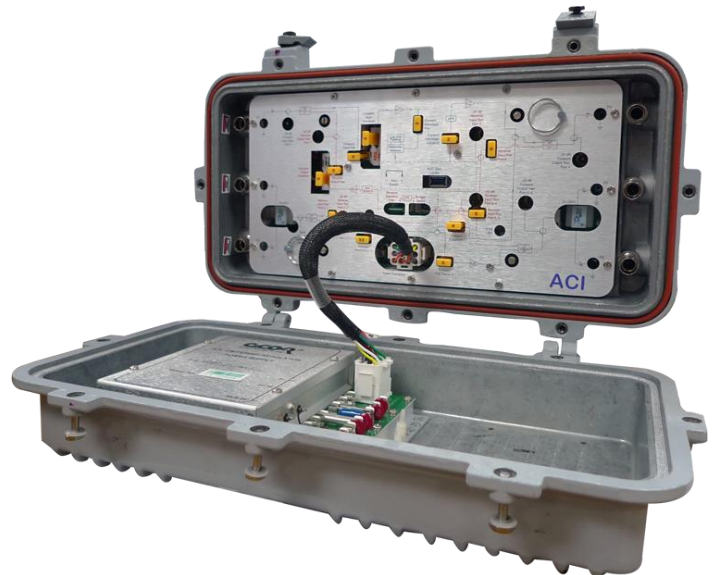




AMF-L  
(1 Output Line Extender)



AMF-T  
(1 Trunk / 2 Bridger)

## ASEM C-Cor®/Arris® Distribution Amplifiers 1002 MHz

The ACI ASEM C-Cor®/Arris® 1G RF upgrade modules are now offered with the Gallium Nitride (GaN) hybrid technology that allows for 3 dB higher output levels while maintaining close to the same specifications as the previous stations with the Gallium Arsenide (GaAs) hybrids. With this increase in the output level capabilities the cable operators are now able to extend the fiber deeper in their networks at a lower cost by reducing the number of active that are needed. The GaN hybrid technology is also extremely beneficial for use in the traditional HFC networks with the increase in station performance at the standard output levels over the GaAS hybrid stations.

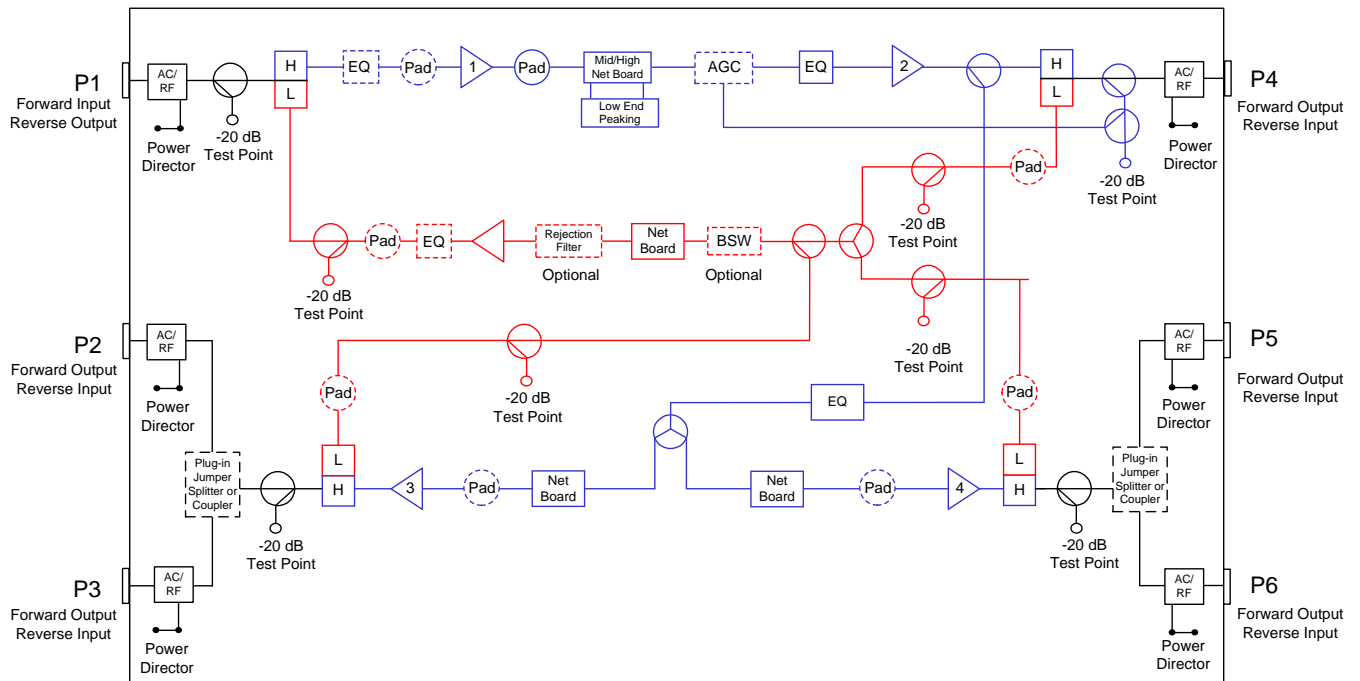
### Features

- ◆ AMF-T Trunk is compatible with Arris® 901e FMT and is a 1G drop-in replacement for the C-Cor® FNT700, FNT800, FNT900
- ◆ AMF-B Bridger is compatible with Arris® 901e FMB and is a 1G drop-in replacement for the C-Cor® FNB700, FNB800, FNB900
- ◆ AMF-L Line Extender is compatible with Arris®/C-Cor® FM331e and is a 1G drop-in replacement for the C-Cor® E6 and E7 Line Extender
- ◆ Pad adjustable forward and return EQ's
- ◆ 5 to 42, 65, 85 or 204 MHz reverse path
- ◆ Ideal for traditional HFC networks for increased performance & reliability
- ◆ Ideal for fiber deep networks with the extended reach of the amplifiers
- ◆ Patented DSIM technology (Digital AGC)
- ◆ Increased reliability with higher surge protection in the GaN hybrids
- ◆ Lower power consumption than OEM amplifiers

# Block Diagrams

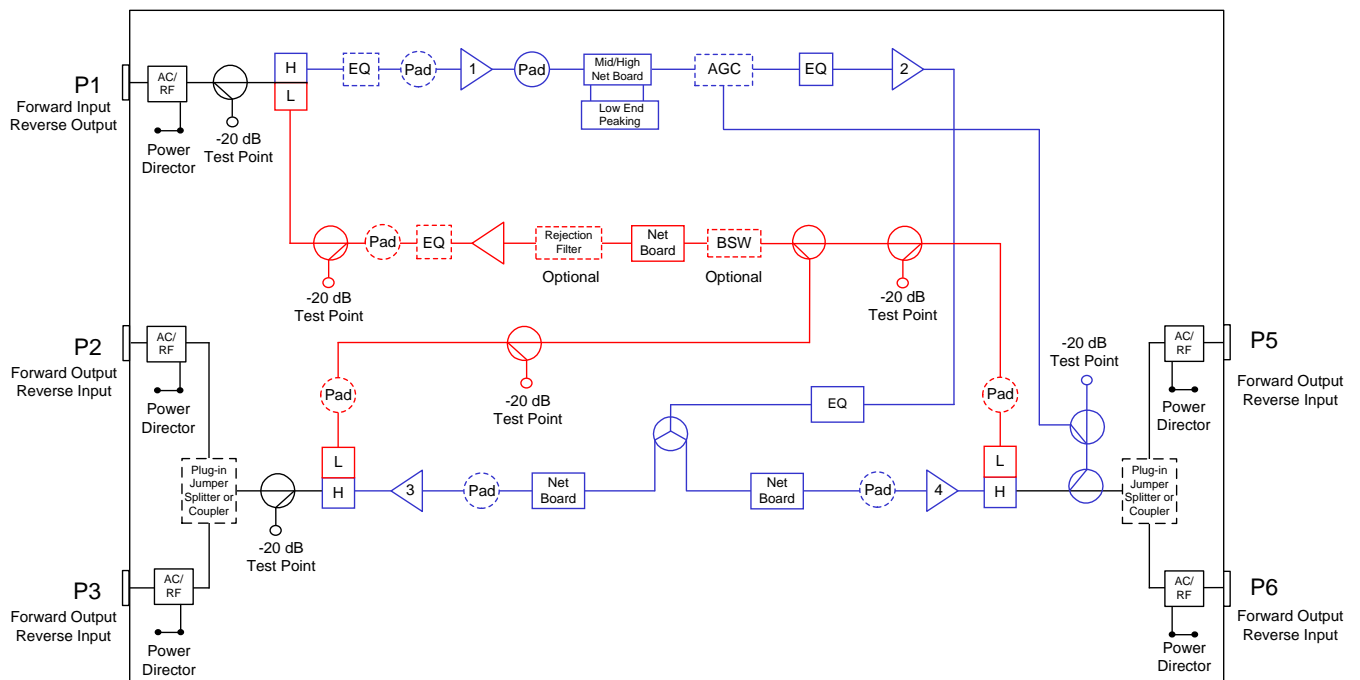
## AMF-T

### AFM-T 1 Trunk / 2 Bridger Outputs 1002 MHz GaN Amplifier Block Diagram



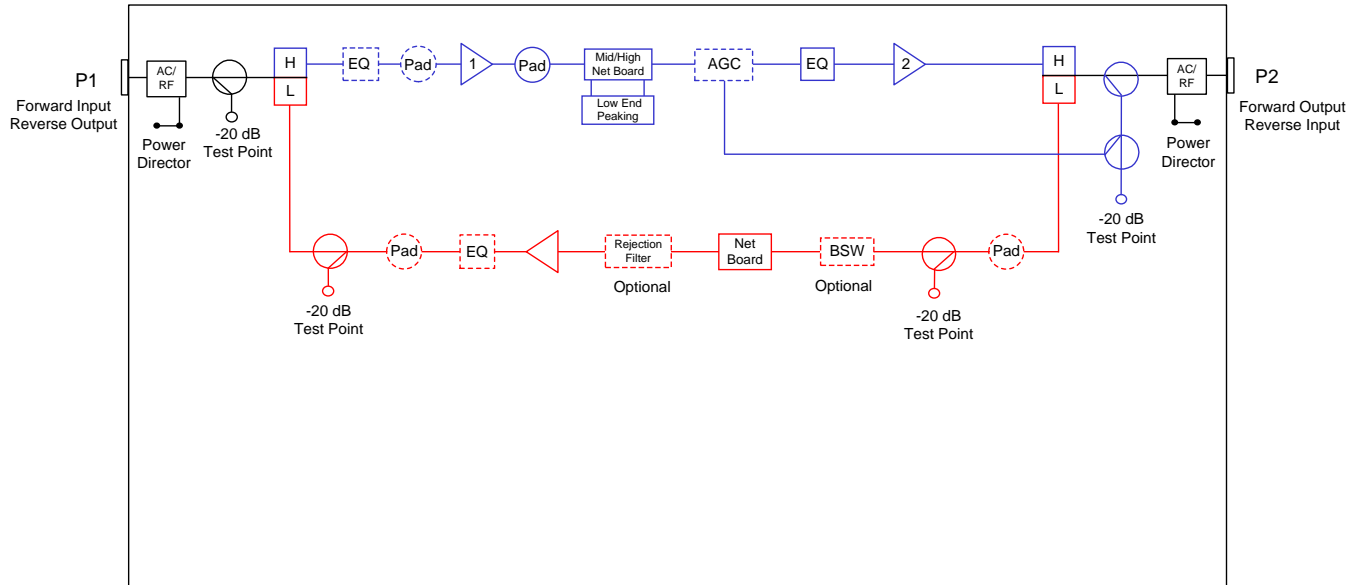
## AMF-B

### AFM-B 2 Bridger Outputs 1002 MHz GaN Amplifier Block Diagram



# AMF-L

## AFM-L 1 Output Line Extender 1002 MHz GaN Amplifier Block Diagram



# Station Parameters 42/53 MHz

STATION PARAMETERS: 1002 MHz 42-53 MHz Split			ASEM C-Cor® / Arris® RF Modules 1002 MHz With GaN Hybrids						
		CONDITIONS	UNITS	SPECIFICATIONS					
Housing passband			MHz	5 to 1002					
Max AC current		Continuous	Amps	15					
Max AC current		Surge	Amps	25					
Hum modulation		Time domain @ rated current above	-dBc	65 @ 5-42 MHz 70 @ 54-1002 MHz					
Return loss		Any port, worst case	dB	16.0					
<b>Test Points</b>									
Frequency range			MHz	5 to 42 (Reverse) / 54 to 1002 (Forward)					
Test point type		Directional coupler	N / A						
Test point level		Forward & reverse	-dB	20.0					
Test point accuracy		Forward & reverse	±dB	0.5					
<b>Station Slope</b>				AMF-T Trunk	AMF-T Trunk	AFM-B Bridger	AFM-L Line Extender		
Internal Slope (Tilt)		± 0.5 dB	dB	T/B : 15/15	T/B : 8/15	15.0	15.0		
Slope control type		Cable equalizers	dB	Plug-in Pad Adjustable EQ's					
Slope control range		Includes cable equivalent	dB	-9.0 to +18					
Slope control steps		Equalizer value steps	dB	1.0					
<b>Station Group Delay</b>									
Group delay		Channel 2 (Std)	nSec / 3.58 MHz	40					
Group delay		Channel 3		16					
Group delay		Channel 4		10					
Group delay		Channel 5 & >		3					
<b>AGC</b>									
Pilot Channel Type			N / A	NTSC Analog or QAM					
Compensation Range			dB	System compensation input change ± 5.5 @ 1002 MHz					
Accuracy			±dB	0.5					
Nominal loss		@ 77 °F (25 °C)	dB	6.25					
Center frequency bandwidth				6 (MHz)					
<b>Configuration</b>				AMF-T Slope T/B : 15/15	AMF-T Slope T/B : 8/15	AFM-B	AFM-L		
<b>Operational Specifications</b>				Trunk	Bridger	Trunk	Bridger		
Station passband			MHz	54 to 1002					
Station flatness		Normalized w / 0 dB slope	±dB	0.5	0.5	0.5	0.5	0.5	0.5
Operational Gain - With AGC		Minimum @ 1002 MHz (Temperature stabilized)	dB	33.0	43.0	33.0	43.0	43.0	35.0
<b>550 MHz analog channel loading, 79 channels +450 MHz digital channel loading, 256 QAM at -6 dBc relative to its associated visual carrier</b>									
<b>Station Output Levels Standard</b>				AMF-T		AMF-T		AFM-B Bridger	AFM-L Line Extender
				Trunk	Bridger	Trunk	Bridger		
Output Level @ ...		1002 MHz 870 MHz 550 MHz 54 MHz	dBmV	43.0 40.9 35.9 28.0	52.0 49.9 44.9 37.0	42.0 40.9 38.2 34.0	52.0 49.9 44.9 37.0	52.0 49.9 44.9 37.0	52.0 49.9 44.9 37.0
Reference Output Slope (Tilt)		54-1002 MHz	dB	15.0	15.0	8.0	15.0	15.0	15.0
<b>Station Distortions (Worse Case)</b>									
Composite Triple Beat			-dBc	84	75	82	75	75	75
Cross Modulation			-dBc	76	67	75	67	67	71
Composite Second Order High Side			-dBc	79	73	78	73	73	74
<b>Station Output Levels High Output</b>				AMF-T		AMF-T		AMF-B	AMF-L
				Trunk	Bridger	Trunk	Bridger		
Output Level @ ...		1002 MHz 870 MHz 550 MHz 54 MHz	dBmV	47.0 44.9 39.9 32.0	56.0 53.9 48.9 41.0	46.0 44.9 42.2 38.0	56.0 53.9 48.9 41.0	56.0 53.9 48.9 41.0	56.0 53.9 48.9 41.0
Reference Output Slope (Tilt)		54-1002 MHz	dB	15.0	15.0	8.0	15.0	15.0	15.0
<b>Station Distortions (Worse Case)</b>									
Composite Triple Beat			-dBc	76	71	80	71	71	70
Cross Modulation			-dBc	69	60	71	60	60	64
Composite Second Order High Side			-dBc	75	70	78	70	70	69

## Reverse Station Specifications 5-42 MHz

REVERSE SPECTRUM:						
REVERSE - CHANNEL LOADING - Typically 23 each, 1.5 MHz wide QPSK channels.						
Reverse - General		CONDITIONS	UNITS	SPECIFICATION		
Station passband			MHZ	5 to 42		
Station flatness		Normalized w / 0 dB slope	±dB	0.5		
Reverse - Station Gain			AMF-T	AMF-B	AMF-L	
Gain		Minimum	dB	20.0	20.0	21.0
Gain control type				Plug-in pads		
Gain control range			dB	12.0		
Gain control steps		Pad value steps	dB	0.5		
Reverse - Station Slope						
Slope control type		Cable equalizers	N / A	Plug-in EQs		
Slope control range			dB	0 to 12.0		
Slope control steps		Equalizer value steps	dB	1.0		
Reverse - Station Output Levels						
@ Forward input port		Average	dBmV	35.0		
REVERSE - STATION DISTORTIONS						
Composite Second Order		6 channel loading	-dBc	82.0		
Composite Tripe Beat				90.0		
Cross Modulation				80.0		
Reverse - Station Group Delay						
Group delay		5 MHz	nSec / 1.5 MHz	36		
Group delay		7 MHz		16		
Group delay		10 MHz		4		
Group delay		35 MHz		10		
Group delay		38.5 MHz		25		
Power Requirements:						
Configuration			AMF-T	AMF-B	AMF-L	
With DSIM-A		Includes reverse (Worst case)	W	53.5	45.5	28.0
Environmental						
Operating temperature			°F (°C)	-40 to +140 (-40 to +60)		

## Accessory Ordering Information:

The ASEM C-Cor ordering matrix provides the part number information to order the configured stations. This page contains the ordering information for the required accessories that will be needed to make the stations functional in the field or the optional accessories that can be ordered separately.

### Required Accessories

Description	Part Numbers (Where XX.X = dB value)
JXP style attenuator pads <ul style="list-style-type: none"> <li>• 1 Required for forward input</li> <li>• 1 Required for reverse output</li> <li>• 1 Required for forward input Equalizer</li> <li>• 1 Required for reverse output Equalizer</li> </ul>	JXP138-XX (0 to 20 dB in 1.0 dB steps)

### Optional Accessories

Description	Part Numbers
Digital Station Intelligence Manager - Single Pilot AGC Module (Analog or Digital)	DSIM-A-MDL-02
Digital Station Intelligence Manager -Controller	DSCT-xxx-yyy xxx = Pilot Channel Number yyy = Channel Type IRC = Analog IRC Spacing DIG = Digital / QAM
DSIM Bluetooth Dongle Apple iOS or android	DSIM-DONGLE-02
Digital Station Intelligence Manager - Cable Assembly For Computer Interface	240327-01
Cable assembly DSIM adaptor to connect controller	240330-01
Pad Adjustable Equalizer JXP Platform 0-18 dB	AEQDA1G
Pad Adjustable Cable Equivalent Equalizers JXP Platform 0-9 dB	ACEQ1G
Pad Adjustable Reverse Equalizers 5-42 & 5-85 MHz JXP Platform 0-12 dB (4 Pin)	AREQDA42 AREQDA85
Splitter, 3.5 dB, 1GHz	SDASPLTR3.5
Directional Coupler, 7 dB, 1GHz	SDADC7
Directional Coupler, 10 dB, 1GHz	SDADC10
Directional Coupler, 12 dB, 1GHz	SDADC12
Reverse Rejection Filter 14 MHz	RPRFLTR-14
Reverse Rejection Filter 8 MHz	RPRFLTR-8
Reverse Rejection Filter by-pass	RPRFLTR-JMP
Test Probe (5.5" Long)	100685-01
Test Probe (1.57" / 4 cm Long)	TP-7504

# Ordering Matrix

## ASEM C-Cor Product Configuration Worksheet

Customer: \_\_\_\_\_

Created By: \_\_\_\_\_ Order Date: \_\_\_\_\_

### ORDERING MATRIX

February 1, 2019

Position	1	2	3	4	5	6	7	8	9	10	11	12	13
PART NUMBER	A	F	M	-									

- 5  STATION TYPE
- T = AFM-T 1 Trunk / 2 Briger Outputs (User configurable to 4 outputs)  
 B = AFM-B 2 Output Bridger (User cofiguarable to up to 4 outputs)  
 L = AFM-L 1 Output Line Extender

- 6  BANDPASS SPLIT
- 4 = 5-42 MHz / 54-1002 MHz                      2 = 5-204 MHz / 258-1002 MHz  
 8 = 5-85 MHz / 105-1002 MHz

- 7,8  STATION GAIN (Forward) - For 0.5 dB gain values, use the first two digits listed in the part number

Amplifier Model	AFM-L	AFM-B	AFM-T	AFM-T
For Slope Call Out	A	A	E	F
Max gain with DSIM	35.0	43.0	33.0	33.0
Max gain w/AGC bypass	39.5	48.0	38.0	38.0

- 9  FORWARD GAIN CONTROL TYPE
- M = Manual (AGC Bypass)                      D = Digital Station Intelligence Manger

- 10  STATION SLOPE

Call Out	Station	42/54	85/105	240/258
A =	FML & FMB	15	14	11
E =	FMT (T/B)	15/15	14/14	11/11
F =	FMT (T/B)	8/15	7/14	4/11

Note: T/B for Trunk/Bridger Ports

- 11  STATION GAIN (Reverse)
- B = 20 dB min (AFM-T & B Only)  
 R = 21 dB min (AFM-L Only)

- 12  CUSTOM OPTIONS
- 0 = NONE  
 X = Determined by Product Management

Generic Order Form: Not all configurations are available



ACI Communications, Inc.  
 23307 66th Avenue South  
 Kent, WA 98032

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