM and a 10BaseT Ethernet interface.							
Model	Redundancy	Expansion Slots	Rack Mount	Height	Width	Depth	Weight
1000-D	None	5 ISA or 2 PCI/2 ISA	No	7"	10.5"	16"	15 lbs.
1000-E	None	13 ISA or 3 PCI /9 ISA	Yes	7"	17"	20"	36 lbs.
1000-F	Power Supply	18 ISA or 3 PCI /14 ISA or 16 PCI / 1 ISA	Yes	7"	17"	27"	53 lbs.
1000-G	Power Supply	7 ISA or 6 PCI	No	7"	13"	16"	15 lbs.
1000-H	None	2 PCI	Yes	1.7"	19"	19"	13 lbs.
These units contain a Pentium-class processor, 128 MB RAM and a 10/100BaseT Ethernet interface.							

- ▶ The G1000 uses a distributed architecture with the processing intelligence residing at the port. The individual port provides all of the protocol processing and device emulation for the connection. Once the data has been successfully received from the remote device, the mainline processor performs the routing and switching of the data packets. Depending on the mix of applications and processes, different models may best fit the application. Normally, the 486-based units satisfy most application. Contact JBM if there is a question on which system to select.

The G1000 application program is available for separate purchase. The program (G1000 System) and our expansion cards can be installed in a customer-supplied Linux system. The G1000 System allows you to standardize on the same computer system for the entire data center.

The G1000's distributed architecture provides several advantages over traditional approaches:

- Intermix dissimilar applications.
- Improve performance by distributing data packet processing.
- Minimize the impact of hardware upgrades/changes.
- Flexibility to add new technologies (i.e. ATM).

The maximum number of cards that can be installed in a G1000 Model B, C, E and G is dependent on the number of open slots, card type and the way the cards are configured in the G1000. The G1000-SPC, G1000-Quad and G1000-WAN4 cards do not use interrupts and can be used in any open slot. The other ISA cards use interrupts and are limited to a total of eight cards (in any combination) per unit.

The G1000 has an auto-ranging power supply that supports voltages from 110 to 250 VAC at 50 to 60 Hz. An optional -48 V DC power supply is also available. The G1000s are listed by a NRTL to UL 1950 standards, meets FCC Class A regulations and complies with the CE Statement for the European Low Voltage Directive 73/23/EEC.

Expansion Cards

WAN Interfaces

Part Number:	Description:
G1000 WAN	This WAN Card supports T1/E1 speeds for Frame Relay and X.25 protocol.
G1000 WAN/C	This WAN Card includes STAC hardware compression circuitry. The card supports Frame Relay and X.25 protocols at T1/E1 speeds.
G1000 WAN/DSU	This WAN Card includes a Fractional-T1 DSU/CSU and supports Frame Relay and X.25 protocol.
G1000 WAN4	A four-port version of the G1000 WAN card provides additional port density for the G1000 at a cost-effective price. The four ports support RS-232C, V.35, X.21 or EIA 530 through supplied cables. The ports are DTE with DCE selectable through an optional cable. Each port support X.25 networks at speeds up to T1/E1 with unique baud rates or configurations.
G1000 bri	This ISDN card supports up to 128 KB speeds.
G1000 pbri	This ISDN card supports up to T1 speeds.
G1000 RAS-1	Async Card with up to 24 channels on one T1 or ISDN pri connections. Each channel supports up to 56 KB (Models D through H).
G1000 RAS-2	Async Card with up to 48 channels on two T1 or ISDN pri connections. Each channel supports up to 56 KB (Models D through H).

LAN Interfaces

Part Number:	Description:
G1000 E-10	A 10 MB Ethernet card with three connectors supporting 10BaseT, 10Base5, and AUI links.
G1000 E-100	A 10/100 MB Ethernet card for 10/100Base-T links (Models D through H).
G1000 TR	An auto sensing Token Ring card which supports either 4 MB or 16 MB networks.

Sync Interfaces

Part Number:	Description:
G1000 SPC	A Serial Card with an RS-232C or V.35 interface at speeds up to 56 KB. This card supports many of the legacy protocols in both host and terminal mode. Supported protocols include: Async, Tandem AM6520, Bisync, Visa Verifone), SNA/SDLC, XModem, YModem, and ZModem, Polled Async, Unisys Poll/Select, Unisys Uniscope, NCR Poll/Select Other protocols are available on a custom basis.
G1000-QUAD	A four-port version of the G1000-SPC provides additional port density for the G1000 at a cost-effective price. The four ports on the Quad card are RS-232C with DTE or DCE selectable through the supplied cable. Each port supports speeds up to 56 KB with a unique baud rate or protocol.
G1000-PQUAD	A PCI version of the G1000-QUAD (Models D through H).

Async Interfaces

Part Number:	Description:
G1000-4PC	4 port async card with a quad cable. Each port supports up to 115 KB.
G1000-4PC/P	PCI version of the G1000-4PC (Models D through H).
G1000-8PC	8 port async card with an octopus cable. Each port supports up to 115 KB.
G1000-8PC/P	PCI version of the G1000- (Models D through H).
G1000-Mod	16 Port External Module for the G1000-MPC or G1000-MPC/P. Each port supports up to 115 KB. Up to three modules can be added to the G1000-MPC's primary module to support more connections.
G1000-MPC	Async Card with a 16 Port External Module. Each port supports up to 115 KB.
G1000-MPC/P	PCI version of the G1000-MPC (Models D through H).
G1000 RAS-1	Async Card with up to 24 channels on one T1 or ISDN pri connections. Each channel supports up to 56 KB (Models D, E, F and G only).
G1000 RAS-2	Async Card with up to 48 channels on two T1 or ISDN pri connections. Each channel supports up to 56 KB (Models D through H).

Software

Suite	Description
G1000-S1	<p>Visa (Verifone), Visa II, XModem, YModem and ZModem support</p> <p>This suite allows the Gateway to support Visa and Visa II connections or XModem, Ymodem or ZModem async file transfers. The data is enveloped in TCP for delivery to the TCP/IP network. The 16 Port Expansion Card can be used for the async connections.</p>
G1000-S2	<p>Tandem AM6520, Uniscope UTS/SVT, Honeywell 7816 VIP</p> <p>This suite provides async and sync support for the vendor's protocol. Host and terminal mode is supported for each of the protocols.</p>
G1000-S3	<p>NCR 270 Poll/Select, Burroughs (Unisys) T27 Poll/Select</p> <p>This suite provides async and sync support for the vendor's Poll/Select protocol. Host and terminal mode is supported for each of the protocols.</p>
G1000-S4	<p>NASDAQ NQDS and NTDS, GovPx, Standard & Poors, LoanNet, Instinet, SIAC, Quotran</p> <p>This suite allows the Gateway to support various financial protocols, including GovPx and the NASDAQ NTDS and NQDS broadcast data feeds.</p>
G1000-FTP	<p>FTP Client and Server Software</p> <p>This suite provides an FTP interface for different serial protocols. Depending on the protocol, custom programming may be required to adapt the data for the current serial application.</p>
G1000-System	<p>Gateway Application Program</p> <p>This is the Gateway application program designed to run on a customer-supplied Linux system.</p>
G1000-Custom	<p>Custom modifications to the application software</p> <p>JBM Electronics Co. specializes in modifying our units to meet unique customer applications. Please contact us to discuss your requirements.</p>

Specifications are subject to change without notice.