



A *RF45-PRO*

Wi-Fi b/g Modem



Quick Start Guide

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About this document

The purpose of this document is to assist the user in configuring the ARF45-Pro so to have it up and running for data transfer.

Assumption: The ARF45-Pro contains the default factory settings.

Declaration of conformity



Manufacturer's name: **ADEUNIS R.F.**
 Manufacturer's address: Parc Technologique PRE ROUX IV
 283 rue Louis NEEL
 38920 CROLLES - FRANCE

declares that the product if used and installed according to the user guide available on our web site www.adeunis-rf.com

Product Name: **ARF45**
 Product Number(s): **ARF7532A**
 Product options:

Complies with the RTTE Directive 99/5/EC:

EMC: conformity to the harmonized standard EN 301 489
 Safety: conformity to the standard EN 60950-1/2001
 Radio: conformity to harmonized standard EN 300-328 covering essential radio requirements of the RTTE directive.

Exposure to radio frequency signals: Regarding the 1999/519/EC recommendation, when using the device, keep the product at least 3 cm from your body.

Notes: - Conformity has been evaluated according to the procedure described in Annex III of the RTTE directive.
 - Receiver class (if applicable): 3.

Crolles, November 12th, 2008
 VINCENT Hervé / Quality manager

Download of the user guide

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1- Directly over the network

Here are given below the pre-requisites in order to be able to quickly configure the ARF45-Pro:

- There should be a DHCP server on the network (for instance in the Access Point)!

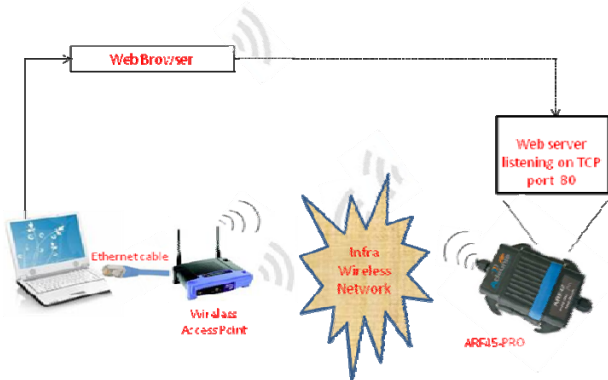
&

- The Access Point's settings must be the same as the ARF45-Pro default settings!

So the Access point should be configured as followed:

- Security settings: no security
- SSID: Lantronix Initial Infra Network

When the above conditions are fulfilled then here is below the scheme of the set up:



Upon power up, the connection establishment is automatic (LED on bottom of ARF45-Pro becomes ON) and the user can access the embedded web server running on the ARF45-Pro using a web browser (like Firefox or Internet Explorer):

- 1/ Open a web browser.
- 2/ Enter the IP address of the ARF45-Pro (The IP address has been assigned by the DHCP server running on the AP. So the address can be retrieved from the AP based on the MAC address of the ARF45-Pro).
- 3/ Enter *Admin* and *PASS* to log into the web server.

The following home page should display:

The screenshot shows the ARF45-PRO web interface. The top left has the logo and 'ARF45-PRO'. The top right has the 'Adeunis RF' logo. The left sidebar contains a list of menu items: Status, Bridge, CLI, CPM, CPU Power Mgmt, Diagnostics, DNS, Email, Filesystem, FTP, Host, HTTP, IP Address Filter, Line, LPD, Network, PPP, Protocol Stack, Query Port, RSS, SNMP, SSH, SSL, System, Terminal, TFTP, Tunnel, WLAN Profiles, and XML. The main content area is titled 'Device Status' and contains three sections: Product Information, Network Settings, and Line Settings.

Product Information		
Product Type:	Adeunis ARF45-Pro	
Firmware Version:	1.3.0.0R9	
Build Date:	Mar 10 2009 (15:42:36)	
Serial Number:	07002347J6MZAM	
Uptime:	0 days 00:05:17	
Permanent Config:	Saved	
Region:	United States	

Network Settings		
Interface:	wlan0	
Link:	ESTABLISHED	
MAC Address:	00:20:4a:aa:22:2e	
Host:	<None>	
IP Address:	192.168.0.11 / 255.255.255.0	
Default Gateway:	<None>	
Domain:	<None>	
Primary DNS:	<None>	
Secondary DNS:	<None>	

Line Settings		
Line 1:	RS232, 9600, None, 8, 1, None	
Line 2:	RS232, 9600, None, 8, 1, None	

Tunneling	Connect Mode	Accept Mode
Tunnel 1:	Active	Waiting
Tunnel 2:	Disabled	Waiting

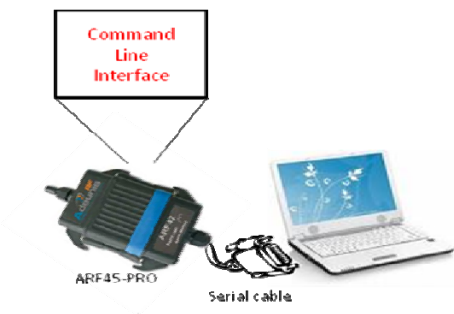
From here you can proceed with an advanced configuration of the device by accessing the different menu.

2- Over the serial port

If no DHCP server is present on the network or if the Access Point's settings cannot be changed, then the user cannot directly connect to the ARF45-Pro over the network.

So the user should first connect to the ARF45-Pro through the serial port and make a few changes to the default configuration in order to be able to connect to a remote AP.

Below, the set up schematic :



To configure the ARF45-Pro using the serial port, connect a terminal or a PC running a terminal-emulation program to the device's serial port.

Configure the terminal for 9600 baud, 8-bit, no parity, 1 stop bit, and no flow control.

Then:

1. Cycle the ARF45-Pro's power (power off and back on).
2. While the device is booting press and hold the exclamation point (!) key.

Then, when an exclamation point appears on the terminal or PC screen, type **xyz** within 5 seconds to display the Command Line Interface prompt.

From this point, the user is required to navigate onto the CLI (Please refer to the Command set and User guide for more information) and perform the following changes :

- If no DHCP server is present on the network, the user must type the following commands (each followed by ENTER): **enable**, then **config**, then **if 2**
 - 1) Disable the DHCP client:
At that point the user must type **dhcp disable** in order to disable the dhcp.
 - 2) Enter a static IP address:
At that point the user must type **ip address xxx.xxx.xxx.xxx** in order to enter a static IP address.
 - 3) Save the changes: by typing **write**.
- If the user cannot change the AP's settings, then he should modify the ARF45-Pro's WLAN settings : this comes down to change the SSID name and possibly the security settings.

After having performed those changes the ARF45-Pro is up and running. So the user can connect to the ARF45-Pro web server (refer to 1) for advanced configuration.

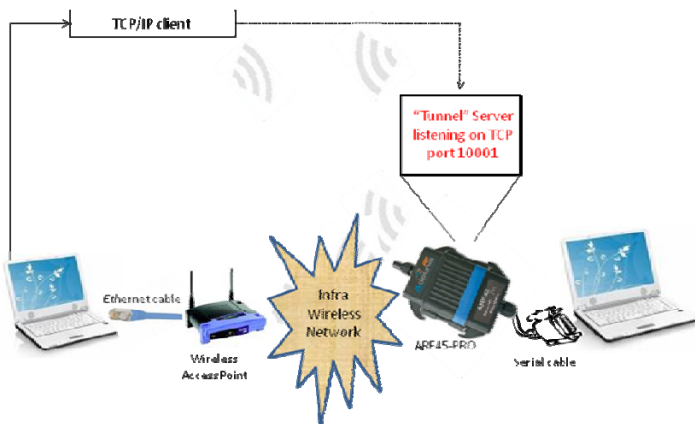
In case the user does not have any Acces Point, then he can connect to the web server by connecting to the Ad Hoc network created by the ARF45-PRO, which name is *Lantronix Initial Adhoc Network*.

3- Data transfer

Once the connection is established with a remote wireless Access Point, the user can send and receive data from the ARF45-Pro.

By default the ARF45-Pro behaves like a TCP server listening on a default port (port number 10001).

So the user should initiate the data transfer by opening a TCP socket from a TCP client.



Specifications

RF

Frequency range :	2.412 – 2.484 GHz
Radiated RF power :	+ 15 dBm
Sensitivity :	- 91 dBm @ 1 Mbps
Range :	200 m in open field
Standards compliance :	EN 300-328 – EN301-489

WIFI

Network standard :	802.11b; 802.11g
Security :	WEP 64, WEP 128, WPA/WPA2-Personal (PSK), WPA/WPA2-Enterprise (EAP-TLS, EAP-TTLS, PEAP, LEAP)
Radio data rate :	Up to 54 Mbps
Supported LAN Protocols :	TCP-IP, DHCP, BOOTP, ICMP, ARP, UDP, SMTP, TFTP, ICMP, SNMP, AutoIP

Modem interface

Serial data rate :	From 300 bps to 250 Kbps
Serial ports :	TxD, RxD.
Flow control :	RTS, CTS
Set-up and configuration :	Through menus (by serial link or telnet or web manager)
Mode :	Transparent
General information	
Power supply :	8 to 36 Volts (integrated regulator)
Electric Power :	< 1,2 W
Operating temperature :	-30 to +70 °C
Size :	145x100x40 mm
Packaging :	IP65 box with integrated antenna

Reference :

ARF7532K : IP65 box version