Rast2432 WiFi Amplifier – Instructions

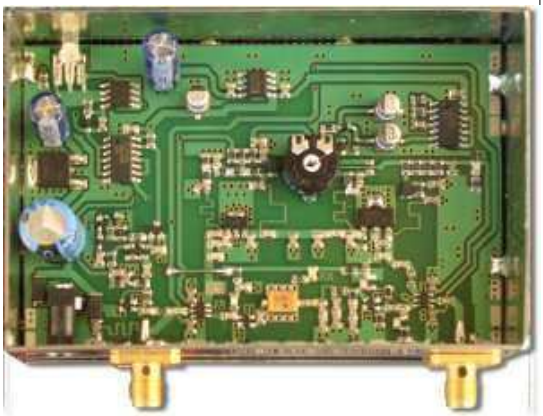
Rast2432 is a linear bidirectional amplifier suitable for WiFi 802.11b/g 2.4GHz wireless networks, because permit to increase TX signal from 17dBm (usual Access Point output power) to 30dBm (1Watt), enhancing RX signal with a low noise GaAsFet amplifier which provide more than 20dB RX gain.

Although it is designed for WiFi networks, it can be used for several other applications limited to the ISM band 2400-2480MHz, such as Audio/Video links.

Using the optional **DC Injector** and **Waterproof Housing**, it's easy to create your network just installing the amplifier closest to your antenna, and leaving the Access Point indoor, connected to the amplifier by a coaxial cable line.

Due to its large output power, **Rast2432 can be used by licensed amateur radio only**!

Extending link coverage is simple, with Rast2432!



Caracteristics:	
Frequency range:	2400-2480MHz (2.4GHz ISM band). **Not usable outside this range, due to RX filter restrictions**
Power supply:	10-14Vdc
Current consumption:	80mA in RX standby/RX, 800mA in TX
TX gain:	15dB. The amplifier works better if the **input power** is **around 15-17dBm**, to avoid amplifier working in the compression zone
TX output power:	30dBm (1W) with at least 15dBm (30mW) input power
RX gain:	more than 20dB, with 2400-2480MHz bandpass filter
Connectors:	SMA female for both AP and Antenna ports
Dimensions:	61x92x30mm LxWxH

Rast2432 WiFi Amplifier – Application schematics

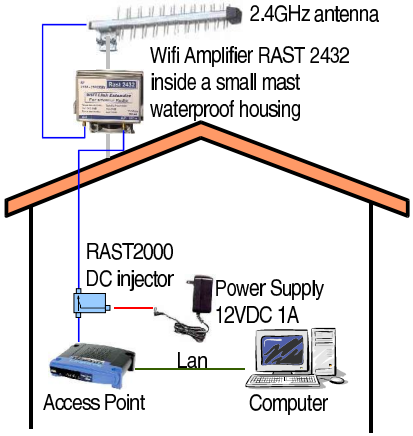


Fig.1 - High performance, Low risk (AP indoor) solution 1 coax cable needed

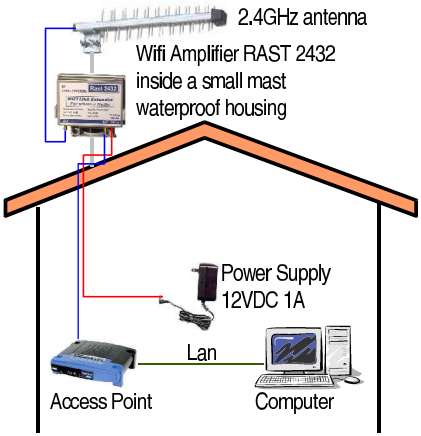


Fig.2 - High performance, Low risk (AP indoor) solution - 1 coax + 1 supply cables

Figures 1 and 2 shown the best solutions to connect antenna to the access point, minimizing cable loss: the amplifier will be installed on the antenna mast, inside its **housing** (optional part). Using **DC insert** device (optional part) it is possible to supply the amplifier through the coaxial cable, as shown in Figure 1.

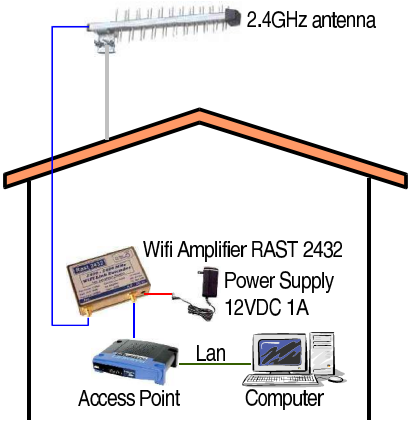


Fig.3 - Low performance solution (deprecated!)

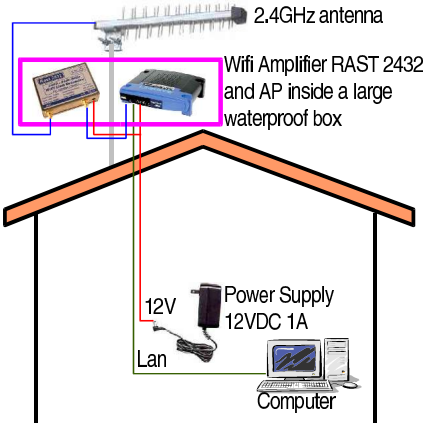


Fig.4 - High performance, High risk (AP outdoor) solution

Figure 3 shown the worst solution, which **should never been used!** Amplifier is connected to the antenna through a long coaxial cable, determining a power loss in both RX and TX. Figure 4 shown a good solution (performance similar to Fig. 1,2) which is not very practical because access point should be located on the roof, beside the amplifier.

Rast2432 WiFi Amplifier – Optional parts

Waterproof housing for Rast2432 amplifier

RAST2000 – DC injector for WiFi amplifier RAST2432
0.3dB insertion loss @2.5GHz

Reverse TNC to SMA adapter

Reverse SMA to SMA adapter

SMA – SMA cable with 16cm RG174