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AIMA-FPAE

- **DOCSIS 3.1 Compatible with operating bandwidth up to 1218 MHz**

- **Plug-and-play with the AIMA3000 platform**

- **Forward-path version (45 MHz to 1218 MHz) supports PAL, CENELEC, and NTSC with up to 127 channels**

- **Supports both digital and analog transmissions**

- **High linearity, superior low noise profile, and minimal distortion**

- **Automatic gain control (AGC) or manual gain control (MGC)**

- **Electronic gain and slope control**

- **Configurable alarm thresholds at a customer's request**

- **Broadband GaAs amplifier technology**

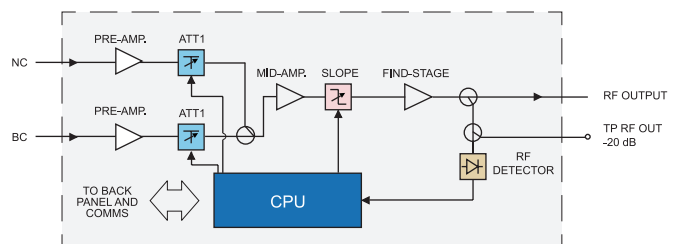- **Fully FCC, CE, and RCM compliant**

Overview

The RF Forward Path Amplifier - Enhanced (FPAE) is designed to plug into Technetix latest generation Advanced Intelligent Multi-services Access platform - the AIMA3000.

The FPAE accepts forward-path RF signals from 45 MHz to 1218 MHz through the RF input port. The module provides an adjustable gain of 20 dB a single output port.

Electronic gain and slope control allows for the module to be customised for many situations.

The forward-path version provides Automatic Gain Control (AGC).

Block diagram

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Specifications

RF Performance

RF bandwidth	45 MHz to 1218 MHz
RF flatness	± 0.5 dB
Noise Figure (NF)	≤ 8 dB
RF Input level (typical)	10 dBmV per channel [1]
RF Output level	40 dBmV per channel (rating) [1]
Gain range	NC: 0 - 20dB BC: 10 - 30dB
Gain adjustment range	NC individual: 0 dB to 10 dB BC individual: 0 dB to 10 dB
Slope adjustment range	0 dB to 9 dB
AGC range	10 dB
AGC accuracy	± 0.5 dB over AGC range
RF impedance	75 Ω
RF return loss	> 18 dB
RF test point relative to RF output port	-20 dB ± 1 dB
Isolation between NC and BC inputs	> 50 dB
Back isolation	> 60 dB
RF connectors	3 x GSK-type female
RF test points	1 x Mini-SMB
Alarms and status	Front-panel LEDs, SNMP Traps

Link Performance

	NTSC [1]	CENELEC (42ch) [2]
CNR	> 60 dB	> 60 dB
CSO	> 75 dB	> 75 dB
CTB	> 75 dB	> 85 dB

General

Power supply	Powered via AIMA3000 backplane
Power consumption	< 13 W
Operating temperature	-5 oC to +55 oC
Storage temperature	-40 oC to +70 oC
Operating humidity	90% (non-condensing)
Storage humidity	90% (non-condensing)
Dimensions (WxDxH)	24.6 x 410 x 152.5 mm
Weight	0.88 kg

Note:

1. Loaded with 77ch NTSC, RF input= 10 dBmV/ch, Gain= 30 dB.
2. Loaded with 42ch CENELEC, RF input= 10 dBmV/ch, Gain= 30 dB.