1.2GHz MDU Amplifier Field Upgradable Deep Fiber Solution

ARF120B Series

- Fiber deep architecture
- 1218 MHz bandwidth
- DOCSIS 3.1 compatible
- Field upgradable
- GaAs multi-chip module
- 1 or 2 output
- 108 dBµV output
- Compact MDU housing
- Suitable for cabinet installation
- Low power consumption
- Local or remote powering

ARF120B Series 1.2G 1 or 2 RF outputs, GaAs MDU amplifier is part of ACT Advanced Fiber Deep HFC solution, which has been designed to deliver interactive CATV, high capacity DOCSIS and other advanced services. The cost effective MDU amplifier platform helps operators expand bandwidth of their existing HFC network while minimizing capital investment. The ARF120B compact housing has compact housing with embedded RF module and is suitable for MDU, FTTB or FTTC applications with outputs up to 108 dBµV.

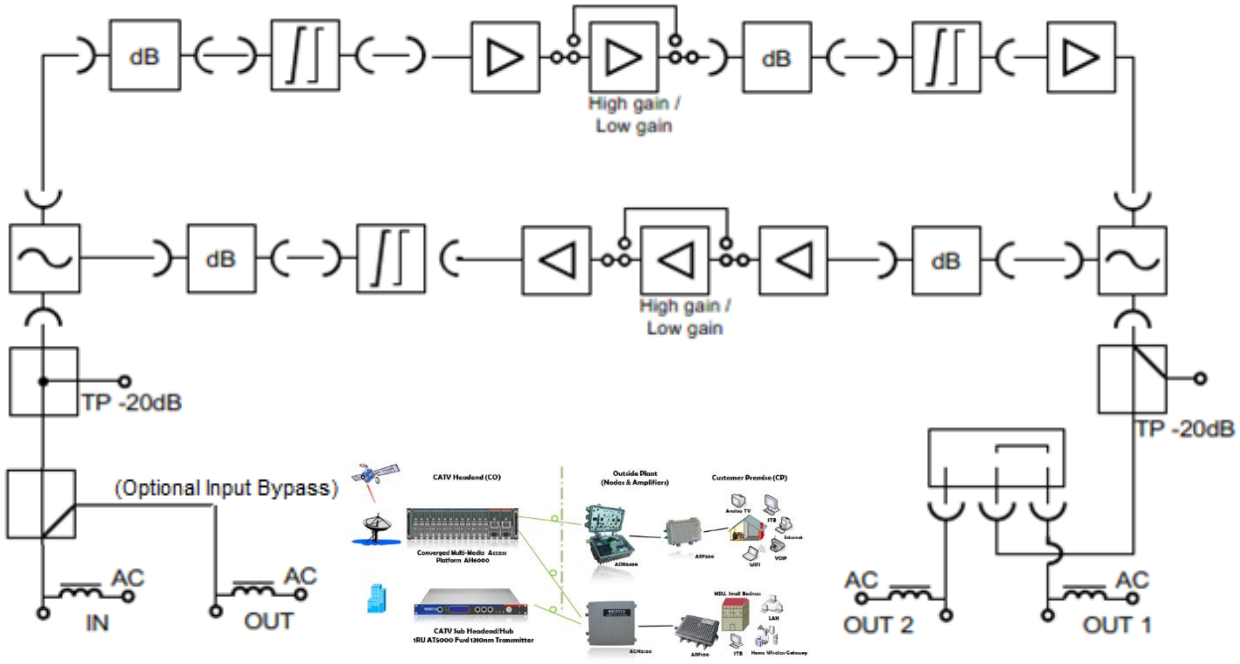
The ARF120B 1.2 GHz MDU amplifier has field upgradeable diplexers and filters with JXP style plug-in PADs and EQs along with plug-in diplex filter for band split upgrade to DOCSIS 3.1.

ARF120B amplifier suits the last mile fiber deep access networks. It has low power consumption and supports local or remote power options. Combined with ACT's converged headend AH1000 optical system and AON node series, ARF120B is an ideal product to provide MSOs with an economical, flexible HFC access solution.

Key Features

- High performance 1218MHz RF Spectrum for analog and digital video
- Economical design with embedded RF section in MDU housing for cabinet installation
- High video quality for PAL, CENELEC and NTSC standards up to 110 analog channels
- RF output up to 108dBµV
- Field upgradeable diplexers and filters with JXP plug-in PADs and EQs
- On-site frequency split upgrade to DOCSIS 3.1
- GaAs technology
- Improved ESD and surge protection
- Second output can be selected via splitter or tap
- Compact housing and low power consumption
- Easy installation and maintenance
- Supports local or remote powering options

Application Diagram



Specifications

Item	Description
Forward Section Specifications	
Frequency Range	86/108/258 to 1218 MHz
Gain	40 dB (optional dual gain)
Frequency Response	±0.65 dB
Output Level	108dBµV
Return Loss	16 dB @ 86 MHz to 1000 MHz
	14 dB @ 1001 MHz to 1218 MHz
RF Test Point	-20 dB
Noise Figure	5 dB
CTB*	66.0 dB
CSO*	63.0 dB
Return Section Specifications	
Frequency Range	5 MHz to 65/85/204 MHz
Gain	25 dB (optional dual gain)
Frequency Response	±0.75 dB
Return Loss	18 dB
RF Test Point	-20 dB
Noise Figure	5.6 dB
MER	>35dB
General Specifications	
Power Consumption	14.5 W
Supply Voltage	26 V AC to 65 V AC
RF Connectors	F - female, Imperial
Dimensions (W × H × D)	210 mm × 148 mm × 84 mm
Weight	1.5 kg
Water/Dust Ingress Protection Rating	IP 54
Operating Temperature	-40 °C to +55 °C
Storage Temperature	-40 °C to +80 °C
Relative Humidity Range	5 % to 95 %
EMC Compliance	IEC 60728-2
Safety	IEC 60728-11
ESD / Surge	6 kV / 6 kV

* Performance measured at 105 dBuV output. Loaded with 59 PAL D/K CW carriers from 47-550 MHz. Digital refers to 550 MHz to 1.2 GHz loading with QAM carriers at -10 dB relative to analog CW carrier

Note: Unless otherwise noted, all specifications reflect typical performance and are referenced to 20 °C.

Ordering Information

ARF120B 1.2GHz Series 1 or 2 Output, MDU Amplifier Ordering Information

ARF12XB-	X-	X-	X-	XXX-	X

	Fwd Gain
H	40dB (default)

	Rtn Gain
H	25dB (default)

	Power Supply
1	35 to 90 VAC Line
2	90 to 270 VAC Main

	MDU Amplifier Types
121B	1 RF Out
122B	2 RF Out

	Bandwidth
2	1218MHz

	Band Split
085	65~85MHz Uplink
105	85~105MHz Uplink
258	204~258MHz Uplink

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Specifications and product availability are subject to change without notice.

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