ALCATEL-LUCENT 7342 ISAM I-241W-U
RESIDENTIAL INDOOR ONT

The Alcatel-Lucent 7342 Intelligent Services Access Manager (ISAM) I-241W-U Residential Indoor Optical Network Terminal (ONT) is the perfect answer for Gigabit Passive Optical Network (GPON) delivered home networking. The device has built-in concurrent dual-band Wi-Fi® 802.11 b/g/n networking with triple play capability that simplifies the home equipment experience. It can provide triple play services with voice, video (RF and IPTV) and data. A powerful new hardware design features gigabit wire-speed routing performance and many in-home networking options, including coax-based Home Phoneline Networking Alliance (HPNA), which ensures reliable fast performance for any application. The 7342 ISAM I-241W-U is designed to take advantage of the Alcatel-Lucent award-winning management platforms including a customized Home Device Manager instance by Motive™ integrated with the Alcatel-Lucent 5520 Access Management System (AMS) platform delivering a uniform end-to-end operations, administration, and maintenance (OA&M) solution that carriers need in order to provide unparalleled subscriber satisfaction.

FEATURES

- Four RJ-45 10/100/1000 Ethernet ports
- Two plain old telephone service (POTS) ports for carrier-grade voice services
- RF interface for video services and HPNA services
- 2 USB host ports
- Wireless IEEE 802.11 b/g/n
- 2.4G and 5G dual-band concurrent Wi-Fi
- Network Address Translation (NAT) and firewall
- Network demarcation for all services
- Voice interworking function from the analog POTS lines to the voice over IP (VoIP)/Ethernet layers
- Optics support received signal strength indication (RSSI)
- ITU-T G.984 compliant
- Echo cancellation
- Supports virtual private network (VPN) pass-through for Point-to-Point Tunneling Protocol (PPTP), Layer 2 Tunneling Protocol (L2TP), and IPSec
- Network management using Alcatel-Lucent 5520 AMS

BENEFITS

- Integrates the ONT and wireless access point functions to allow one less device in the home
- Delivers connectivity to Ethernet devices within the home
- Supports full triple play services including voice, video, and high-speed Internet access
- Allows service-per-port configurations
- Supports IP video distribution
- Supports connection to USB disk drives for home Network-attached Storage (NAS)
- Delivers voice services using VoIP
- Delivers video services efficiently with multicasting or unicasting
- Delivers RF video services
- Flexible video delivery options enable service providers to start with RF overlay and migrate to IPTV

APPLICATIONS

This indoor ONT is designed to deliver triple play services (voice, data and video) to residential subscribers. Voice services are provided through two POTS ports, by using an integrated ATA that converts voice traffic into Session Initiation Protocol (SIP) or ITU-T H.248. Connectivity to an existing PSTN Class 5 switch is supported through a voice gateway (GenBand) or through SIP with direct interoperability to a variety of soft switches. Ethernet connectivity is available on four Gigabit Ethernet ports, both of which have the ability to burst up to a full gigabit dynamically. Service providers can deliver video using RF overlay or as IP packets (IPTV) using the integrated HPNA feature. RF overlay allows video to be distributed to any television set without investing in a set-top box (STB). If a service provider chooses to offer IPTV, the service provider can distribute IPTV signals using HPNA. The ONT transfers IP packets onto coaxial cable (HPNA v3 over coax), enabling video and IP traffic to be distributed through the home using existing coaxial wiring.

TECHNICAL SPECIFICATIONS

Physical

- Height: 43 mm (1.7 in)
- Width: 225 mm (8.9 in)
- Depth: 166 mm (6.5 in)
- Weight: 0.702 kg (1.55 lb)
- Wall or desk mount

Operating environment

- Temperature: 0°C to 40°C (32°F to 104°F)
- Humidity: 8% to 95% relative humidity

Power requirement

- Local powering with 12 V input (feed uses external AC/DC adapter)
- Power consumption: Less than 30 W

GPON interface

- 1490 nm wavelength downstream, 1310 nm wavelength upstream
- 2.488 Gb/s line rate downstream, 1.244 Gb/s line rate upstream
- GPON Encapsulation Method (GEM) mode support for IP/Ethernet service traffic support
- ITU-T G.984.3-compliant dynamic bandwidth reporting
- ITU-T G.984.3-compliant Advanced Encryption System (AES) in downstream
- ITU-T G.984.3-compliant FEC
- ITU-T G.988 Appendix 1 and Appendix 2 ONT Management Control Interface (OMCI)
- Remote software image
- Small form factor (SFF) type laser, SC/APC connector

Ethernet

- 10/100/1000Base-T interface with RJ-45 connectors
- Wire-speed forwarding
- Ethernet port auto-negotiation or manual configuration with Media Dependent Interface/Media Dependent Interface with Crossover (MDI)/MDIX)
- Virtual switch based on IEEE 802.1q virtual LAN (VLAN)
- VLAN tagging/detagging per Ethernet port and marking/remarking of IEEE 802.1p
- IP Type of Service/Differentiated Services Code Point (ToS/DSCP) to IEEE 802.1p mapping for untagged frames
- Class of Service (CoS) based on VLAN-ID, IEEE 802.1p bit
- Internet Group Management Protocol (IGMP) v2/v3 snooping

Residential gateway

- IPv4 and IPv6
- Point-to-Point Protocol over Ethernet (PPPoE) and IP over Ethernet (IPoE)
- NAT, Demilitarized Zone (DMZ) and firewall
- Dynamic Host Configuration Protocol (DHCP) and Domain Name System (DNS) proxy
- Parental controls
- DSCP quality of service (QoS) and IGMP proxy
- TR-64 and TR-69

WLAN interface

- IEEE 802.11b/g/n
- 64-bit and 128-bit Wireless Encryption Protocol (WEP) support
- Wireless Protected Access (WPA) support including Pre-shared Key (WPA-PSK) and WPA2
- Media access control (MAC) filters

USB interface

- Two USB 2.0 interfaces – one powered, one unpowered
- One USB 2.0 host port slot powered for dongle (both units)

POTS interface

- Two FXS ports for VoIP service with RJ-11 connectors
- Multiple CODECs: ITU-T G.711, ITU-T G.729 (A and B)
- SIP (RFC 3261)
- ITU-T G.168 Echo cancellation
- Services: Caller ID, Call Waiting, Call Hold, 3-Way Call, Call Transfer, Message Waiting Indication
- 5 REN per line
- Dual-Tone Multi-Frequency (DTMF) dialing
- Balanced sinusoidal ring signal, 55 Volts Root Mean Square (VRMS)

RF video service interface

- Coaxial port (75 W F connector)
- Operating wavelength range: 1550 nm to 1560 nm
- Operating RF bandwidth: 47 MHz to 870 MHz
- Video output power: 18 dBm V

LED

- PWR
- WAN
- GPON
- Gigabit Ethernet 1-4
- VoIP 1-2
- Wi-Fi 5G
- Wi-Fi 2.4G
- WPS 5G
- WPS 2.4G
- USB
- RF video
- HPNA

Regulatory compliance

- UL 60950-1
- FCC Part 15, subpart B
- ISE-003
- CE
- CB

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