Allied Telesis™

iMAP™ POTS24 (AT-TN-143)
24-Port POTS Channel Unit

Easily add DLC voice services to a broadband-access Allied Telesis integrated Multiservice Access Platform (iMAP™) with this 24-port iMAP™ POTS channel unit for the iMAP.

Overview

The Allied Telesis iMAP POTS24 is a completely integrated access solution that contains both talk battery and ringing capability and combines them with a VoIP codec. The iMAP POTS24 was designed primarily for use in last-mile POTS service provider applications.

Together with a n Allied Telesis GR-303 media gateway, the iMAP POTS 24 extends all of the voice services from a Class 5 switch to subscribers transparently. This ensures all CLASS features are supported over an IP infrastructure. When deployed using Ethernet Protection Switched Rings (EPSR™) network topology, service providers achieve the five nines (99.999%) reliability of SONET, but with the simplicity, efficiency and cost savings of Ethernet.

The iMAP POTS24 delivers a rich suite of traditional POTS services including:

▸ Loop start
▸ DTMF and dial pulse detection
▸ CLASS features
▸ 1200 ohms at 5REN per line
▸ 1800 ohms nominal
▸ Integrated GR-909 metallic testing

The iMAP POTS24 also includes support for MGCP- and SIP-based Softswitch interoperability. The same iMAP POTS24 can be used to communicate to a legacy circuit-switched Class 5 switch or alternatively, to a next-generation IP-based Softswitch. With the iMAP POTS24 channel unit, service providers can deploy an IP broadband access system that can protect and take advantage of existing or future investments.

The IP Broadband Access Family

Whether it's broadband ADSL2+, FTTH or POTS, the iMAP family is the ideal platform for last-mile service delivery. The iMAP POTS24 line card can be used with any of the iMAP family of carrier-grade, integrated Multiservice Access Platforms:

▸ iMAP™ 9810 (3RU, eight channel unit slots)
▸ iMAP™ 9700 (9RU, 17 channel unit slots)
▸ MiniMAP™ 9100 (1RU, three channel unit slots)

Provisioning, management and diagnostics of subscriber ports can be accomplished from either the iMAP Command Line Interface or the NMS.

The iMAP POTS24 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.

Specifications

Interface Specifications
Number of ports: 24
Connector: RJ-21 (female)

POTS Specifications
Talk battery:	48 to 52 Volts tip-ring on-hook
Ringing:	81–86 Vrms, with nominal voltage 84 Vrms, Balanced ringing 20 Hz into 15 REN
Two-wire impedance:	900 ohms + 2.16uF complex
Frequency response:	200 – 30000 Hz flat +/- 0.2dB
Longitudinal balance:	>45 dB
Loop current:	26 – 28 mA current limited
Loop range:	0 – 1100 ohms resistance
Loop signaling:	Loopstart supervision, superimposed ringing
Dialing support:	DTMF, dial pulse

Key Features

▸ 24 POTS ports
▸ Integrated ringing with 5 REN per line capability
▸ Selectable G.711 or G.726 VoIP codec
▸ MGCP and SIP call control protocols
▸ CLASS feature support
▸ Support for V.90 analog modem rates
▸ Currently available in North America only

VoIP Specifications
CODEC:	G.711, G.726-32k
Packetization:	10, 20, or 30ms
Echo:	G.168 echo cancellation
Jitter buffer:	Up to 150ms average delay with 300ms buffer depth

Power Requirements
Maximum power:	95W
Typical power:	21W to 62W based on lines off hook or ringing

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 Approval
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
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Ordering Inormation

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