AIMA-FRAS

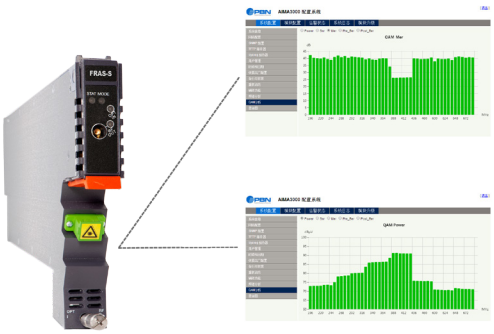
Analog Forward Receiver - Standard

The Analog Forward Receiver - Standard (FRAS) is designed to plug into PBN's latest generation Advanced Intelligent Multi-services Access platform - the AIMA3000.

The FRAS is available in single port configurations. It incorporates a low noise front-end circuit that receives optical wavelengths from 1260 nm to 1620 nm and converts them into RF signals for Master Antenna Television (MATV), CATV, and broadband applications. The supported RF bandwidth is from 45 to 1218 MHz.

The FRAS offers a superior frequency response with a low distortion profile and low noise characteristics. Based on broadband detection, it features automatic gain control (AGC). Also it supports managing RF output AGC threshold level and the slope remotely.

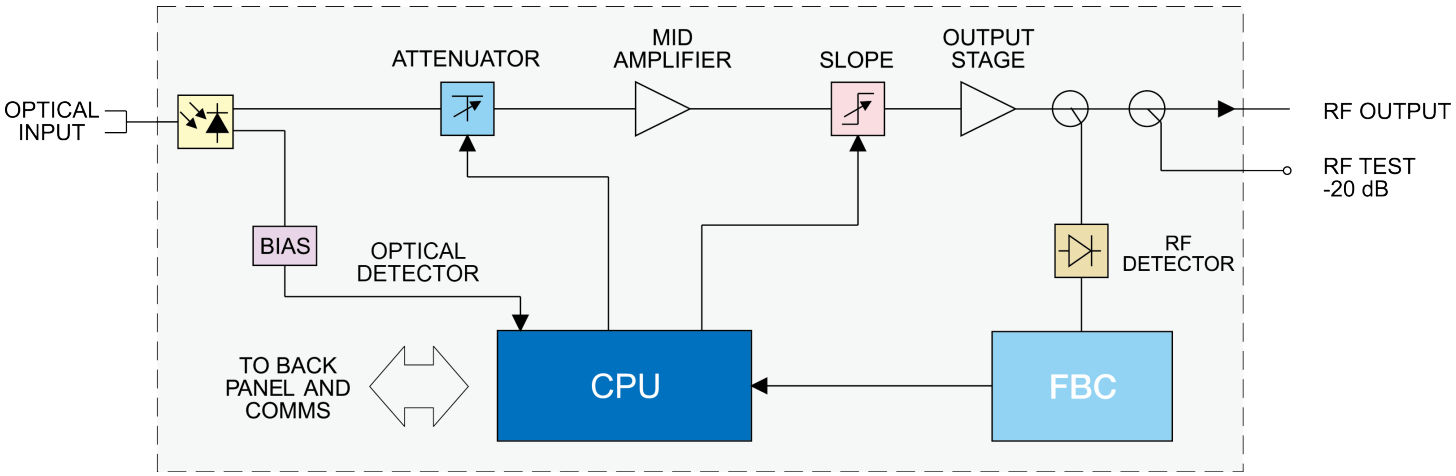
With the optional embedded Full Band Capture (FBC) module, it enables the operator to capture and monitor the spectrum and QAM demodulation data, including level of each channel, SNR, MER, BER, constellation and so on. Operators can get the metric of each QAM channel remotely.



Key Features and Functions

- Plug-and-play with the AIMA3000 platform
- Superior performance with a low noise profile and minimal distortion characteristics
- High RF output for flexible deployment
- Supports Automatic Gain Control (AGC) for a stable RF output
- Electronic slope control
- Electronic gain setting and AGC adjustable thresholds
- Broadband GaAs amplifier technology
- Support for CENELEC and NTSC standards up to 110 channels (analog and digital)
- Comprehensive status monitoring and alarm with PBN's NMS network management software
- SCTE-HMS MIB compliant
- Remote firmware upgrade and auto upload/download of configuration files through ASMM web interface or using PBN's NMSE
- Bulk firmware updates through PBN's NMSE
- Fully FCC, CE, and RCM compliant

Block Diagram



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Specifications

Optical Performance

Optical wavelength	1260 nm to 1620 nm
Optical input	-5 dBm to +3 dBm
Optical return loss	> 50 dB
Optical connector	SC/APC, FC/APC, LC/APC, E2000/APC

RF Performance

RF bandwidth	45 MHz to 1218 MHz
RF output level (1)	40 dBmV (2)
RF flatness	± 0.75 dB
Gain adjustment	0 dB to 20 dB
Slope adjustment	0 dB to 7 dB
AGC range (input variation)	10 dB
AGC accuracy	± 0.5 dB over AGC range
RF impedance	75 Ω
RF return loss	> 16 dB
RF test point relative to RF output port	-20 dB ± 1 dB
RF OUT connector	GSK-type female
RF test point	Mini-SMB
Alarms and status	Front-panel LEDs, SNMP Traps

Link Performance (3)

CNR	> 53 dB
CSO	> 65 dB
CTB	> 70 dB

General

Power supply	Powered via AIMA3000 backplane
Power consumption	< 12 W (without FBC module) < 17 W (with FBC module)
Operating temperature	-5 °C to +55 °C
Storage temperature	-25 °C to +70 °C
Dimensions (WxDxH)	24.6 x 410 x 152.5 mm
Weight	0.88 kg
Supported network management options	PBN's NMSE or through ASMM's Web Interface

With the FBC Module

Frequency capture range	45 to 1000 MHz
Demodulation mode	QAM64, QAM256
Metrics and functions available	Level, SNR, MER, BER and live spectrum

Note:

(1) Measured in a typical system with 0 dBm optical input, 3%~4% OMI.

(2) dBuV=60+dBmV.

(3) Loaded with 77 NTSC channels, measured with PBN referenced optical transmitter @ 0 dBm, 3%~4% OMI.

Order Details

A-FRAS-[W]-[X]-[Y]-[Z] ····· Analog Forward Receiver - Standard

Options:

W Optical Input Ports
- **S** Single (1)

X FBC function (1)
- **M** With FBC Management

Y Optical Connector Type
- **S** SC/APC
- **F** FC/APC
- **L** LC/APC
- **E** E2000/APC

Z Bandwidth
- **12** 45 ~ 1218 MHz

(1) Option for FBC Management configurations only. Please omit X when select a model without FBC function.

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