

## VDSL2/ADSL2+ 802.11N 4 Port IAD

- ✓ *xDSL Mode with VDSL2 (profiles 8, 12, and 17a) with Fallback to ADSL2+*
- ✓ *Support VDSL2 (G.993.2) with 100Mbps downstream and 50Mbps upstream data rates*
- ✓ *Support ADSL2+ (G.992.5) with 24 Mbps downstream and 1 Mbps upstream data rates*
- ✓ *Auto sensing 10/100/1000 Ethernet ports*
- ✓ *802.11N WiFi with 2 x 2 antennae*
- ✓ *Supports TR-069*
- ✓ *2 FSX ports based on SIP VoIP*



The 6748-W1 is a VDSL2/ADSL2+ residential Integrated Access Device(IAD) that deliver the required performance for Triple-Play applications including Voice Over IP (VoIP). It is capable of dual mode ATM and PTM networks as well as FTTx with Copper Gigabit Ethernet WAN interface. In PTM mode, the 6748 IAD offers multiple VDSL2 profiles suitable for deployment in different regions (Profile 8a/b/c/d, 12 A/b and 17a) and ADSL2+ /ADSL2/ADSL connections. The Gigabit WAN interface provides a Gigabit port using copper Ethernet.

ISP with xDSL services can use the same 6748 when they migrate from ADSL2+ to VDSL2 or from VDSL2 to PON. Upgrading from ADSL2+ to VDSL2 can be achieved without intrusive truck-roll.

The 6748 features IEEE 802.11n technology that provides the ultimate solution for both speed and coverage. With the wireless data rates of up to 300mbps\* when clients are using the same 802.11n, the 6748 can provide a reliable, fast wireless connection for high speed data and multimedia application.

The 6748 IAD incorporates TR-069 standard management specifications enables service providers to manage and configure the IAD remotely without end-user intervention. Service provider can schedule firmware upgrade during slow traffic hours. They can also help assist end-user manager their devices remotely without a truck-roll.

## Technical Specifications

### Dimensions

- 6.75" (H) x 8.5" (W) x 2.75" (D)
- 17.15 cm (H) x 21.59 cm (W) x 6.03cm (D)

### Weight

- 0.75 lbs
- 440 grams

### Power

- Input: 100V-240V; 50-60Hz
- Output: 12V DC 2A

### Interfaces

- 1 x RJ11 - VDSL2/ADSL2+ uplink
- 1 x RJ 45 10/100/1000Base-Tx Ethernet uplink
- 4 x RJ45 - 10/100/1000Base-TX Ethernet, Auto-detection MDI/MDS-X
- 2 x USB Host 2.0
- 2 x RJ11 - FXS Port
- 1 x ON/OFF Power Switch
- 1 x Reset
- 1 x Toggle switch for xDSL/Ethernet
- 1 x WLAN/WPS button (6748)
- 2 x 2Dbi Antennae (6748)

### Wireless Support

- IEEE 802.11n compliance
- Frequency: 2.4GHz
- Data Rate: 300Mbps
- Backward compatibility: 802.11b/g
- Static and Dynamic WEP Key (62/128 bit)
- WPA/WPA-PSK
- WPA2/WPA2-PSK
- MAC address filter (up to 32)
- Auto Channel selection
- WDS (Wireless Distribution System)
- Multicast traffic pass-through
- WPA (Wireless Protected Setup)

### Standards Support

- ADSL2+
  - ANSI T1.413 (Full Rate ADSL)
  - ITU G.992.1 (DMT)
  - ITU G.992.2 (G.lite)
  - ITU G.992.3 (ADSL2)
  - ITU G.992.5 (ADSL2+)
  - ITU G.994.1 (G.hs)
  - ITU G.997.1
  - Annex L
  - Annex M
  - Phy R, G.INP
- VDSL2
  - ITU-T G.993.2 (VDSL2)
  - ITU-T G.993.1 (VDSL1)
  - ANSI T1-424
  - ETSI TS 101 270-1
  - ETSI TS 101 270-2
  - China MII VDSL standard
  - ITU-T G.994.1 (G.hs) based hand shaking
  - Supports band plan 997, 998, FX and China
  - VDSL2 profiles 8a/b/c/d, 12a/b, and 17a
  - PhyR, G.INP
  - G. Vector
  - Extended US0 band up to 276kHz
  - VLAN to Port mapping
- 3G (WCDMA, CDMA2000, TD-SCDMA)
- Ethernet Interface
  - IEEE 802.3/802.3u compliant
  - Support 10/100Mbps operation
  - Support half/full duplex operation
  - Support IEEE 802.3u clause 28-auto negotiation
  - Support Flow Control
  - Support Auto MDI/MDIX
  - IP Multicast and IGMP snooping
  - Support 802.1d
  - IEEE 802.1q
  - IEEE 802.1p
- Routing
  - Static routes
  - Dynamic routes: RIPv1 or RIPv2
  - PPP client
  - IGMP proxy
  - DHCP server and client
- Firewall
  - SPI firewall
  - Access control list based on IP and port
  - Port forwarding, virtual server
  - Support for one DMZ host
  - ALG support including FTP, PPTP, L2TP

### Voice Support

- SIP (Section Initiating Protocol, RFC 3261) version 2
- SDP (RFC 2327)
- RTP (RFC 1889)
- RTCP (RFC1890)
- Codec: G711 (selectable PCM A-law and μ-law), G.722, G.726, G.729a/b
- Echo cancellation: G.168
- Fax/modem detection and pass-through
- Voice Active Detector (VAD)
- Silence Suppression
- Comfort Noise Generation (CNG)
- Dynamic Jitter Buffer
- DTMF Detection and Generation
- DTMF relay by In-Band and Out-of-Band (RFC 2833, SIP INFO)
- SIP account (URL type included)
- DNS SRV
- Flexible dial plan (RFC3525 section 7.1.14)
- Session timers (Draft-IETF-SIP-Session-Timer)
- On hook, off hook and flash detection.
- Dialing Type: Tone
- Phone Features:
  - Abbreviated Dialing (Speed Dial)
  - Caller ID
  - Call Forwarding (No condition, Busy, No answer)
  - Call Transferring (Blind, Attendant)
  - Call Hold / Call Retrieve
  - CLIP (Calling Line Identification Presentation)
  - CLIR (Calling Line Identification Restriction)
  - COLP (Connected Line Identification Presentation)
  - COLR (Connected Line Identification Restriction)
  - Call Block
  - Call Waiting
  - Do Not Disturb
  - Flash Hook Timer
  - Message Waiting Indicator (RFC 3842)
  - T.38 Fax Relay
  - Three Way Conference
  - Transparent Fax relay over G.711

### Protocol Support

- PPP over ATM AAL5 (RFC2364)
- PPPoE (RFC 2516)
- MAC Encapsulation Routing
- Support VC-based and LLC-based multiplexing
- ATM traffic shaping (CBR, VBR-rt/nrt, UBR)
- Broadcom PhyR, PHY Level Retransmission Technology Bridge
- IEEE 802.1D transparent bridge including PPP and BCP support
- 512 MAC learning addresses
- PPPoE Pass Through

### Management

- Web
- CLI (Command Line Interpreter)
- Firmware upgrade via Web/FTP/TFTP
- SNMP v1 & v2
- DSL Forum TR-069 (with HTTPS)

### Regulatory Compliance

- CE
- ETL
- FCC
- RoHS Compliant
- UL-60950-1

### Operating Requirements

- Operating Temperature: 0° C - 40° C
- Operating Humidity: 5% - 95% (non-condensing)
- Storage Temperature: -20° C - 70° C
- Storage Humidity: 5% - 95% (non-condensing)

## Ordering Information

6748-W1-NA	VDSL2/ADSL2+ GigE WAN, 4 Port, 802.11n Wireless IAD, (North America Power Adapter)
6748-W1-EU	VDSL2/ADSL2+ GigE WAN, 4 Port, 802.11n Wireless IAD, (Euro Power Adapter)
6748-W1-UK	VDSL2/ADSL2+ GigE WAN, 4 Port, 802.11n Wireless IAD, (United Kingdom Power Adapter)