



## POTS24

### AT-TNI I3-A 24 Port POTS Service Module

#### Easily Add DLC Voice Services to your Broadband Access MAP

The POTS24 is a 24 port POTS service module for the Allied Telesis iMAP. It is a completely integrated access solution that contains both talk battery and ring generators and combines them with a VoIP codec. The AT-TNI I3 was designed primarily for use in last mile POTS Service Provider applications.

Together with a GR-303 Media Gateway, the POTS24 extends all of the voice services from your Class 5 switch to your subscribers transparently. This ensures all CLASS features are supported over an IP infrastructure. When deployed using Ethernet Protection Switched Rings (EPSR) network topology, you get the five 9's (99.999%) reliability of SONET, but with the simplicity, efficiency and cost savings of Ethernet.

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

- Loop start
  - Ground start\*
  - DTMF and dial pulse detection
  - CLASS features
  - Unbalanced ringing @ 5REN per line
  - 18kft loops
  - Integrated GR-909 metallic testing
- \* Future software upgrade

The POTS24 also includes support for MGCP based Softswitch interoperability. The same 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 POTS24 line card, Service Providers can deploy an IP broadband Access system that can protect and take advantage of existing or future Class investments.

#### Part of a IP Broadband Access Family

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

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

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

The AT-TNI I3 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.

#### Key Features

- 24 POTS ports
- Integrated ring generator with 15 REN capability
- Selectable G.711 or G.726 VoIP CODEC
- MGCP call control protocols
- CLASS feature support
- Support for V.90 analog modem rates
- Currently available in North America only



Allied Telesis' iMAP family of integrated Multiservice Access Platforms

# POTS24 | AT-TNI13-A 24 Port POTS Service Module

## Interface Specifications

Number of ports: 24  
Connector: RJ-21 (Female)

## POTS Specifications

Talk Battery: 48 to 52Volts tip-ring on-hook  
Ring Generator: 86-90Vrms, 20Hz into 15REN  
Zwire 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 — 2000 ohms resistance  
Loop signaling: Loopstart supervision,  
superimposed ringing  
Dialing support: DTMF, Dial Pulse

## 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: 55W

## Environmental Conditions

Operating Temp: -40C to 65C  
Storage Temp: -40C to 75C  
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  
USDA RUS  
GR-57-CORE

## Ordering Information

POTS24		
Model	Description	Part #
POTS24	24 ports, POTS Service Module	AT-TN-113-A

## iMAP 9x00 Chassis

Model	Description	Part #
iMAP 9700	17-slot chassis with DC power with faceplates	AT-TN-250GF
iMAP 9700	17-slot chassis with DC power without faceplates	AT-TN-250G
iMAP 9400	7-slot chassis with DC power with faceplates	AT-TN-251GF
iMAP 9400	7-slot chassis with DC power without faceplates	AT-TN-251G
MiniMAP 9101	3-slot mini chassis with DC power	AT-TN-9101-A-80
MiniMAP 9102	3-slot mini chassis with AC power	AT-TN-9102-A-XX*

## iMAP Common Control

Model	Description	Part #
CFC24	24GbE switch controller card	AT-TN-401-B
GE3	3x GbE WAN interface card	AT-TN-301-A
CFC12	12GbE switch controller card	AT-TN-408-A

## Related iMAP Line Cards and Accessories

Model	Description	Part #
ADSL24	24-port, ADSL2+ Service Module (Annex A)	AT-TN-112-A
CES8	8-port, T1/E1 Circuit Emulation Service Module	AT-TN-119-A
PAC24	24-port, POTS/ADSL2+ Combo w/Splitters, Annex A	AT-TN-123-A
Optimized Splitter Chassis	Splitter Chassis, 3RU, 4 slot (North America only)	AT-TN-S004-A
Optimized Splitter	24-port, Optimized Splitter card (North America only)	AT-TN-S101-A
Optimized Splitter Cable	ADSL24 to High Performance Splitter Cable	AT-TN-C013-A-YY**
Standard Splitter Cable	ADSL24 to Standard Splitter Cable	AT-TN-C018-A-YY**
MDF Kit	Terminal block to RJ-21 Male, 4 cables	AT-TN-K022-A-YY**
CPE Attenuator	ADSL2+ Attenuator	AT-TN-S900-A
Filler	Full size service slot filler plate	AT-TN-M000-A

\*Where XX = 10 for U.S. power cord = 40 for Australia power cord  
= 30 for U.K. power cord = 50 for Europe power cord

\*\*Where YY = 005 for 5 ft = 030 for 30 ft = 070 for 70 ft  
= 010 for 10 ft = 040 for 40 ft = 080 for 80 ft  
= 015 for 15 ft = 050 for 50 ft = 090 for 90 ft  
= 020 for 20 ft = 060 for 60 ft

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