

## iMAP 9810

### Optical Aggregation and High Capacity IP Access Platform



The iMAP 9810 incorporates the proven multi-service performance of the iMAP 9000 family of IP/Ethernet access platforms with high capacity wirespeed line card interfaces and enhanced optical aggregation capabilities. It uses the same operating software and supports the same service modules as the iMAP 9000 family, delivering any mix of fiber or copper services, as well as being used as a hub and aggregation platform for other access equipment in a 'mid-mile' application.

In a compact 3RU form factor, the iMAP 9810 chassis has eight universal line card slots, each with a full 10Gbps wirespeed interface. Any line card slot can be used for active Ethernet and PON fiber service or VDSL2, ADSL2+, SHDSL, POTS and T1/E1 copper services. The iMAP 9810 capacity is ideally suited to medium density central office or remote cabinet service needs. In addition to the eight line card slots, there are two half-height slots that can be used for GbE or 10Gbps network interfaces.

The iMAP 9810 features full redundancy and protection, with dual Central Fabric Control (CFC) slots and dual power supply and fan controllers. The CFC slots support CFC100 controllers with a 100Gbps throughput per card.

#### iMAP 9810 Optical Aggregation

The iMAP 9810 supports IP access aggregation through the use of either multi-port Gigabit cards, or multi-port 10 Gigabit cards as an optical hub for subtending access equipment. The network uplinks supports dual 10 Gigabit interfaces with Ethernet Protection Switching Ring (EPSR+ and +++) for protection and redundancy. The iMAP 9810 is an efficient and cost-effective platform for aggregation of fiber and copper access equipment in the distribution network. The iMAP 9810 can support any switch, access or other access equipment using a standards-based 1G or 10G interface.

#### iMAP 9810 FTTx Platform

With each service module slot receiving a full 10Gbps wirespeed, the iMAP 9810 is an ideal platform for delivering FTTx services. High density active Ethernet service modules provide symmetrical bandwidth for fiber-to-the-premise applications, or multi-port PON cards may serve dozens of subscribers per interface with asymmetric service offerings. Dense GbE active fiber can also be used, with each service module supporting up to 10 interfaces at wirespeed. Size and capacity make the iMAP 9810 ideally suited for mid-sized ILEC and CLEC requirements, as well as optimized for MDU applications.

#### Flexibility and Scalability

Since the iMAP 9810 can serve concurrently as a subscriber access platform and an aggregation hub, it provides a multi-purpose use in the network along with the ability to configure its use as the service provider's needs change—without replacing hardware or software. It also serves as an ideal platform for migrating services from copper to fiber, with capacity and bandwidth already built-in. By incorporating redundancy, the iMAP 9810 enables high-value services and network traffic to be protected in the event of a failure.

#### Support for Managed IP Services

The iMAP 9810 incorporates advanced IP Layer 2 and Layer 3 filtering functionality necessary to support the needs of enhanced multi-play services. IGMP multicast, IP filtering, ACL, DHCP with Option 82 as well as Layer 4 flow metering are but a few of the many features the iMAP 9810 supports. There is also IEEE 802.1p and IEEE 802.1Q for QoS, DiffServ coupled with Q-in-Q and SLA support.

#### iMAP 9810 Chassis Configuration Modular 3RU system

- 2 control module slots
- 2 network transport slots
- 8 line card slots
- Dual power feeds and fan controllers

#### iMAP 9810 Service and Access Options

- Up to 160 active Ethernet FTTx
- Up to 80 10/100TX Ethernet ports
- Up to 64GbE circuits
- Up to 192 POTS
- Up to 192 ADSL2+
- Up to 96 POTS with 96 ADSL2+ combo
- Up to 64 T1/E1 circuit emulation service
- Up to 192 G.SHDSL
- Up to 512 GEPON (32:1 split)
- Up to 192 VDSL2

#### iMAP 9810 Key Features

- Fully redundant CFCs, transport, power
- Carrier-class IP/Ethernet access
- Video-optimized for IP Triple Play services
- Support for up to 10 x 10Gbps slots
- Environmentally-hardened
- Resilient network transport
- Line card hot swapping
- Common family iMAP line cards
- Simultaneous fiber and copper access
- Life-line VoIP POTS telephony
- Front access for service modules
- ETSI, NEBS\* and ANSI compliant

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## True Carrier Grade Performance

The redundant design of the iMAP 9810 is built around a fault-tolerant switch core and is designed to operate with 99.999% network availability. The iMAP 9810 is NEBS level 3 compliant design and temperature hardened for use in outdoor cabinets. It is front access, meeting both ANSI and ETSI requirements. With its large switch fabric, wirespeed slot interfaces and ultra-fast controllers, the iMAP 9810 is a highly capable and highly reliable device for service aggregation, having the redundancy and reliability to assure network integrity.

## Manageability

In keeping with Allied Telesis' unified management philosophy, the iMAP 9810 shares the same provisioning and management via AlliedView™ Network Management System (NMS) that the iMAP 9000 family uses. AlliedView provides comprehensive provisioning, management, diagnostics and real-time performance monitoring capabilities for all iMAP platforms, as well as iMG service gateways and switches in the Allied Telesis portfolio. It is designed to increase productivity and network uptime through centralized management. The NMS provides a XML/SOAP Web-based Northbound Interface (NBI) for easy interfacing to upstream Operational Support Systems (OSS) and Business Support Systems (BSS) for comprehensive network management.

## Specifications:

### Physical Characteristics

Dimensions: 44cm x 30cm x 13cm  
(W x D x H) 17.4" x 11.9" x 5.25"  
Weight: 15 lbs  
Rack unit: 3RU  
Access: Full frontal access for service modules  
Rear power and alarms

### Power Characteristics

Dual -48VDC, -36VDC to -57.7VDC  
AC power kits available

### Environmental Specifications

Operating temp. -40°C to 65°C  
Storage temp. -40°C to 85°C  
Relative humidity 5% to 95%, non-condensing

## Regulatory Approvals

FCC Part 15 Class A/ANSI C63.4  
EN 300 386 VI.3.1:2001-09/EN 55022:1998, Class A  
VCCI Class A; ITE/ CISPR 22:1997 Class A  
EN 300 386 VI.3.1:2001-09/EN 55022:1998, Class A  
EN 300 386 VI.3.1:2001-09/EN 61000-4-3:1998  
EN 300 386 VI.3.1:2001-09/EN 6100-4-6:1996  
EN 300 386 VI.3.1:2001-09/EN 61000-4-4:1995  
EN 300 386 VI.3.1:2001-09/EN 61000-4-5:1995  
EN 300 386 VI.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

\* NEBS certification pending

## Standards and Compliance

IEEE 802.1d,w	Rapid Spanning-Tree
IEEE 802.1Q	MEV (double tagging)
IEEE 802.1p	Traffic class expediting
IEEE 802.3ad	Link aggregation
IEEE 802.3ah	Ethernet First Mile (EFM)
IETF RFC 1112	IP multicasting/IGMP snooping v1
IETF RFC 2236	IP multicasting/IGMP snooping v2
IETF RFC 3619	EAPS w/Allied Telesis extensions for EPSR
IETF RFC 2131	DHCP
IETF RFC 1350	TFTP



Allied Telesis' iMAP family of integrated Multiservice Access Platforms

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## iMAP 9810 Ordering Information

### iMAP Chassis

Model	Description	Part #
iMAP 9810	8 slot chassis with DC power without filler plates	AT-TN-253G

### iMAP Common Control

Model	Description	Part #
CFC100	100GbE switch controller card	AT-TN-409A
GE3	3 x GbE WAN interface card	AT-TN-301
XE1	10GbE WAN interface card	AT-TN-308
XE6	6 x 10GbE	AT-TN-309A

### iMAP Line Cards

Model	Description	Part #
ADSL24A	24 port ADSL line card (annex A)	AT-TN-121
ADSL24B	24 port ADSL line card (annex B)	AT-TN-124
CES8	8 port CES8 T1 line card	AT-TN-119
FE10	10 port 10/100TX line card	AT-TN-102
FTTX (MM)	10 port 100Mbps multi-mode fiber line card	AT-TN-104
FTTX (SM, dual fiber)	10 port 100Mbps single-mode fiber line card	AT-TN-107
FTTX (SM, single fiber)	10 port 100Mbps single-mode, single fiber line card	AT-TN-109
FTTX (SM, single fiber)	20 port 100Mbps single-mode, single fiber line card	AT-TN-139
X20BX40	20 port 100Mbps fiber line card 40km	AT-TN-142A
GE8	8 port GbE line card	AT-TN-117
GEPON2	2 port GEPON line card	AT-TN-118
NTE8	8 port N x T1 MLPPP line card	AT-TN-125
PAC24	24 port POTS ADSL combo line card (annex A)	AT-TN-123
POTS24	24 port POTS line card	AT-TN-113
SHDSL24	24 port SHDSL line card	AT-TN-127
VDSL24A	24 port VDSL2 line card (annex A)	AT-TN-130
VDSL24B	24 port VDSL2 line card (annex B)	AT-TN-128
ADSL24AE	24 port ADSL2+ line card (annex A)	AT-TN-140
Filler	Full size service slot filler plate	AT-TN-M000
Filter	Non NEBS	AT-TN-M019-A
Filter	NEBS	AT-TN-M020-A

### iMAP AC Power Options

Model	Description	Part #
AC starter	iMAP 9700/9810 AC starter kit	AT-TN-R113-xx*
AC adder	iMAP 9700/9810 AC adder kit	AT-TN-R114-xx

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