

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 today's and future multi-services access requirements.

The AIMA3000 simplifies MSO operators' 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 32 forward-path laser transmitters or 64 return-path receivers.



Key Features and Functions

- 1 GHz Advanced Intelligent Multi-Service Headend Platform (AIMA3000)
- Highest density with 16 single, dual or quad application modules in one 4RU headend platform
- Low power consumption per transmitter-receiver link saves MSOs' operation expenditure
- Plug-and-play modules with blind RF connectors to allow module maintenance without disconnecting the cables
- Hot-swappable application modules with auto-configuration feature through management module
- Integrated front and rear fiber-access panel for easy fiber management
- Ergonomically designed, fan-forced airflow permits the mounting of multiple AIMA3000s without the need for clearance or spacers in between
- Reliable, fully redundant, dual hot-swappable power supplies
- Intelligent management system with integrated SNMP agent and web server (HTTP) through front and rear-mounted RJ45 Ethernet ports, for system-wide network management and local configuration
- HMS standards compliance
- Fully RoHS and CE compliant

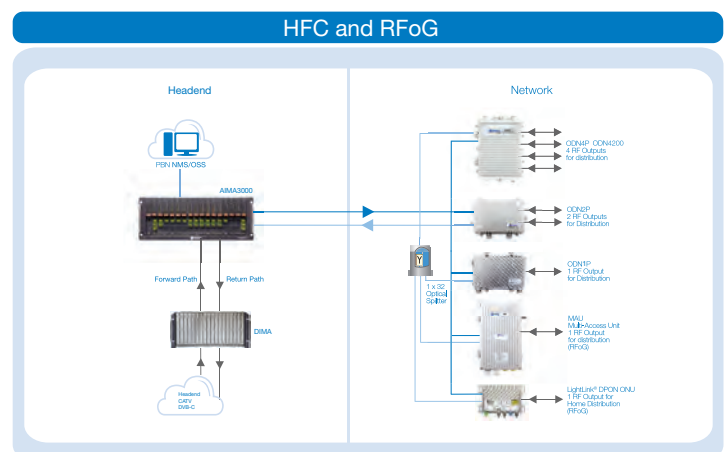
Typical Application

The AIMA3000 was designed to seamlessly fit into all common service scenarios. In a traditional headend deployment with optical transmitters and receivers, the AIMA3000 convinces with lowest in industry per-port power consumption as well as ultra-high density of receiver ports.

While FTTx technologies are making their way into traditional cable MSOs' networks, AIMA3000 supports a range of RFOG modules such as the RRAQ-RG to ease the transition to full-blown PON/P2P.

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

A wide variety of complementary modules such as externally-modulated transmitters, amplifiers or switches will meet the needs of even special 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	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, via HTTP polling, or via the optional hand-held controller (AHC).
Monitoring and control	Requires an ASMM module in slot 0 and optional hand-held controller (AHC). The chassis can also be controlled through a netbook or laptop connected to one of the Ethernet ports or the USB port on the AIMA3000's ASMM module. Remote control and monitoring by network operating centers is possible via SNMP and HTTP. All module settings are retained in NV memory to ensure trouble-free operation.

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	Horizontal, fan-forced airflow via 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 ventilation space.						
Dimensions	<table border="1"> <tr> <td>Overall width</td> <td>482.6 mm (including flanges)</td> </tr> <tr> <td>Overall depth</td> <td>500.5 mm (including handles)</td> </tr> <tr> <td>Overall height</td> <td>175.0 mm</td> </tr> </table>	Overall width	482.6 mm (including flanges)	Overall depth	500.5 mm (including handles)	Overall height	175.0 mm
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Packaging dimensions (W x D x H)	600 × 600 × 400 mm						
Net weight	Empty chassis: 15 kg Fully populated: 38 kg						

Power (APSA & APSD)

Power supply modules	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 10 A (120 W) is being consumed by modules, and redundancy in case 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	<table border="1"> <tr> <td>Universal mains</td> <td>90 Vac to 260 Vac, 50/60 Hz, maximum output power 460 W</td> </tr> <tr> <td>Battery</td> <td>-48 Vdc, maximum output power 460 W</td> </tr> </table>	Universal mains	90 Vac to 260 Vac, 50/60 Hz, maximum output power 460 W	Battery	-48 Vdc, maximum output power 460 W
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Battery	-48 Vdc, maximum output power 460 W				
Efficiency	> 88 %				
Cooling	Integrated variable-speed cooling fan, with on-board microcontroller.				
Protection	Field-replaceable fuse. Overload, over-voltage and over-temperature sensors. Load-share functions for +12 Vdc power rail.				
Interface	LED status indicators				
Internal power rails	12 Vdc, 33 A 5 Vdc, 6 A -5 Vdc, 6 A				

Order Details

AIMA3000 Chassis

AIMA-CHA-19-A	Chassis 4RU, 19 inch version A
AIMA-PS-AC	Power Supply Module with fan for mains 90~260 Vac 50/60Hz, 460W
AIMA-PS-DC	Power Supply Module with fan for battery -48Vdc, 460W
AIMA-FAN-Kit	Replacement backplane FAN units (four fan units per kit)
AIMA-SMM-A	System Management Module, version A

Application Modules

AIMA-FT3S-[Y]-[Z]	Forward Transmitter 1310nm, Single Module with a range of output powers and optical connectors
AIMA-RRAQ-ST-[Z]	Return Receiver Analog Quad Module, standard version, with a range of optical connectors
AIMA-RRAQ-FK-[Z]	Return Receiver Analog Quad Module, with FSK decoder, remote node monitoring and a range of optical connectors
AIMA-RRAQ-RD-[Z]	Return Receiver Analog Quad Module, with redundancy setting and a range of optical connectors
AIMA-RRAQ-RG-[Z]	Return Receiver Analog Quad Module, low-noise RFOG receiver, with a range of optical connectors
AIMA-FRXV-[Z]	Forward Receiver Module, with a range of optical connectors
AIMA-RFAF	RF Forward-Path Amplifier Module
AIMA-RFSW	RF AB Switching Module



ASMM
System Management



FRXV
Forward Receiver



FT3S
Forward Transmitter
1310nm



RFAF
RF Forward-Path
Amplifier



RFSW
RF AB Switching



RRAQ-ST
Return Receiver
Analog Quad

Accessories

AIMA-RCBL-[Z]	Redundancy Cable, available in various lengths
AIMA-HHC-A	AIMA Handheld Controller, China Version
AIMA-HHC-B	AIMA Handheld Controller, International Version

Refer to separate PBN datasheets for further details of AIMA3000 Application Modules.