



ADFA is an omnidirectional antenna with a unique design to achieve an ultra-wideband of 430 -1160 MHz.

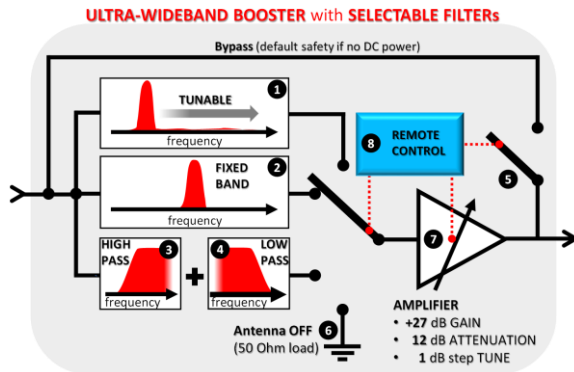
ADFA integrate a unique bank of filters along with a low noise amplifier.

Filters and gain can be easily setup locally thru a 4 key navigation buttons and a TFT display or remotely with a data connection on the same RF coaxial cable.

Using the latest Wisycom filter technology, ADFA gives a full control of RF zones and allows to build flexible and remote controllable antenna systems.

The feeding line is integrated on the PCB (for mechanical robustness) and all the electronic and mounting base are made by solid metal with waterproof gasketing.

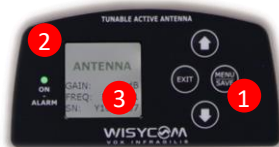
BLOCK DIAGRAM



- ① Tunable filter 430-730 (40 MHz wide)
- ② Fixed band saw filter: 940-960 MHz (Usa) or 1240-1260 (Japan) or 470-700MHz & 960-1160MHz (4G-STOP)
- ③ ④ High pass filter (410/470/510 MHz) and low pass filter (600/700/810 MHz) CASCADE (9 bandpass combinations)
- ⑤ Bypass line for full band reception (active mode if no DC power for safety)
- ⑥ Antenna off for zone control
- ⑦ Gain control from -12 dB to 27 dB
- ⑧ Remote control with a data link running on coaxial cable

SETUP CONTROL

1) Simple operation with 4 buttons to quickly monitor and setup the antenna booster and filters through the user menu.



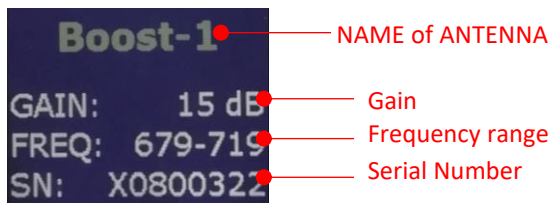
2) Signaling LED multicolor:

- White: when the unit is in bootloader mode during the firmware upgrade
- Orange: booster bypassed, antenna becomes passive
- Green: active booster with gain between $-12 \div 14$ dB (low consumption approx. 65mA@12V)
- Blue: active booster with gain between $15 \div 27$ dB (consumption approx. 110mA@12V)
- Red: fast blinking (when blinking function is activated by Manager or by MAT/SPL for easily recognizing of antenna)
- Red: fixed, alarm (type of alarm is shown on the display)
- OFF: antenna OFF mode or LED disable by settings

3) TFT – transfective (176 x 176 pixels, RGB)

MENU STRUCTURE AND NAVIGATION

STATUS menu This is the first menu displayed after power up and provides access to submenus and displays a summary of antenna settings.



Push MENU/SAVE to enter in the menu



Use the arrows to navigate the menu and edit the parameters



Keep pushing MENU/SAVE for 2 seconds to save

Confirm the new setup value within 5 sec. by pressing one more time on the MENU/SAVE button. Without any confirmation within 5 sec. the modification is cancelled.

Configure filter setting according to the frequency range in use.

Configure gain setting according to the loss of the cable used (see below typical attenuation table).

Typical attenuation of most common coaxial cable (30m / 100 ft.)

Cable type	Diameter mm (in)	Attenuation @ 400 MHz	Attenuation @ 900 MHz
RG 58 C/U	4.95 (1.9)	9.6 dB	10.4 dB
RG 213 /U	10.3 (4)	3.9 dB	6.6 dB
RG 218 /U	22.1 (8.6)	2.1 dB	4.2 dB
Cellflex - 1/4" foam	8.8 (3.4)	2.5 dB	3.9 dB

When GAIN is set to OFF (by pass mode) internal filter is disabled and the antenna is working in **430÷1160 MHz** range.

For more details about antenna settings see the below menu:

MENU	SUBMENU	SETTINGS	example	
Gain		OFF/ Bypass/ -12dB to 27dB	2dB	
	4G-STOP <i>(only F6 version)</i>	470-1160MHz	470-700 & 960-1160MHz	
Filter	WB (Wide Band) <i>(F1/F2 version)</i>	High pass filter (i.e.410/470/510 MHz) and Low pass filter (i.e.600/700/810 MHz)	470-600 MHz	
	NB (Narrow Band)	940-960 MHz (Usa) or 823-832 MHz	940-960 MHz	
	Tunable	430 ÷ 730 MHz (40MHz) @1MHz step	430-470 MHz	
		<i>Frequency range of selected filter</i>		
Settings	Display			
	Timeout	from 5s to 240s	20s	
	Brightless	from 1 to 10	5	
	Color	white/black	white	
	Rotate	0/180	0	
	Led	ON/OFF	ON	
Info	Boost	ON/OFF		
	Data	ON /OFF		
	Model	<i>Model of antenna</i>	ADFA-B-F6	
	Name	<i>Name of antenna (max 8 characters)</i>	ANT-A Z1	
	SN	<i>Serial number</i>	X1300045	
	FW	<i>Firmware/Application/Boot Ver</i>		
	HW		<i>Option</i>	B
			<i>Main rev.</i>	1
		<i>Filter rev.</i>	1	
		<i>Supply</i>	12.0 V	

SPECIFICATIONS**ANTENNA**

- Gain: 3dBi typical
- Bandwidth: 430÷1160 MHz
- Polarization: vertical

BOOSTER

- Control: display menu or remote thru coaxial cable (thru MAT244/MAT288/SPL2208/SPL2216)
- Gain: -12÷27 dB typical (1 dB step selection)
- Bandwidth: from 430MHz up to 1160 MHz (depending on the variants)
- Gain flatness: +/-1 dB
- Powering: +12 Vdc/65mA (green led, up to about 15dB of gain),
+12 Vdc/110mA (blue led, more than about 15dB of gain)
- Full bandwidth Bypass (0.8dB attenuation) and RF OFF function

FILTER

- Tunable: 430 ÷ 730 MHz (UHF), 40MHz of BW
- Fixed:
 - 940 ÷ 960 MHz (for USA) or
 - 470-700MHz & 960-1160MHz (4G-STOP)
- Selectable band pass filter: HP 410/470/510 MHz, LP 600/700/810 MHz (other see filter option)

MECHANICAL

- Connectors: BNC-F (LFA-B), N-F (LFA-N)
- Display: TFT – transfective (176 x 176 pixels, RGB)
- Body Material: Epoxy fiberglass with skeletal design
- Finishing: Black matte textured weather resistance coating
- Mounting: 5/4" & 3/8" thread (metal support and mounting base)
- Weight: 315 g (BNC), 365 g (N)
- Size: 305 x 111 x 28 mm (H x W x D)

VARIANTS**ADFA-<Connector>-<FilterOption>****<Connector>**

- B** BNC female
- N** N female

<FilterOption>: Tunable Filter • Selectable Filter • Fixed Filter:

- F1** TUN:430-730MHz • HP: 410/470/510 MHz + LP: 600/700/810 MHz • 940 ÷ 960 MHz (Europe/Usa)
- F2** TUN:430-730MHz • HP: 470/520/550 MHz + LP: 617/663/698 MHz • 940 ÷ 960 MHz (Europe/Usa)
- F6** TUN:430-730MHz • Narrow Band 823-832MHz • 470-700 & 960-1160MHz (4G-STOP)

