

# PA04-501C PA04-181D



500 W UHF ANALOG AMPLIFIER  
180 W TV (DVB-T/T2) DIGITAL AMPLIFIER  
*Air Cooled*

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**UHF TV AMPLIFIER**

## General Information

The **PA04-501C/PA04-181D** Amplifier is designed for the UHF band power amplification process. The unit employs last generation solid state LDMOS transistor in order to obtain high reliability and efficiency. It operates as a wideband amplifier over the full frequency band so that no adjustment is required a channel change.

The cooling system is performed with forced air by means two blowers installed inside the rack and the fully integrated mechanical structure itself provides to convey the air toward the RF module heat-sink and the power supply unit.

The Fig.1 shows the simplified block diagram. The input power is amplified in the driver stage and then applied the output final stage, the circuit involves also the directional couplers for RF monitoring, power detection and SWR protection.

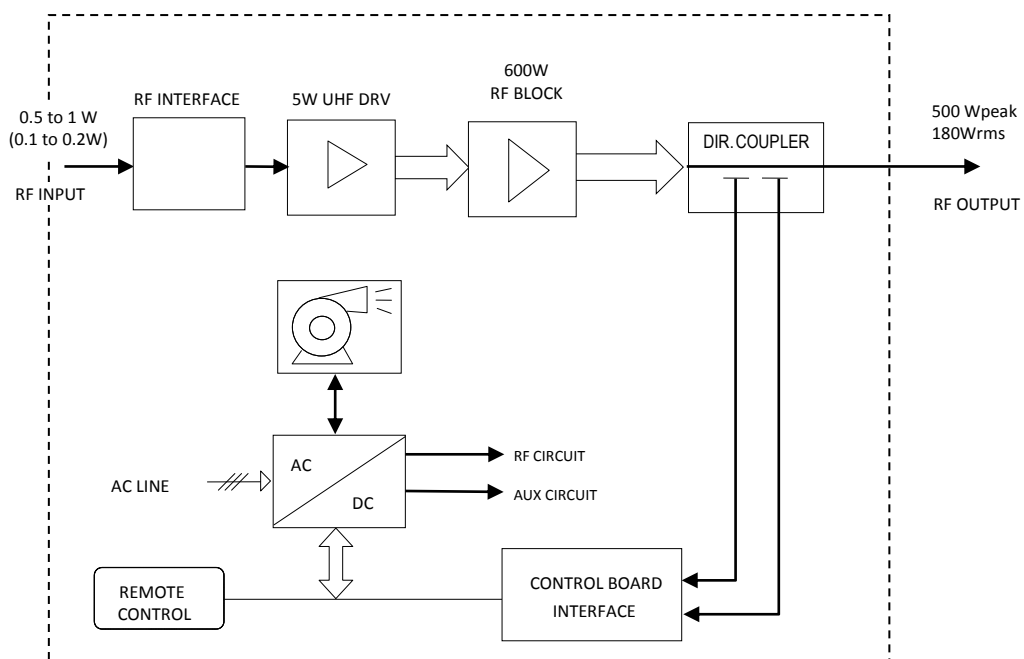


The "Control Board" card collects the parameter signals coming from the sensor installed in the RF module and after the process it provides to enable the RF and power supply circuits, furthermore the status is represented on the display front panel.

The amplifier is fully remote controlled by means hardware wire, the suitable connector is installed on the RF module rear panel.

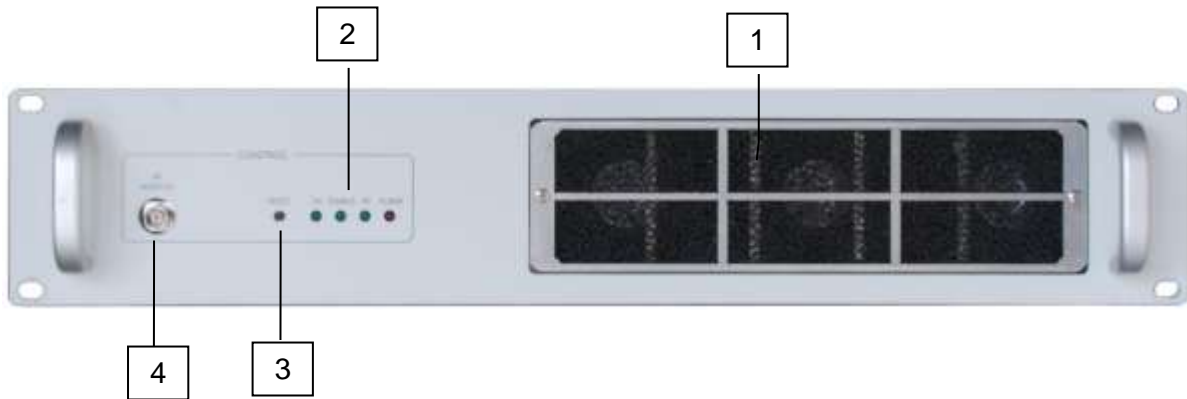
The power supply unit is mounted inside the drawer, the AC/DC replaceable module employs transformless switch-mode technology controlled, the protections against over-current, overvoltage and temperature are provided.

The amplifier is arranged in a 19" standard shelf, two unit high and the front panel includes the removable air inlet filter and monitoring control display, while the RF connectors and electrical interfaces are located on rear panel.



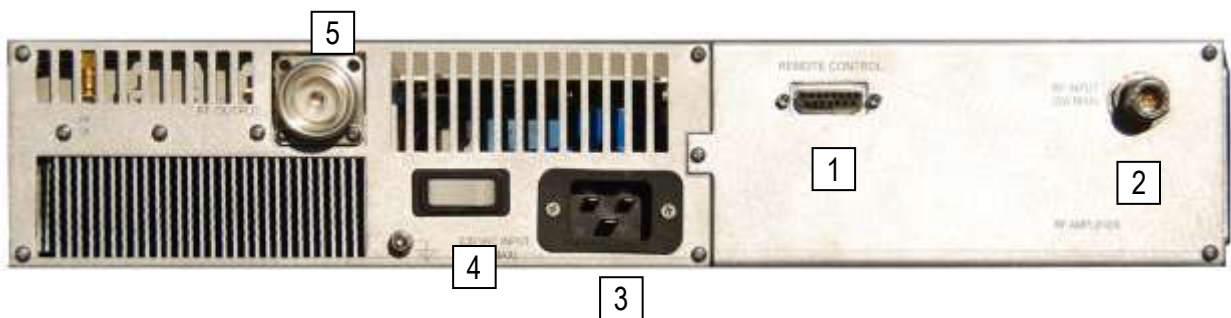
Simplified block diagram

Front Panel view



Nr.	Description
1	Air Inlet grid
2	Led indicators
3	Alarm Reset Pushbutton
4	RF Monitor

Rear Panel view



Nr.	Description	Nr.	Description
1	Remote Control	4	Main Breaker
2	RF Input	5	RF Output
3	AC Mains Power Input		

## Technical Specifications

- Frequency range ..... 470 to 862 MHz
- Class operation ..... AB Linear
- Input - output impedance ..... 50  $\Omega$
- Input return loss .....  $\geq 15$  dB
- Input power (nominal) ..... 0.2 W ATV mode  
0.1W DTV mode
- Output power ..... 500W peak (ATV mode)  
180W rms (DTV mode)
- RF input ..... N connector
- RF output ..... DIN 7-16
- Harmonics emission .....  $\leq 75$  dBc
- Size ..... 2 unit 19" rack , depth 580 mm
- Weight ..... 14kg approx
- Cooling: ..... forced air
- Voltage power supply: ..... 220 V AC  $\pm 15$  % (other on request)
- Frequency: ..... 50 - 60 Hz  $\pm 5$  %
- Power consumption (cooling system included) : .....  $\leq 2,2$  kW
- Power factor: .....  $\geq 0.9$
- Cooling: ..... forced air
- Dimensions: ..... 483 x 88 H x 580 mm
- Weight: ..... 14 kg approx.
- Temperature operating range: ..... 0 to 45  $^{\circ}$ C
- Altitude:..... up to 2.500 meters

### Remote Control

- Connector ..... D15 Male
- Inputs ..... Enable, Power Control, Alarm Reset
- Output ..... Alarm (General), RF Regular, Forward  
Power Measure, Reflect Power Measure

### How to Order:

**PA04-181D** – 180 W Digital TV Amplifier

**PA04-501C** – 500 W Analog TV Amplifier

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