

# THOMSON

## THOMSON ST780(i)WL DeXtenTion VoIP Gateway with USB Master for Residential and Business Users



Data Voice Video

TELECOM

SATELLITE

CABLE

TERRESTRIAL

### | Best in Class in Digital and Voice Communication

The THOMSON ST780(i)WL DeXtenTion is a Voice over IP Gateway allowing ADSL connectivity while providing Voice over IP functions for residential and business users. The THOMSON ST780(i)WL DeXtenTion offers next to 4 Ethernet ports, an additional 802.11g wireless LAN interface, and supports ADSL2+. It is also backwards compatible with ADSL offering autonegotiation capability.

### | Home Networking with Easy Installation

Like all Thomson gateways, the THOMSON ST780(i)WL DeXtenTion is provided with the Home Install Wizard, making the setup of a wireless home network as easy as clicking a button. No more helpdesk calls, just click and you are ready to go. The Home Install Wizard performs comprehensive system checks before and during the installation and setup process, and validates all user inputs to guarantee the end user a secured wireless connection to the Internet.

### | Easily Manageable

The THOMSON ST780(i)WL DeXtenTion is completely designed according to the TR-069 Data Model, through which the device can be configured remotely. In addition, TR-104 for VoIP is implemented for the configuration and management of all voice services. TR-037 enables auto-configuration of network bandwidth according to service needs, allowing seamless integration with the network's provisioning system.

### | Voice over IP

The THOMSON ST780(i)WL DeXtenTion offers two phone connectors to accommodate a phone and fax. Once the gateway is registered with a VoIP service, regular phone calls can be conducted over the Internet with all the benefits of IP Telephony. The gateway offers a wide range of services like caller ID, CLIR, call waiting, call forwarding, 3-way conference and message waiting notification.

## Thomson ST780(i)WL DeXtenTion

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### | Advanced in Security

The integrated firewall guarantees users ultimate network security. The firewall minimizes undesired service impact and provides stateful inspection of packets. An integrated Denial of Service (DoS) engine monitors a wide range of attack patterns, and logs potential security breaches to a local cache or remote server.

The THOMSON ST780(i)WL DeXtenTion also supports powerful wireless security mechanisms, such as Wi-Fi Protected Access (WPA™), Wired Equivalent Privacy (WEP™) encryption, and a physical registration button. This allows users to communicate and access data with efficient link quality and the highest level of network security. Unwanted content filtering on the Internet is also integrated.

### | Extendable Solution for Cordless High Quality VoIP and Advanced Features

The THOMSON ST780(i)WL DeXtenTion can easily be extended with the USB DECT Dongle through the USB master port, enabling the gateway to handle DECT multi-line Voice over IP. The Thomson IP DECT phones feature advanced High Definition Sound which equals CD sound quality. Other advanced features include remote control, picture upload and music streaming, all with the DECT handset. The USB master port can also be used for printer sharing or connecting other USB devices, such as an external hard disk whose content can be shared by anyone on the home network.

### | Choosing for the THOMSON ST780(i)WL DeXtenTion is Choosing for

- a solution that is part of a whole product range, built with the same software,
- a strong management of Quality of Service, coming from our Business Gateways,
- full implementation of TR-069, enabling an easy roll out in the field, in addition to Thomson's widely known Easy Setup Wizard,
- our choice of VoIP stack, coming from a market leader, guaranteeing instant interoperability with main market softswitch- and IP-PBX vendors,
- support of Port Mapping on any RJ45 port, depending on the type of traffic (for example data, voice or video).

# Technical Specifications

## Hardware Specifications

### Interfaces

- RJ11 DSL line port
- 4-port autosensing 10/100Base-T auto-MDI/MDI-X Ethernet switch
- 2 FXS POTS interfaces
- 1 FXO PSTN POTS interface
- 1 USB 1.1 master and 1 USB 1.1 slave

### Extras

External dipole antenna  
Restore factory defaults button  
WLAN/DECT registration button

### Dimensions

33 x 160 x 240 mm (1.3 x 6.3 x 9.45 in.)

### AC Voltage

220-240 VAC / 100-120 VAC

### Temperature

0° - 40° C (32 - 104 F)

### Humidity

20% to 80%

## DSL Modem Specifications

- Supports Multi Mode Standard
- ADSL2 ITU G.992.3 Annex A (G.dmt.bis), ITU G.992.4 Annex A (G.lite.bis)
  - Maximum Rate: 12 Mbps for downstream and 1.5 Mbps for upstream
- ADSL2+ ITU G.992.5 Annex A
  - Maximum Rate: 24 Mbps for downstream and 1.3 Mbps upstream
- Reach extended ADSL (RE ADSL)
- Supports VC-based and LLC-based Multiplexing
- Supports up to 16 PVC's
- F4/F5 OAM
- Zero Touch Configuration
- Annex M

## Router Features

- NAT (Network Address Translation): multiple LAN-users to access the Internet for the cost of only one IP address / Hyper-NAT
- multi-to-multi NAT
- NAT Server (Port forwarding)
- PAT (Port Address Translation)
- ALGs (Application Level Gateways): such as NetMeeting, MSN Messenger, FTP, QuickTime, mIRC, RealPlayer, CuSeeMe, VPN pass-through, etc.
- TCP/IP
- Embedded PPPoE client, supporting PPP over Ethernet (PPPoE) and PPP over ATM (PPPoA)
- DHCP Client/Server/Relay
- RIP I / RIP II Support
- IP Multicasting, IGMP v1/v2
- DNS server/relay
- Embedded dynamic DNS client
- UPnP<sup>TM</sup> \*\* support
- UPnP IGD (Internet Gateway Device) with NAT traversal capability
- Port Mapping: users can set up multiple virtual servers (e.g., Web, FTP, Mail servers) on the user's local network.
- Supports DMZ
- SNTP: Time protocol can be used to get current time from network time server.

## Management

### Local

- User Friendly GUI via HTTP and HTTPS
- (Wireless) Home Network Install Wizard
- Web based Easy installation (OS independent)
- Command Line Interface (CLI)/ Telnet
- Multi role – multi user management
- TR-064
- SW upgrade

### Remote

- SNMP v1/v2 agent with MIB-II
- SW upgrade
- TR-069
- Command Line Interface (CLI)/ Telnet
- Configuration file backup and restore

## Quality of Service

- ATM QoS UBR/VBR/CBR support
- ATM SAR with low and high queues
- Media bandwidth management
- RTP voice packet as highest priority
- ToS
- Diffserv IP QoS
- Port-based PVC for Different Services
- QoS for Triple Play
- VLAN Tag Support

## Firewall Security

- Firewall with Stateful Packet Inspection
- Protection of Denial of Service (DoS) such as SYN Flood, Ping of Death, Fraggle, LAND, Teardrop, etc.
- Content filtering: URL blocking
- IP and generic packet filtering, based on IP address/port number/protocol type
- Real-time attack alert and logging

## Wireless Performance and Security

- Wi-Fi<sup>®</sup> CERTIFIED<sup>™</sup> 802.11b/g access point
  - data rates up to 54Mb/s
- Wi-Fi Multimedia - WMM<sup>™</sup> (802.11i)
- Supports 802.1x/ PSK WPA<sup>™</sup>
- WPA<sup>™</sup>-Personal / WPA2<sup>™</sup>-Personal (802.11i)
- Supports wireless repeater function to extend the coverage area
- Dynamic rate switching for optimal wireless data rates up to 54 Mb/s
- Manual/auto radio channel selection
- Manual/auto selection of pure 802.11g/mixed mode (802.11b/g) network
- Wireless Distribution System (WDS)
- 64/128bit WEP encryption
- Wireless client MAC or hardware address-based access control (with physical registration button)

<sup>\*</sup> Wi-Fi CERTIFIED<sup>™</sup> is a registered certification mark and WPA<sup>™</sup>, WPA2<sup>™</sup>, WPA<sup>™</sup>-Personal, WPA2<sup>™</sup>-Personal, and WMM<sup>™</sup> are trademarks of the Wi-Fi Alliance

<sup>\*\*</sup> UPnP<sup>™</sup> is a certification mark of the UPnP<sup>™</sup> Implementers Corporation

# Technical Specifications

## Voice over IP Features

### Voice Functionality

- SIPv2 (RFC 3261), SDP (RFC 2327), RTP (RFC 1889), RTCP (RFC 1890)
- Codecs: G.711, G.729a/b, T.38, G.722, G.726 (optional), G723.1 (optional)
- Echo cancellation G.168
- Voice activity detection
- Silence suppression
- Dynamic jitter buffer
- Comfort noise generation
- TOS and DiffServ tagging support
- DTMF detection and generation
- Multiple SIP numbers support
- Modem and fax tone detection
- Polarity reverse
- SIP server
- Call admission control
- Interop with main market soft switches
- Multiple channel support
- Common DECT number

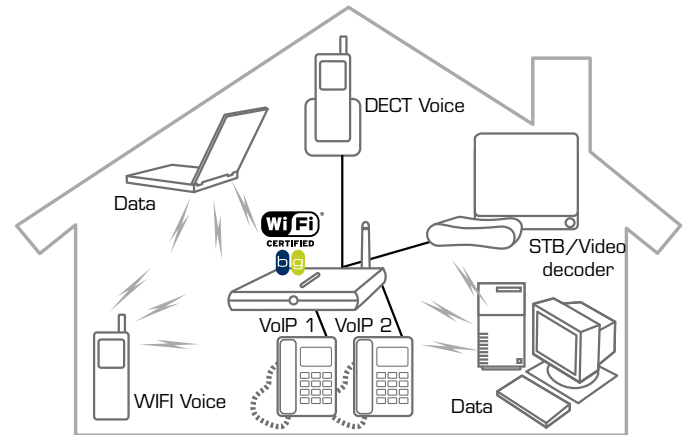
### Lifeline Support

- Sending of emergency call to PSTN
- Make PSTN call by dialing pre-fix number
- PSTN relay when device power down
- PSTN relay when VoIP service not available
- Receiving incoming PSTN phone call

### Supplementary and Advanced Services

- Call waiting
- Call waiting with Caller ID
- Call forwarding (No answer/Busy/Unconditional)
- Call transferring
- CLIP (Calling Line Identification Presentation)
- CLIR (Calling Line Identification Restriction)
- CLIR on call basis
- Call transfer
- Call hold/call retrieve
- Three-way conference
- MWI (Message Waiting Indicator)
- MWI by e-mail
- Internal call
- Second call
- Flash hook timer
- Speed dial (phone book)
- Caller ID generation/detection with DTMF and FSK format
- Click to dial via Thomson GUI and (MS Windows®) desktop shortcut
- Call return
- Abbreviated number

\* Windows® is a registered trademark of Microsoft Corporation in the United States and other countries



Auto Configuration  
Remote Management



## For more information

Thomson | 46, quai Alphonse Le Gallo | 92100 Boulogne-Billancourt | France  
Tel. : 33 (0) 1 41 86 50 00 | Fax : 33 (0) 1 41 86 56 59 | www.thomson-broadband.com

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