# ADSL24AE

**AT-TN-140 24-PORT ADSL2+ CHANNEL UNIT (ANNEX A)**

The ADSL24AE (annex A) is a 24-port ADSL2+ channel unit for the Allied Telesis iMAP and has been designed to meet the most demanding broadband and IP Triple Play applications.

## Uncompromising ADSL Performance for Demanding Applications

The ADSL24 channel unit's Gigabit Ethernet backplane link ensures that all 24 ports will receive the maximum of 26Mbps per port without oversubscription. At the heart of the card is a wirespeed Ethernet switch that is designed for the most demanding traffic applications: IP multicast video, Video on Demand (VoD), voice, and data.

Each of the 24 subscriber ports can simultaneously support any of the standard ADSL modes — ADSL2+, G.DMT, S=1/2, or T1.413 — on a per-port basis. A powerful DSP implements all ADSL algorithms and allows future and emerging ADSL2+ features to be added through simple software upgrades.

In ADSL2+ mode, a subscriber port can deliver up to 26Mbps of downstream bandwidth — enough to support up to five set-top boxes with standard digital video — plus headroom for VoIP and data traffic. Traffic priority can be differentiated by service type so that VoIP, video and data can be prioritized from a single port based on your business needs.

## Performance You Can Depend On

Allied Telesis is the only broadband access vendor that provides a complete end-to-end ADSL solution. Service providers can maximize real world downstream rates and DSL reach when they use the ADSL24AE incorporating our patent-pending optimized interconnect system. This unique system maximizes both revenue and subscriber satisfaction.

A complete set of management counters monitor ADSL performance at each end of the link. Every performance monitor counter can be assigned a threshold that will generate an alarm if the threshold is exceeded.
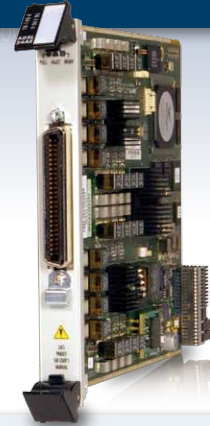
## Part of the Allied Telesis IP Broadband Access Family

Whether it is broadband ADSL2+, FTTH, POTS or T1/E1 circuits, the iMAP family is the ideal platform for last mile service delivery. The ADSL24AE (annex A) line card can be used with any of the Allied Telesis iMAP family of carrier grade, IP multiservice access platforms:

- iMAP 9700 (9RU, 17 service slots)
- iMAP 9810 (3RU, 8 service slots)
- iMAP 9400 (3RU, 7 service slots)
- MiniMAP 9100 (1RU, 3 service slots)

Provisioning, management, and diagnostics of subscriber ports of subscriber ports can be accomplished from either the iMAP command line interface or the NMS.

The ADSL24AE (annex A) has been designed to survive the most rugged environmental conditions. It can be confidently deployed in either a central office or in outdoor enclosures withstanding extremes of heat, cold, and light exposure.

Allied Telesis provides a large portfolio of FTTx, Ethernet and xDSL transport and access equipment. In addition, Allied Telesis provides a complete set of xDSL and FTTx CPE solutions in the form of intelligent Multiservice Gateways (iMG), Layer 2/Layer 3 switches, routers or media converters to terminate the broadband link.

## Key Features

- » 24 ADSL2+ ports
- » ADSL annex A
- » 1Gbps backplane link
- » Automatic or manual selection of ADSL2+, G.DMT, S=1/2, T1.413, ADSL2, annex M and annex L modes
- » Flexible control of traffic priorities for voice, video and data applications
- » Video-optimized
- » Improved SELT performance

**QoS**
- » Eight queues per virtual circuit (VC)
- » Priority scheduling
- » VC to VLAN mapping

**Security**
- » MAC limiting (up to 64)
- » MAC flooding – VLAN-based

**Services Supported**
- » High-speed Internet
- » VoIP
- » IPTV
- » Business VPN
- » Gaming

## Specifications

### Interface
Number of ports: 24
Backplane capacity: 1Gbps
Physical design: Front access, RJ-21 (female)

### ADSL Standards
ADSL annex A
T1.413
G.992.1 (G.DMT)
G.992.2 (G.Lite)
G.992.3 (ADSL2)
G.992.3 annex M
G.992.3 annex L (READSL2)
G.992.5 (ADSL2+)
G.992.5 annex M

### Port
Number of virtual circuits per port: 4
Priority queues per virtual circuit: 8
Dropped packet counter
Full traffic classifier support
Full traffic classifier action support
ARP filtering
Ingress metering: 1Mbps increment
Peak cell rate limiting per virtual circuit
Ingress max burst size: 64kbps
Egress max burst size: 64kbps

### Protocols
IEEE 802.1Q VLAN bridging
IEEE 802.1p prioritization
IETF RFC 1112 IP multicasting/IGMP snooping v1
IETF RFC 2236 IP multicasting/IGMP snooping v2
DHCP relay agent option 82 (RFC 3046)

### Power Requirements
Maximum power: 45W

### Environmental Conditions
Operating temperature: -40°C to 65°C (-40°F to 149°F)
Storage temperature: -40°C to 75°C (-40°F to 167°F)
Relative humidity: 5% to 95%, non-condensing

### Regulatory Approvals
FCC Part 15 Class A/ANSI C63.4
EN 300 386 V1.3.1:2001-09/EN 55022:1998, Class A
VCCI Class A; ITE/ CISPR 22:1997 Class A
EN 300 386 V1.3.1:2001-09/EN 55022:1998, Class A
EN 300 386 V1.3.1:2001-09/EN 61000-4-3:1998
EN 300 386 V1.3.1:2001-09/EN 6100-4-6:1996
EN 300 386 V1.3.1:2001-09/EN 61000-4-4:1995
EN 300 386 V1.3.1:2001-09/EN 61000-4-5:1995
EN 300 386 V1.3.1:2001-09/EN 61000-4-2:1999
UL/cUL 60950: IEC60950
NEBS Level 3, GR-1089 Issue 3, GR63 Issue 2
USDA RUS

## Ordering Information

### ADSL24AE

**ADSL24AE (AT-TN-140)**
24 ports, ADSL2+ channel unit, annex A

### iMAP 9x00 Chassis

**iMAP 9810 (AT-TN-253G)**
8-slot chassis with DC power

**iMAP 9700 (AT-TN-250G-B)**
17-slot chassis with DC power

**iMAP 9400 (AT-TN-251G)**
7-slot chassis with DC power

**MiniMAP 9101 (AT-TN-9101-A-80)**
3-slot mini chassis with DC power

**MiniMAP 9102 (AT-TN-9102-A-xx)**
3-slot mini chassis with AC power

### iMAP Common Control

**CFC24 (AT-TN-401-E)**
24GbE switch controller card

**GE3 (AT-TN-301-C)**
3 x GbE WAN interface card

**CFC12 (AT-TN-408-C)**
12GbE switch controller card

**CFC56 (AT-TN-407-C)**
56GbE switch control module

**CFC100 (AT-TN-409-A)**
100GbE switch control module

### Related ADSL2+ CPE

**ADSL2+ Gateway (AT-iMG624A-R2-xx)**
ADSL2+ intelligent Multiservice Gateway, 4 x LAN
(annex A)

**ADSL2+ Gateway (AT-iMG634A-R2-xx)**
ADSL2+ intelligent Multiservice Gateway, 4 x LAN,
2 x FXS (annex A)

**ADSL2+ Gateway (AT-iMG634WA-R2-xx)**
ADSL2+ intelligent Multiservice Gateway, 4 x LAN,
2 x FXS, wireless

Where xx = 10 for U.S. power supply
20 for no power supply
30 for U.K. power supply
40 for Australian power supply
50 for European power supply



**iMAP**
**INTEGRATED MULTISERVICE**
**ACCESS PLATFORM**

**Allied Telesis**

the **solution** : the **network**

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