

## TT-AVDSL-2PW

SMB - Class ADSL/VDSL/Eth Integrated Access Device



### Designed for Cloud Connectivity

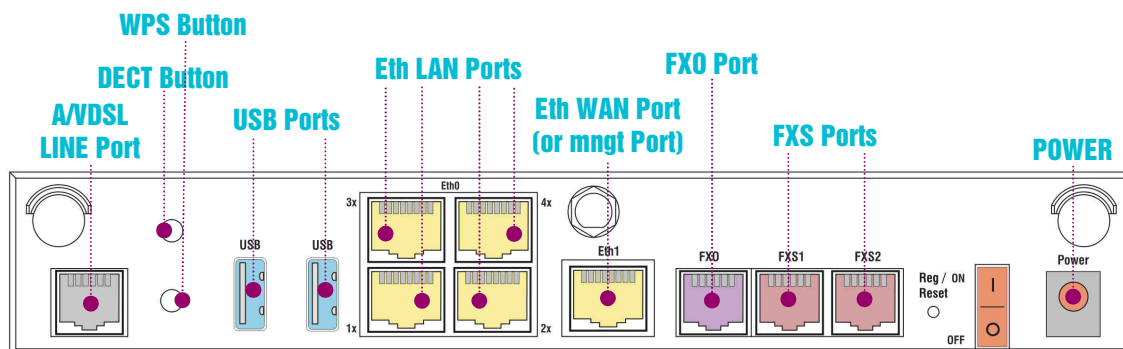
High-speed internet ADSL/VDSL connection, Gb Ethernet LAN ports and fully-fledged QoS for fast access to network resources and applications

### Next generation Voice and Data with IPv6

High-quality voice and high-speed data services over the next generation IP networks with IPv6 support<sup>1</sup>

### Business Continuity

Connectivity backup using 3G (internal module or USB dongle), WANs and FXO port for failover management



### All-in-one Business Solution

TT-AVDSL-2PW is a feature-rich Integrated Access Device (IAD), providing advanced voice and data services for Small and Medium Enterprises. Up to four concurrent high quality voice calls, a four ports Gb Ethernet switch, Fax/Modem support and secure WiFi make the TT-AVDSL-2PW the perfect choice or A/VDSL connectivity with full end to end Vectoring support. Printer and storage server capabilities are also offered using the two USB 2.0 ports.

### WiFi Hot Spot Services

TT-AVDSL-2PW is the first IAD on the market to include Captive Portal functionalities to allow enterprises to easily offer Internet access and connectivity creating Wi-Fi Hot Spots.

### Fully featured SIP IAD

Entirely based on SIP, the TT-AVDSL-2PW offers a full set of IP telephony services with voice mail, fax to mail, centralized phone book and conferencing bridge inside the IAD.

TT-AVDSL-2PW supports 2 analog extensions, 6 DECT phones and standard SIP phones and clients.\*

### Fast Configuration and Deployment

TT-AVDSL-2PW can be configured and managed locally and remotely, giving ITs, network administrators and service providers a fast and cost-effective way to deploy network services to branch offices and tele-workers.

\* IPv6 support and IPPBX available with ATOS

## LED Indicators

- Power
- FXS1, FXS2
- Eth (1-4), WAN Eth
- DSL, Internet
- Wi-Fi, DECT
- USB 1. USB 2

## Physical Interfaces

- 2-port FXS with RJ-11 connectors
- 1-port FXO with RJ-11 connector
- 4-port 10/100/1000bT Ethernet Switch with RJ-45 connectors
- 1-port 10/100/1000bT Ethernet with RJ-45 connector
- 2-port USB 2.0 host (high-power)
- 1-port A/VDSL with RJ-11 connectors

## ADSL2/2+, VDSL2 Network Interface

- ADSL2/2+, VDSL2
  - ANSI T1.413 Issue 2,
  - ITU-T G.992.1 Annex A, B (G.dmt),
  - ITU-T G.992.2 Annex A, B (G.lite), ITU-T G.994.1 (G.hs)
  - ITU-T G.992.3, ITU-T G.992.4 Annex A, B, L, M, (G.dmt.bis)
  - ITU-T G.992.5 Annex A, B, L, M
  - ITU-T G.993.2, profiles: 8a, 8b, 8c, 8d, 12a, 12b, 17a, 30a
  - ITU-T G.993.5 – Full Vectoring Support

## WiFi Interface

- IEEE 802.11b/g/n
- WEP encryption (64/128-bit), WPA1 and WPA2, WPS
- IEEE 802.1x authentication
- MAC filtering

## DECT CAT-iq

- TS 102 527-1, TS 102 527-3, TS 102 527-5
- ETSI EN 301 406 (V1.5.1), ETSI EN 301 489-1 (V1.8.1) and 6 (V1.2.1)

## IP PBX Features

- Analog, DECT and SIP extensions
- Call Hold, Transfer, Waiting, Barring, Pick Up and Forwarding (Unconditional, On Busy, NoAnswer)
- Night Service, Answering Machine, Hunt Groups
- Virtual Conferencing Room(s)
- Follow Me, Voice Mail, Fax to Mail
- Centralized Phone Book

## Voice Interfaces

- 2x FXS
  - Compliant to Q.552 requirements
  - Port impedance: real 600 $\Omega$  or complex Euro values
  - Low distortion ringing voltages
  - Diagnostic features

## Voice Processing

- Voice Codes
  - ITU-T G.711 (A-law,  $\mu$ -law), ITU-T G.729a
  - Transparent pass-through
- ITU-T G.165/G.168 echo cancelation

- Voice Activity Detection and Comfort Noise Generation
- RTP/RTCP (RFC 1889)
- Up to 4 G.729 voice calls (with transcoding capabilities. eg. from DECT)

## Signalling

- SIP 2.0 according to RFC 3261 (TCP or UDP transport)
- DTMF detection and carrying (RFC2833), DTMF info
- Local Generation of
  - Dial tone
  - Ring back tone (180 Ringing reply)
  - Call Waiting tone
  - Busy tone
  - Fast Busy tone

## Fax and Modem Support

- T.38 fax relay
- Automatic G.711 Fax and Modem Pass-Through

## Supplementary Services

- Locally managed or Softswitch-based
  - Call hold, call waiting, call forwarding
  - Consultation call
  - Caller Identity Presentation (CLIP), DTMF and FSK based
  - Identity restriction
  - Call transfer
  - 3party conference (FXS only)

## IP Functions

- IP Routing
  - RIP v1/v1c/ v2, BGP, OSPF
  - Enhanced Network Address and Port
  - Translation (NAPT) engine, with multiple
  - ALGs (including SIP, TFTP and H.323)
  - DHCP Server/Client/Relay, DHCP Learning
  - Multicast IGMP v1/v2/v3, PIM-SM, Static
- Routing Filtering Redistribution
- Firewalling
  - Extended Access Lists
  - Stateful Packet Inspection including Denial of Service attacks
- IP Services
  - DNS proxy
  - DDNS client
  - VPN (GRE, IP, PPTP server/client)
  - IPSec with DES, 3DES and AES
  - ICMP, IGMP snooping, Telnet, TFTP
  - Layer 3 QoS according to DiffServ model (RFC2474, RFC2475)
  - Priority based queuing (Absolute Priority, WFQ, RED)
  - Extensive monitoring, tracing and troubleshooting facilities

## Ethernet Services

- Self Learning Bridge with up to 1k MAC addresses and automatic ageing
- Full-Duplex IEEE 802.3x
- Half-Duplex back pressure flow control
- Automatic MDI/MDI-X crossover
- Broadcast/Multicast storm protection
- VLANs (802.1Q and 802.1p) port based management
  - Tag/Re-Tag/Untag
  - Trunking (VLAN multiplexing)
  - Priority based queuing

## ATM

- Services
  - Up to 8 VCCs
  - Class of Services (CBR, VRB-rt, VBR-nrt, UBR+, UBR)
  - Voice and Data packets over different VCCs (VC bundling)
  - Selective CLP marking
  - F4/F5 OAM cells, AIS and RDI
  - ATM: ITU T-I.361, ITU T-I363.5, ITU T-I432, ITU T1610, ITU T-1731
- Access protocols
  - IP over AAL-5, Ethernet over AAL-5 (RFC2684)
  - PPP over AAL-5 (RFC2364)
  - PPP over Ethernet (RFC2516)
  - LLC/SNAP and VC encapsulation

## Authentication

- PAP/CHAP/MS-CHAPv1 and v2 authentication
- Basic and Digest schemes (RFC2617)

## Management & Configuration

- Password Protected Access
  - 2 login levels + configurable privilege access right
  - AAA and local authentication
  - TACACS+
- Local Management
  - Console port
  - Extensive CLI
- Remote Management
  - CLI (internal Telnet Server)
  - HTTP (embedded WEB Server)
  - HTTPS (embedded Secure HTTP WEB Server)
  - SNMP Agent (v1, v2c, v3)
  - SSH
  - Syslog
  - Network Performance Monitor
  - Ping MIB
  - TR-069
- Firmware upgrades: Local and Remote (TFTP & FTP client embedded)

## Environment

- Operating Temperature:  
-5° ÷ 45°C (23° ÷ 113°F)
- Non-Operating Temperature:  
-40° ÷ 70°C (-40° ÷ 158°F)
- Operating Humidity:  
10 ÷ 93% (noncondensing)

## Compliance & Approvals

- Storage:  
ETSI EN 300 019-2-1 T 1.3
- Transportation:  
ETSI EN 300 019-2-2 T 2.3
- Operating Conditions:  
ETSI EN 300 019-2-3 T 3.2
- EMC:  
EN 55022, EN 55024,  
EN 61000-3-2, EN 61000-3-3
- Protection: ITU-T K.21
- Safety: EN 60950-1

## Power

- External AC/DC main adapter
- Input voltage from 100 to 240 Vac