

AIMA3000

Advanced Intelligent
Multi-Service Headend Platform

Industry-leading headend platform
for HFC, RFoG, and FTTx applications
featuring high density and low power consumption



About the Product

The AIMA3000 platform is PBN's newly developed high-density, low-power consumption headend platform that enables MSOs to build or upgrade their networks to meet the demands of today as well as future multi-services access requirements.

The AIMA3000 simplifies the transition to IP Networks by providing a complete range of intelligent, interoperable, RF and optical modules for HFC, RFoG, PON video overlay, and other applications.

The design employs a 19" rack of 4RU height, with 17 slots for high-density application modules and integrated front and rear fiber-access panel for easy fiber management. Slot 0 is used for a System Management Module (ASMM). In total, one 4RU AIMA3000 chassis allows for configurations of up to 64 forward-path laser transmitters or 64 return path receivers.



Key Features and Functions

- 1.2 GHz Advanced Intelligent Multi-Service Headend Platform (AIMA3000)
- Fully compatible with DOCSIS3.1
- Highest density with 16 single, dual or quad application modules in one 4RU headend platform
- Efficient low power consuming modules reduce operating expenditures
- Plug-and-play modules
- Hot-swappable application modules with auto-configuration feature through management module
- Integrated front and rear fiber-access panel for easy fiber management
- Advanced active cooling techniques allows for the mounting of multiple AIMA3000s without the need for clearance or spacers between AIMA chassis
- Reliable, fully redundant, dual hot-swappable power supplies
- Intelligent management system with an integrated SNMP agent and web server (HTTP) through the front and rear-mounted RJ45 Ethernet ports, for system-wide network management and local configuration
- SCTE-HMS MIB compatible
- Firmware management from centralized TFTP server (In combination with PBN NMSE network management software)
- Fully FCC, CE and RCM compliant

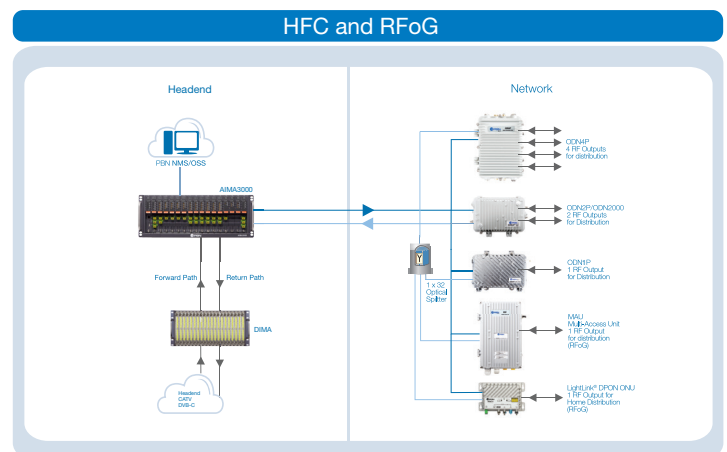
Typical Application

The AIMA3000 is designed to seamlessly fit into all common service scenarios. In a traditional headend deployment with optical transmitters and receivers, the AIMA3000 leads with lowest in industry per-port power consumption as well as having a highly dense amount of receiver ports.

While FTTx technologies are making their way into traditional cable MSO networks, the AIMA3000 supports a range of RFoG modules such as the RRAG to ease the transition to full-blown PON/P2P.

For networks with FTTx technologies already in place, delivering high-speed data and voice services, the AIMA3000 is geared to provide a full-spectrum CATV overlay using transmitters and EDFA modules.

A wide variety of complementary modules such as externally-modulated transmitters, amplifiers, and switches meet the needs of even the most specialized and unique network architectures.



Specifications

Chassis (ACHA)

Module slots	17 slots for AIMA3000 plug-and-play modules. Slot 0 is used for the System Management Module (ASMM). Slots 1~16 are used for any of the Application Modules.
Alarms ⁽¹⁾	Requires an ASMM module in slot 0. Alarms are available via SNMP traps to multiple destinations, via a voltage-free NO/NC alarm contact, via SNMP polling, or via HTTP polling.
Monitoring and control	Requires an ASMM module in slot 0. The chassis can also be controlled through a web browser connected to one of the Ethernet ports or by a mobile device supporting USB host mode through the USB port on the AIMA3000's ASMM module. All module settings are retained in non-volatile memory to ensure trouble-free operation.

Power (APSA & APSD)

Power supply modules	The chassis supports up to two hot-swappable power supply modules in the AIMA3000 chassis. Any one power supply can handle a fully-loaded chassis. Two power supplies provide load sharing when more than 12 V / 10 A (120 W) is being consumed by modules, and redundancy in the event of a single power supply failure. Both universal mains (APSA) and battery (APSD) models are available. It is possible to use one mains module and one battery module in the same chassis.
Power input	Universal mains (APSA) 90~264 Vac, 50/60Hz Battery (APSD) -48 Vdc (-75 ~ -36 Vdc)
Efficiency	> 85 %
Cooling	Integrated variable-speed cooling fan with on-board microcontroller.
Protection	Overload (AC only), over-voltage (AC only), and temperature sensors. Load-share functions for +12 Vdc power rail.
Interface	LED status indicators
Internal power rails ⁽²⁾	12 Vdc, 33 A 5 Vdc, 6 A -5 Vdc, 6 A

General

Operating temperature	-5 °C to +55 °C
Operating humidity	Max. 90% RH (non-condensing)
Storage temperature	-25 °C to +70 °C
Storage humidity	Max. 90% RH (non-condensing)
Cooling	Cooling fans in the power supply units and the 8 fan modules mounted in the chassis. Multiple AIMA3000 chassis can be mounted on top of each other without needing ventilation space.
Dimensions	Overall width 482.6 mm (including flanges) Overall depth 500.5 mm (including handles) Overall height 175.0 mm
Packaging dimensions (W x D x H)	600 × 600 × 400 mm
Net weight	Empty chassis: 15 kg Fully loaded: 40.5 kg
Shipping weight	20.71 kg

Note:

(1) Up to 5 SNMPv2c trap addresses per ASMM.

(2) Measured with 460 W APSA.

Order Details

AIMA3000 Chassis

A-ACHA-4U-LGAN	AIMA3000 Chassis, 4RU, 16+1 slots, 19 inch, fans included, power supply not included, with LGAN handles
A-APSA-460-XX	Power Supply Module with fan for mains 90 ~ 260 Vac 50/60 Hz, 460 W. XX: AU, CN, CH, EU, UK, US
A-APSD-460	Power Supply Module with fan for battery -48 Vdc, 460 W
A-ASMM-A	System Management Module, version A

Accessories

A-BP	Single Slot Blank Panel
A-FANTRAY	8 Replacement Module Fans in Fan Bracket
A-SMB-F	Mini SMB to F adapters

Application Modules



FT3S
1310 nm Forward Transmitter - Standard



FT5S
1550 nm Forward Transmitter - Standard



FT5E
1550 nm Forward Transmitter - Enhanced



FT5X
1550 nm Forward Transmitter - Externally Modulated



FRAS
Analog Forward Receiver - Standard



FRAE
Analog Forward Receiver - Enhanced



RRAS
Analog Return Receiver - Standard



EDFA
Erbium Doped Fiber Amplifier



FPAS
RF Forward Path Amplifier - Standard



RFSW
RF A/B Protection Switch



OPSW
Optical A/B Protection Switch



RT3S
1310 nm Return Transmitter - Standard



RT5S
1550 nm Return Transmitter - Standard



RPAS
RF Return Path Amplifier - Standard

Accessories



A-BP
Single Slot Blank Panel



A-APSA-460-XX
Power Supply Module with fan for mains 90-260 Vac 50/60 Hz, 460 W. **XX:** AU, CN, CH, EU, UK, US



A-SMB-F
Mini SMB to F adapters



A-FANTRAY
8 Replacement Module Fans in Fan Bracket