

# 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

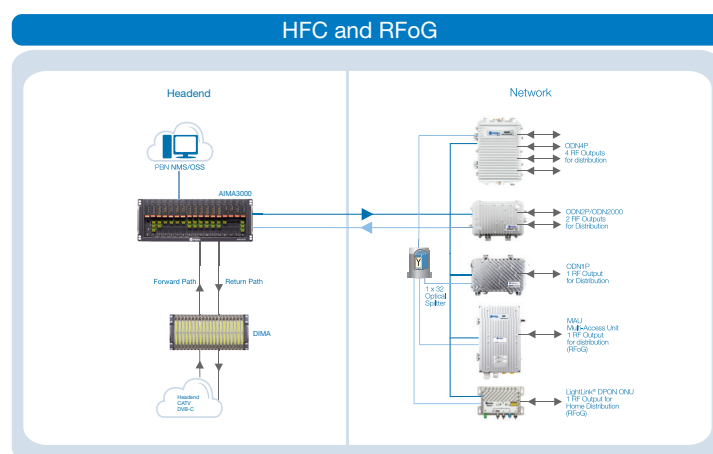
## Typical Application

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)

<b>Module slots</b>	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.
<b>Alarms <sup>(1)</sup></b>	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.
<b>Monitoring and control</b>	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)

<b>Power supply modules</b>	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.
<b>Power input</b>	<b>Universal mains (APSA)</b> 90~264 Vac, 50/60Hz <b>Battery (APSD)</b> -48 Vdc (-75 ~ -36 Vdc)
<b>Efficiency</b>	> 85 %
<b>Cooling</b>	Integrated variable-speed cooling fan with on-board microcontroller.
<b>Protection</b>	Overload (AC only), over-voltage (AC only), and temperature sensors. Load-share functions for +12 Vdc power rail.
<b>Interface</b>	LED status indicators
<b>Internal power rails <sup>(2)</sup></b>	12 Vdc, 33 A 5 Vdc, 6 A -5 Vdc, 6 A

### General

<b>Operating temperature</b>	-5 °C to +55 °C
<b>Operating humidity</b>	Max. 90% RH (non-condensing)
<b>Storage temperature</b>	-25 °C to +70 °C
<b>Storage humidity</b>	Max. 90% RH (non-condensing)
<b>Cooling</b>	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.
<b>Dimensions</b>	<b>Overall width</b> 482.6 mm (including flanges)
	<b>Overall depth</b> 500.5 mm (including handles)
	<b>Overall height</b> 175.0 mm
<b>Packaging dimensions (W x D x H)</b>	600 × 600 × 400 mm
<b>Net weight</b>	Empty chassis: 15 kg Fully loaded: 40.5 kg
<b>Shipping weight</b>	20.71 kg

Note:

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

(2) Measured with 460 W APSA.

## Order Details

### AIMA3000 Chassis

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

### Accessories

<b>A-BP</b>	Single Slot Blank Panel
<b>A-FANTRAY</b>	8 Replacement Module Fans in Fan Bracket
<b>A-SMB-F</b>	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



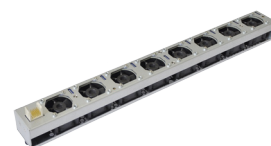
**A-BP**  
Single Slot Blank Panel



**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