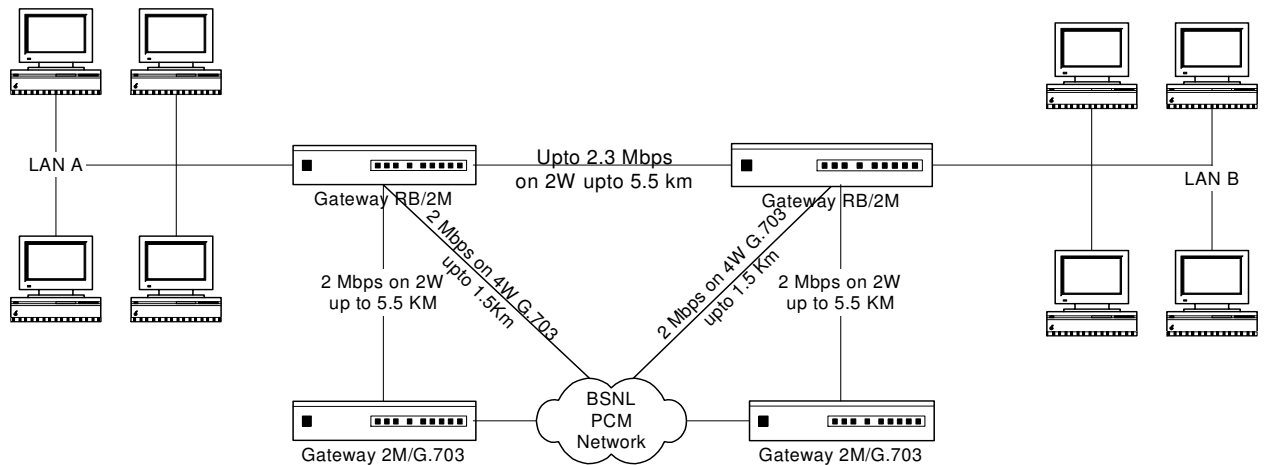


HCL Gateway RB

Ethernet Remote Bridge - LAN Extender

HCL Gateway RB Remote Bridge is a very cost-effective way to connect two geographically isolated LAN segments without having to depend on IP segmentation and Routing. By using HCL Gateway RB Ethernet Remote Bridge instead of a Router, a faster and transparent LAN can be constructed, where Network resources or Disk Drives can easily be shared across the LANs without having the Name Resolution Server. No complicated IP sub-netting is required. The Bridge works with all the protocols such as IP, IPX, NetBEUI etc. including the proprietary ones. This easy to install, setup and efficient one box solution saves expensive resources like two External Modems and two IP Routers. An example of a typical application is shown in the figure below. The example depicts the connection of two LAN segments in two different buildings over a single/dual pair of telephone wire or through a TELCO leased line or using G.703 terminations.



The Gateway RB offers 5 Interfaces for connecting the LAN segments over a distance:

- A V.35/RS530/RS232 Synchronous serial port to connect to any type of external Leased xDSL or dialup modem from 2.4 Kbps to 2.3 Mbps or even direct connection to the NTU of MLDN/MLLN.
- G.703 64Kbps Co-directional interface to allow connection to the PCM Network without the need for Interface Converters. (GatewayRB/G703/64K.)
- G.703/E1 2 Mbps G.703 port to allow connection to the PCM Network directly without the need for any interface converter (Gateway RB/G703/2M).
- iDSL 2B1Q modem with speeds of 64/128/144 Kbps which allows you to Bridge LAN Segments up to 8KM apart on 2 Wire Leased Line. Compatible with Gateway BB/G703 for bridging over the PCM network. (Gateway RB/64K)
- G.SHDSL 2.3 Mbps (nx64Kbps) modem which allows you to Bridge LAN Segments up to 5.5 Km apart or even further at lower speeds on 2 Wire Leased Line. Compatible with Gateway 2M/G703 for bridging over the PCM network (Gateway RB/2M).

FEATURES

- ❖ 10 Base-T Ethernet interface on RJ-45 port
- ❖ High speed DMA data-transfer for efficient bridging
- ❖ Protocol independent, supports proprietary ones
- ❖ Management through DIP Switch, FP Switches, Console Port and SNMP)
- ❖ Front panel LED indicators for Ethernet & WAN ports status
- ❖ 32 bit CRC check on Ethernet & 16 bit CRC on serial channels ensures reliable data transfer
- ❖ Built in high speed modem based on G.SHDSL (ITU-T G.991.2) standard for speeds up to 2 Mbps or iDSL modem for speeds of 64/128/144 Kbps
- ❖ Full compatibility with Gateway 2M/G703, 2 Mbps or Gateway BB/G703, 64 Kbps modems for long distance leased line through exchange/PCM
- ❖ Built-in 2 Mbps ITU G.703 or 64 Kbps G.703 interface for direct connection to the PCM network
- ❖ External high speed Leased/Dial-up modem or ISDN TA support through RS530 / V.35/ RS232 interface from 33.6Kbps to 2 Mbps

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TECHNICAL SPECIFICATIONS

<u>Built-in Line Interface</u>	<u>Gateway RB/2M</u>	<u>Gateway RB/64K</u>	<u>GW RB/G703/2M</u>	<u>GW RB/G703/64K</u>
Modulation	TCPAM G.SHDSL	2B1Q Echo Cancellation iDSL	ITU-T G.703, G.704; Framed/Unframed	as per ITU-T co- directional G.703
Line Type	2 Wire Twisted- Pair Copper Wire	2 Wire Twisted- Pair Copper Wire	4 Wire Twisted-Pair Copper Wire	4 Wire Twisted- Pair Copper Wire
Connector	RJ45 135 Ohm	RJ45 135 Ohm	RJ45 & Terminal Block for 120 Ohm Balanced or BNC for 75 Ohm Unbalanced	RJ45 for 120 Ohm Balanced
Range	5.5Km on 0.5mm copper wire	8 Km on 0.5 mm copper wire	1.5 Km on 0.5 mm copper wire	0.8 Km on 0.5 mm copper wire
Speed	nx64 Kbps up to 2.304 Mbps	64/128/144 Kbps	nx64 Kbps up to 2.048 Mbps	64 Kbps
<u>RS530/232 Serial Interface</u>				
Speed:	RS530 RS232C	Upto 2 Mbps Upto 115,200 bps		
Data Mode	Full-Duplex, Serial, Synchronous			
Connector	25 Pin Female D-type Connector			
<u>WAN Protocol</u>	HDLC with 16 bit CRC			
<u>LAN Interface</u>	10 Base-T complying to IEEE 802.3 / ANSI 8802-3 on RJ45 connector			
<u>Bridge</u>	Self Learning and MAC address based Packet Filtration Algorithm with up to 10,000 MAC address storage complying to IEEE 802.1d			
<u>Management</u>	RS232 Console, SNMP Agent			
<u>Diagnostics</u>	Front Panel Switches			
Local Digital Loop-Back	Receive Data is Looped Back to Transmit Data before the Digital Interface			
Remote Digital Loop-Back	Remote modem is requested to Loop-Back Receive Data to Transmit Data before the Digital Interface			
Bit Error Test	A Pseudo Random Test pattern is automatically transmitted & checked against received data for Bit or Block Errors			
<u>Indicators</u>	System LAN WAN	PWR, MR LINK, TX, RX, COLL TD, RD, SYN, M/S, TST, ERR		
<u>Power</u>	230VAC +/-10%, 50mA Earthed Power or 48VDC +/- 10%, 0.3A (in-built)			
<u>Mechanical</u>	210mm (D) x 170mm (W) x 45mm (H) Aluminum Casing, 1.5KG Weight			
<u>Operating Conditions</u>	0 °C to 50 °C; 90% Humidity			
<u>TEC Approval No</u>	TEC/WR/I/DCA-18/03/135 and TEC/WR/I/DCA-18/03/149			

Also available: Gateway IFC - V.35 to G.703 Rate & Interface Converter for both 2 Mbps (nx64) and 64 kbps

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** Information subject to change at HCL's discretion. Manufactured by Nomus Comm-Systems.

