

## THOMSON TG780 Business Business VoIP Gateway for Office Users



Data Voice Video

TELECOM

CABLE

SATELLITE

TERRESTRIAL

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

The THOMSON TG780 Business is a Voice over IP Gateway allowing ADSL connectivity while providing Voice over IP functions for SOHO users. The THOMSON TG780 Business offers next to 4 Ethernet ports, an additional 802.11g wireless LAN interface. It supports ADSL2+ and is also backwards compatible with ADSL offering autonegotiation capability.

### | Easy to Install Office Networking

Like all THOMSON gateways, the THOMSON TG780 Business is provided with the Office Install Wizard, making the setup of a wireless home network as easy as clicking a button. No more helpdesk calls, just a click and you are ready to go. The Office 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. The THOMSON TG780 Business also features a full VLAN enabled bridge which can be used to segment both services and networks.

### | Easily Manageable

The THOMSON TG780 Business 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. Also more advanced tasks like managed VLANs and advanced QoS configurations become possible.

TR-037 enables auto-configuration of network bandwidth according to service needs, allowing seamless integration with the network's provisioning system. Moreover, the gateway can be easily introduced in an existing management system using TFTP and TACACS+ for configuration and access control. Service level agreements can be offered thanks to proactive monitoring tools like SYSLOG and SNMP. The THOMSON TG780 Business also allows operators to easily fit it into their existing management framework of business CPE thanks to TFTP configuration and TACACS+/RADIUS operator control facilities.

# THOMSON TG780 Business

## Business VoIP Gateway for Office Users

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### | Voice over IP

The THOMSON TG780 Business 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.

The built-in SIP server contains a registrar supporting registration for up to 20 internal accounts in the office environment. For the outside world, up to 15 external SIP accounts can be defined, each allowing a distinct outbound registrar and outbound proxy. The internal and external SIP accounts can be mapped to each other in a flexible way.

### | 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 TG780 Business 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 TG780 Business 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 which content can be shared by anyone on the home network.

### | Office Interconnect and Teleworking Solution

The THOMSON TG780 Business supports a powerful and robust IPSec VPN module which is compliant with most IPSec solutions available on the market. Up to four sites can be interconnected very easily in a full mesh scenario. There is also a VPN server module available which can terminate up to 16 VPN clients dialing in from anywhere and any network (hotspot, home...) as a teleworking solution. The modules feature extreme robustness allowing operation over virtually any network configuration, even dynamic IP allocation is supported.

### | Choosing for the THOMSON TG780 Business means choosing for:

- a solution that is part of a whole product range, built on similar software.
- a strong management and Quality of Service.
- a strong SLA offering with the RADIUS/TACACS+, SYSLOG and TFTP implementation.
- 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, and guaranteeing instant interoperability with main market softswitch- and IP-PBX vendors.
- a scalable and easy-to-use SIP PBX allowing office autonomy.
- support of Port Mapping on any RJ45 port, depending on the type of traffic (data, voice or video).

# Technical Specifications

## Hardware Specifications

### Interfaces

- RJ11 DSL line port for ADSL Annex A
- RJ45 DSL line port for ADSL Annex B (ISDN version)
- 4 Ethernet ports 10/100Base-T autosensing and auto-crossover
- 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

### 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 8 PVC's
- F4/F5 OAM
- Zero Touch Configuration
- Annex M

## Router Features

- NAT (Network Address Translation): multiple LAN-users to access the Internet at 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™ (1) support
- UPnP 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
- SYSLOG, SNMP & Extended Business GUI for Remote Management
- Easy integration in existing management framework
  - Manual TFTP up/download
  - File System Commands
  - TACACS+/RADIUS

## 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

# Technical Specifications

## Wireless Performance and Security

- Wi-Fi® CERTIFIED 802.11b/g access point<sup>(2)</sup>
  - data rates up to 54Mb/s
- Wi-Fi Multimedia - WMM™ (802.11e)
- Supports 802.1x/ PSK WPA™
- WPA™-Personal / WPA2™-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)

## Office Interconnect and Telesolution

- IPSec with Public Key Infrastructure (PKI), online and offline PKI enrollment
- Encryption AES, DES, 3DES
- Hashing HMAC, MD5, SHA1
- IP VPN Tunnels

	Basic	Advanced <sup>(3)</sup>
Incoming tunnels	16	16
Outgoing tunnels	1	4

## Voice over IP Features

### Voice Functionality for FXS and DECT

- 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 for FXS and DECT

- 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

## SIP PBX

- 20 LAN user agents, 15 WAN user agents
- Inbound/outbound mappings
- Supported services:
  - CLIP, CLIR: can be terminated on the external account or handled transparently
  - Forking of an external account in multiple internal accounts
  - Transparent supplementary services: call hold, waiting, and transfer, 3-party conference, CFNR, CFB, CFU
  - Internal / local calls
- Call logs

## Supplementary and Advanced Services for FXS and DECT

- 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 hold/call retrieve
- 3-party 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<sup>(4)</sup>
- Call return
- Abbreviated number

<sup>(1)</sup> UPnP™ is a certification mark of the UPnP™ Implementers Corporation

<sup>(2)</sup> Wi-Fi CERTIFIED™ is a registered certification mark and WPA™, WPA2™, WPA™-Personal, WPA2™-Personal, and WMM™ are trademarks of the Wi-Fi Alliance

<sup>(3)</sup> Software Key Activation

<sup>(4)</sup> Windows® is a registered trademark of Microsoft Corporation in the United States and other countries



For more information

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