iMAP™ PAC24 (AT-TN-145)

integrated Multiservice Access Platform

Eliminate external splitters with the Allied Telesis integrated Multiservice Access Platform (iMAP™) PAC24 combined POTS and ADSL2+ channel unit for the iMAP.

Overview

Allied Telesis has combined industry-leading ADSL2+ technology, VoIP-based POTS interfaces and optimized splitters to deliver the iMAP PAC24 combo channel unit. The Allied Telesis iMAP PAC24 eliminates the external wiring required to connect POTS and ADSL2+ circuits on traditional DLC or legacy DSLAM platforms. Utilizing the same optimized wiring and board layout techniques in the ADSL24 channel unit, the iMAP PAC24 is a cost-effective means to deliver Triple Play services that rely on copper plant in the last mile.

Each of the 24 subscriber ports simultaneously supports analog POTS and 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. Though the combined services appear as a single port on the physical connection to the iMAP PAC24 channel unit, each service is individually managed. This ensures services are enabled on an on-demand basis through remote management—including through the comprehensive Allied Telesis AlliedView™ Network Management System (NMS).

The iMAP PAC24 integrated splitters eliminate the costs associated with external splitters and eliminate a significant source of ADSL2+ interference which optimizes line rates. The iMAP PAC24 includes support for SIP and MGCP-based Softswitch interoperability so that the same iMAP PAC24 can communicate with a legacy circuit switched Class 5 switch or to a next-generation IP-based Softswitch.

Specifications

Interface

Number of ports	24
Connector	RJ-21 (Female)

POTS Specifications

Talk battery	48 to 52V, tip-ring on-hook
Balanced Ringing	5 REN per line between 0 and 1100 ohms < 5 REN up to 1800 ohms
2wire impedance	900 ohms + 2.16uF complex
Frequency response	200 – 34000Hz flat ± 0.2db
Longitudinal balance	> 45dB
Loop current	26 – 28mA current limited
Loop range	0 – 1800 ohms for signaling and supervision
Loop signaling	Loop Start supervision, superimposed ringing
Dialing support	DTMF, Dial Pulse
CODEC	G.711, G.726-32k, G.729
Packetization	10, 20, or 30ms
Echo	G.168 echo cancellation
Jitter buffer	Up to 150ms average delay

ADSL Standards and Specifications

T1.413
G.992.1 (G.DMT)
G.992.2 (G.Lite)
G.992.3 (ADSL2, Annex M and Annex L)
G.992.5 (ADSL2+ and Annex M)
Annex A (ONLY)
IEEE 802.1Q VLAN Bridging
IEEE 802.1p Prioritization
IETF RFC 1112 IP Multicasting/IGMP Snooping v1
IETF RFC 2236 IP Multicasting/IGMP Snooping

Port

Virtual circuits per port	Four
Priority queues per virtual circuit	Eight
Dropped packet counter	
Full traffic classifier support	
Full traffic classifier action support	
ARP filtering	
Ingress metering in 64kbps increments	
Ingress max burst size	4KB to 512KB
Egress ATM class of service per virtual circuit	

Power Requirements

Maximum power	100W

Environmental

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

Key Features

- 24 POTS and ADSL2+ ports with Integrated Splitters
- Integrated ring generator with 5 REN per line
- G.711, G.726-32, or G.729 CODECs
- SIP and MGCP call control protocols
- CLASS feature support
- Integrated GR-909 metallic testing
- Support for V.90 analog modem rates
- Automatic or manual selection of ADSL2+, G.DMT, S=1/2, or T1.413 modes
- Flexible control of traffic priorities for voice, video, data applications
- Video-optimized
- Currently available in North America only

Quality of Service

- Eight queues
- Priority scheduling
- VC to VLAN mapping

Security

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

Supported Services

- High-Speed Internet
- VoIP
- IPTV
- Gaming
- POTS

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 certification in progress
USDA RUS
GR-57-CORE

Ordering Information

iMAP PAC24
24-port POTS and ADSL2+ combo channel unit
Part number: AT-TN-145

617-000526 RevB