

## 54 Mbps Wireless DSL Gateway GT701-WG

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### Software Specifications

Features	Descriptions
<b>ADSL</b>	<ul style="list-style-type: none"> <li>ITU G.992.1 (G.dmt), G.992.2 (G.Lite), G.994.1 (G.hs), G.992.3 (G.dmt.bis)**, G.992.4(G.lite.bis)**, G.992.5 (ADSL2plus)**</li> <li>ANSI T1.413 Issue2</li> </ul> <p>** available in future firmware upgrade</p>
<b>ATM</b>	<ul style="list-style-type: none"> <li>ATM User-Network Interface, Version 3.1, Section 3. The ATM Forum, 1995. <ul style="list-style-type: none"> <li>The full VPI range (0 – 4095) and VCI range (1 – 65535) are supported.</li> <li>Adaptation Layers AAL5, AAL2 and AAL0 are supported.</li> <li>The traffic shaping function supports traffic classes CBR, VBR (real time and non-real time) and UBR (with PCR limiting).</li> </ul> </li> </ul>
<b>OAM</b>	<ul style="list-style-type: none"> <li>ITU-T Recommendation I.610 B-ISDN Operation and Maintenance Principles and Operations. <ul style="list-style-type: none"> <li>F5 segment and end-to-end loopback cells</li> </ul> </li> </ul>
<b>Ethernet</b>	<ul style="list-style-type: none"> <li>ISO/IEC 8802-3; ANSI/IEEE standard 802.3 part 3 <ul style="list-style-type: none"> <li>IEEE 802.3x – Full Duplex capable</li> <li>IEEE 802.3u – Auto negotiation</li> </ul> </li> <li>RFC 1213 S K. McCloghrie, M. Rose, "Management Information Base for Network management of TCP/IP-based internets: MIB-II", 03/26/1991.</li> <li>D-I-X, "The Ethernet - A Local Area Network: Data Link Layer and Physical Layer Specifications", Digital, Intel, and Xerox, November 1982.</li> </ul>
<b>Wireless</b>	<ul style="list-style-type: none"> <li>IEEE 802.11B</li> <li>IEEE 802.11G</li> </ul>
<b>Wireless Security</b>	<ul style="list-style-type: none"> <li>WEP 64/128/256 bit encryption</li> <li>WPA, WPA-PSK</li> <li>802.1x</li> <li>SSID Broadcast enable/disable</li> </ul>
<b>Bridge</b>	<ul style="list-style-type: none"> <li>Transparent MAC level bridge for Ethernet-like devices in conformance with the IEEE802.1d specification.</li> <li>ISO/IEC 10038:1993 (E), Std 802.1D.</li> <li>RFC1213 S K. McCloghrie, M. Rose, "Management Information Base for Network Management of TCP/IP-based internets: MIB-II", 03/26/1991.</li> <li>RFC1493 Definitions of Managed Objects for Bridges. E. Decker, P. Langille, A. Rijssinghani, &amp; K. McCloghrie. July 1993.</li> </ul>

<b>IP</b>	<ul style="list-style-type: none"> <li>• RFC 791, Internet Protocol. J. Postel. Sep-01-1981. RFC 950, Internet Standard Subnetting Procedure. J.C. Mogul, J. Postel. Aug-01- 1985.</li> <li>• RFC 1122, Requirements for Internet hosts – communication layers. R.T. Braden. Oct-01-1989.</li> <li>• RFC 1191, Path MTU discovery. J.C. Mogul, S.E. Deering. Nov-01-1990.</li> <li>• RFC 1213, Management Information Base for Network Management of TCP/IP-based internets:MIB-II. K. McCloghrie, M.T. Rose. Mar-01-1991.</li> <li>• RFC 894, Standard for the transmission of IP datagrams over Ethernet networks. C. Hornig. Apr-01-1984.</li> </ul>
<b>ARP</b>	<ul style="list-style-type: none"> <li>• RFC 826, Ethernet Address Resolution Protocol: Or converting network protocol addresses to 48.bit Ethernet address for transmission on Ethernet hardware. D.C. Plummer. Nov-01-1982.</li> </ul>
<b>ICMP</b>	<ul style="list-style-type: none"> <li>• RFC 792, Internet Control Message Protocol. J. Postel. Sep-01-1981.</li> </ul>
<b>UDP</b>	<ul style="list-style-type: none"> <li>• RFC 768, User Datagram Protocol. J. Postel. Aug-28-1980.</li> </ul>
<b>TCP</b>	<ul style="list-style-type: none"> <li>• RFC 793, Transmission Control Protocol. J. Postel. Sep-01-1981.</li> </ul>
<b>IP Router</b>	<ul style="list-style-type: none"> <li>• Support Static Route..</li> <li>• Support unnumbered mode</li> </ul>
<b>RIP</b>	<ul style="list-style-type: none"> <li>• RFC 1058, Routing Information Protocol. C.L. Hedrick. Jun-01-1988.</li> <li>• RFC 1723, RIP Version 2 - Carrying Additional Information. G. Malkin. November 1994.</li> <li>• RFC 2453, RIP Version 2. G. Malkin. November 1998.</li> <li>• RFC 1812, Requirements for IP Version 4 Routers. F. Baker. June 1995.</li> <li>• RFC 1191, Path MTU discovery. J.C. Mogul, S.E. Deering. Nov-01-1990.</li> </ul>
<b>DHCP Server</b>	<ul style="list-style-type: none"> <li>• RFC 2131: Dynamic Host Configuration Protocol: R. Droms, March 1997.</li> <li>• RFC 2132: DHCP Options and BOOTP Vendor Extensions: S. Alexander, March 1997.</li> </ul>
<b>DHCP Client</b>	<ul style="list-style-type: none"> <li>• RFC 2131: Dynamic Host Configuration Protocol: R. Droms, March 1997.</li> <li>• RFC 2132: DHCP Options and BOOTP Vendor Extensions: S. Alexander, March 1997.</li> <li>• The DHCP client supports the following minimal subset of options described in RFC2132: <ul style="list-style-type: none"> <li>◦ Requested IP Address (requested by default; is mandatory)</li> <li>◦ Parameter Request list (subnet-mask only)</li> <li>◦ IP Address Lease time (dhcp-lease-time)</li> <li>◦ Client-identifier (dhcp-client-identifier)</li> <li>◦ Default route (routers)</li> <li>◦ DNS servers</li> </ul> </li> </ul>
<b>DNS Relay</b>	<ul style="list-style-type: none"> <li>• RFC 1035, Domain names - implementation and specification. P.V. Mockapetris. Nov-01-1987.</li> </ul>
<b>NAT, PAT (IP Masquerading)</b>	<ul style="list-style-type: none"> <li>• RFC2663, "IP Network Address Translator (NAT) Terminology and Considerations, P.Srisuresh, M. Holdrege. August 1999.</li> <li>• RFC3022, Traditional IP Network Address Translator (Traditional NAT). P. Srisuresh, K. Egevang. January 2001.</li> </ul>
<b>NAT ALGs (Application Level Gateway) (NAT Pass Through)</b>	<ul style="list-style-type: none"> <li>• FTP (over NATP)</li> <li>• Netmeeting</li> <li>• IPSec</li> <li>• PPTP</li> </ul>
<b>NAT advanced features</b>	<ul style="list-style-type: none"> <li>• Port Forwarding</li> <li>• DMZ</li> <li>• Service Blocking:</li> <li>• Web site blocking</li> <li>• Web Activity Log</li> </ul>
<b>Firewall</b>	<ul style="list-style-type: none"> <li>• Stateful Firewall: multiple security levels.</li> <li>• Basic IDS: Stateful Packet Inspection for prevention of Denial of Service (DoS) attacks</li> </ul>

<b>Universal Plug and Play (UPnP)</b>	<ul style="list-style-type: none"> <li>Internet Gateway Device (IGD) Standardized Device Control Protocol V 1.0, 11/12/2001</li> </ul>
<b>MAC Cloning</b>	<ul style="list-style-type: none"> <li>Automatic cloning of client MAC address when desired or required</li> </ul>
<b>PPP</b>	<p><b>LCP</b></p> <ul style="list-style-type: none"> <li>RFC1661 W. Simpson, "The Point-to-Point Protocol (PPP)", 07/21/1994.</li> <li>RFC1570 W. Simpson, "PPP LCP Extensions", 01/11/1994.</li> </ul> <p><b>PAP</b></p> <ul style="list-style-type: none"> <li>RFC1334 W Simpson, "PPP Authentication Protocols", 09/1992</li> </ul> <p><b>CHAP</b></p> <ul style="list-style-type: none"> <li>RFC1994 W. Simpson, "PPP Challenge Handshake Authentication Protocol (CHAP)", 08/30/1996.</li> </ul> <p><b>IPCP</b></p> <ul style="list-style-type: none"> <li>RFC1332 G. McGregor, "The PPP Internet Protocol Control Protocol (IPCP)", 05/26/1992.</li> </ul> <p><b>BCP</b></p> <ul style="list-style-type: none"> <li>RFC1638 F. Baker, R. Bowen, "PPP Bridging Control Protocol (BCP)", 06/09/1994.</li> </ul>
<b>PPPoA</b>	<ul style="list-style-type: none"> <li>RFC 2364, PPP Over AAL5. G. Gross, M. Kaycee, A. Lin, A. Malis, J. Stephens, July 1998.</li> </ul>
<b>PPPoE</b>	<ul style="list-style-type: none"> <li>RFC 2516, Method for Transmitting PPP Over Ethernet (PPPoE). L. Mamakos, K. Lidl, J. Evarts, D. Carrel, D. Simone, R. Wheeler. February 1999.</li> </ul>
<b>RFC1483</b>	<p>Supports bridged 802.3 Ethernet frames over an ATM network.</p> <ul style="list-style-type: none"> <li>LLC encapsulation, in which an LLC/SNAP header is prepended to the (Ethernet) frame</li> <li>VC multiplexing, in which a null two byte header is prepended to the frame.</li> </ul> <p>Default is LLC encapsulation; VC multiplexing can be configured using console command or WEB configuration.</p> <ul style="list-style-type: none"> <li>RFC1483 J. Heinanen, "Multiprotocol Encapsulation over ATM Adaptation Layer 5", 07/20/1993.</li> <li>RFC1213 S K. McCloghrie, M. Rose, "Management Information Base for Network Management of TCP/IP-based internets: MIB-II", 03/26/1991.</li> <li>RFC 2684, Multiprotocol Encapsulation over ATM Adaptation Layer 5. D. Grossman, J. Heinanen. September 1999.</li> </ul>
<b>TELNET</b>	<ul style="list-style-type: none"> <li>RFC 854 Telnet Protocol specification. J. Postel, J.K. Reynolds. May-01-1983.</li> <li>RFC 855 Telnet option specifications. J. Postel, J.K. Reynolds. May-01-1983.</li> <li>RFC 857 Telnet echo option. J. Postel, J.K. Reynolds. May-01-1983.</li> <li>RFC 858 Telnet Suppress Go Ahead option. J. Postel, J.K. Reynolds. May-01-1983.</li> </ul>
<b>FTP Server/Client</b>	<ul style="list-style-type: none"> <li>RFC 1350, The TFTP Protocol (Revision 2). K. Sollins. July 1992.</li> <li>FTP server is in boot loader only.</li> </ul>
<b>Web server and Web Based Configuration</b>	<ul style="list-style-type: none"> <li>RFC 1945, Hypertext Transfer Protocol -- HTTP/1.0. T. Berners-Lee, R. Fielding, H. Frystyk. May 1996.</li> <li>RFC 2068, Hypertext Transfer Protocol -- HTTP/1.1. R. Fielding, J. Gettys, J. Mogul, H. Frystyk, T. Berners-Lee. January 1997. (Not full support).</li> <li>RFC 2617, HTTP Authentication: Basic and Digest Access Authentication. J. Franks, P. Hallam-Baker, J. Hostetler, S. Lawrence, P. Leach, A. Luotonen, L. Stewart. June 1999.</li> </ul>
<b>PC Driver</b>	<ul style="list-style-type: none"> <li>Microsoft RNDIS USB driver</li> </ul>

## Physical Specifications

### • Enclosure

The enclosure has the following physical dimensions:

Length: 6 1/2 inch  
 Width: 4 5/8 inch  
 Height: 1 1/2 inch

### • Visual indicators

The device has following 6 visual indicators:

**Power:** ON/OFF Ready indicator;

Solid Green = Power on; Green Controlled by GPIO7;

Off = Power off

Red = POST (Power On Self Test) failure (non bootable)  
 or Device Malfunction; Red Controlled By GPIO8;

LED Mode	Green Led	Red Led
Green	On	Off
Red	Off	On

**DSL:** Indicates ADSL layer connectivity

Solid Green = DSL good sync

Off = Modem power off

Flashing Green = DSL attempting sync

The LED Controlled By DSLLNK;

**Internet:** Internet indicator light that indicates whether or not it has at least one DSL Device-controlled session up. Green controlled by GPIO13, Red controlled by GPIO9;

Solid Green = IP connected (the device has a WAN IP address from IPCP or DHCP and DSL is up) and no traffic detected. If the IP or PPPoE session is dropped, the light will remain green if an ADSL connection is still present. The light will turn red when it attempts to reconnect and DHCP or PPPoE and fails.

Off = Modem power off, modem in bridged mode or ADSL connection not present.

Flickering Green = IP connected and IP Traffic is passing thru the device (either direction)

Red = Device attempted to become IP connected and failed (no DHCP response, no PPPoE response, PPPoE authentication failed, no IP address from IPCP, etc.)

For bridged mode, the indicator light MUST be off.

LED Mode	Green Led	Red Led
Green	On	Off
Red	Off	On
Off	Off	Off

**Ethernet :** LAN Port 1 indicator; Link & Activity; Controlled by GPIO 10;

Solid Green = Powered device connected to the associated port

Flashing Green = LAN activity present (traffic in either direction)

Off = Modem power off or no powered device connected to the associated port

**USB:** USB Port Indicator; Link & Activity; Controlled By GPIO12;

Solid Green = Powered device connected to the USB port

Flashing Green = USB activity present (traffic in either direction)

Off = Modem power off or no powered device connected to USB port.

**Wireless:** Wireless Indicator; Controlled By GPIO6;

Solid Green	=	Wireless Card insert;
Flashing Green	=	Wireless activity present (traffic in either direction)
Off	=	Wireless is disabled within the firmware.

**• Connectors:**

Phone(RJ-11):	One for the ADSL line
RJ-45:	One 10/100 Ethernet connection for LAN
USB:	One standard USB connector to connect to PC
Power:	One power connector for wall mount 12VDC power adapter
Reset Button:	Reset the unit and Reset to manufacturing default.
Power Switch:	One On/Off rocker switch
Antenna:	Attached 802.11b/g Wireless

**Environmental Operating Range**

Operating temperature:	0-40 degrees Celsius
Humidity:	8-95%, non-condensing

**Power requirements**

Operating voltage:	+12V DC +- 5% @ 600mA max
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**Power Dissipation**

The typical approximated power dissipation is as below:

Power Dissipation for	GT701-WG
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Active (typical)	12V DC @ 380mA
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