



AP400 BY GÜÇLÜKADRO

USER MANUAL

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1) INTRODUCTION

1.1) AP400 by Güçlükadro

Our product is a network monitoring device which is a combination of an access point (AP-400), a 128x64 graphic LCD and a PCB (Printed Circuit Board) which contains PIC 16f877. While AP400 provides wireless communication to the users, the administrator can see their Mac addresses and number of connected users to the device by the help of the graphic LCD. Also the administrator can change SSID of the device. When doing these, he/she is going to use PCB's buttons.

1.2) HARDWARE COMPONENTS

1.2.1) Admin PC

Administrator will use it for installation, in other words loading the kernel and make the device ready.

1.2.2) Airties AP-400

AP-400 can be used as a 54 Mbps wireless access point, repeater, bridge and a 4-Port switch. When AP-400 is connected to a wired ADSL Router, it forms a local network and provides wireless Internet access to the computers that supports wireless communication.

1.2.3) PCB

The Printed Circuit Board contains PIC 16f877 and 5 buttons namely RESET, UP, DOWN, ENTER and EXIT. The usage of these buttons will be explained later.

1.2.4) 128x64 Graphic LCD

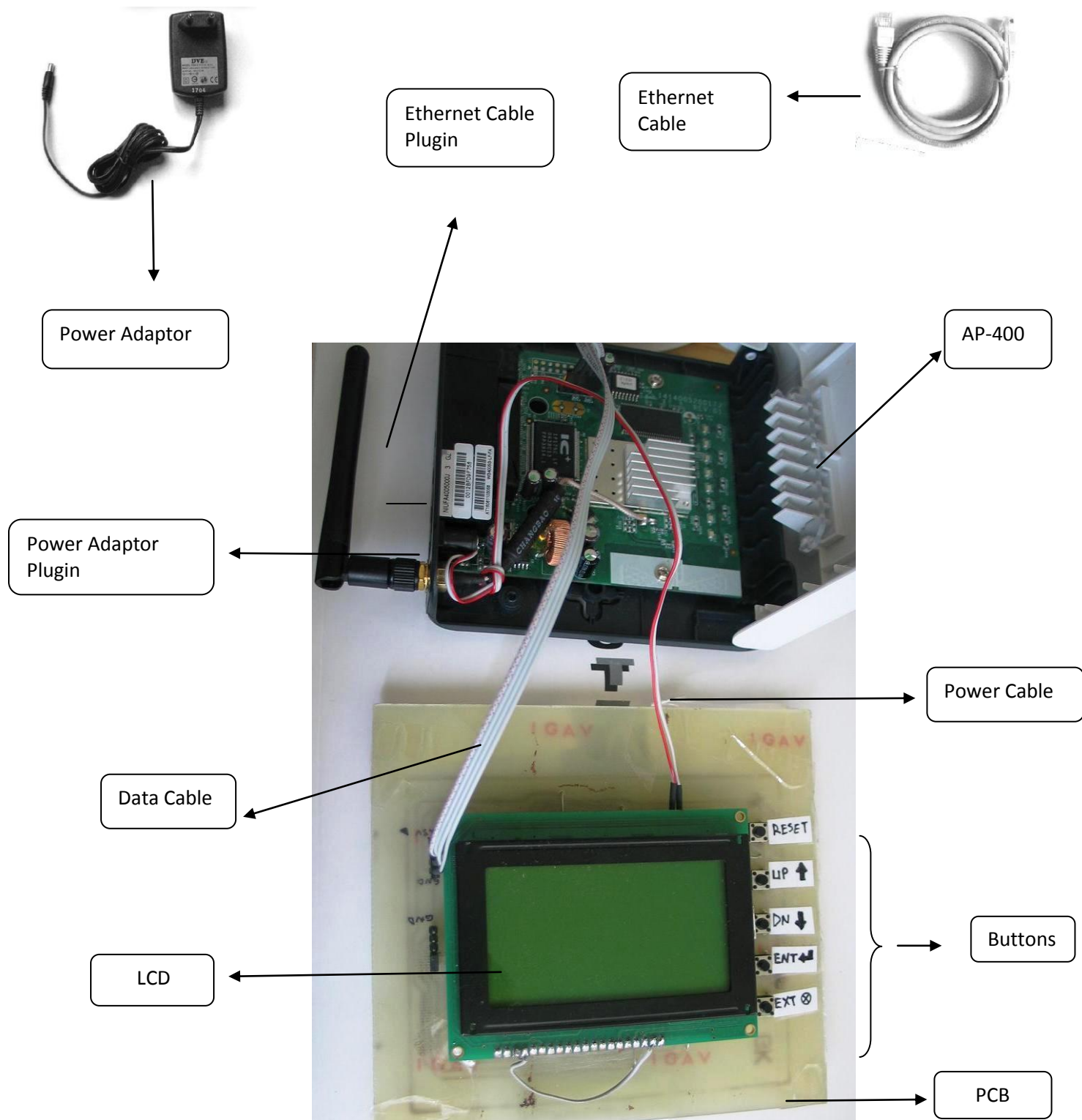
This component is connected to the PCB and displays the user menu, Mac addresses of the connected users, number of connected users etc.

1.2.5) Plugging the Components

The user should attach 4 cables:

- The first one is the Power Adaptor cable, which is the power supplier of the AP-400 and the PCB.
- The second one is the data cable, which is the provider of data transfer between AP-400 and PCB.
- The third one is the power cable, which transfers power to the PCB over AP-400 in order to make it work.
- The fourth one is the Ethernet cable, which connects the device to the Internet.

Picture 1 shows all of the components and the way of attaching the cables. It is important to attach them as shown in the Picture 1.



Picture 1

2) INSTRUCTIONS FOR ADMINISTRATOR

2.1) SETTING UP THE DEVICE

Once you have extracted the tgz files to a directory, and installed the PIC code you need to build the kernel. To do this go to src directory open a terminal and write “make ap400”. After this you need to connect the AP400 with computer and using a serial terminal program (and when AP400 is in redboot) transfer the rootfs files to AP400. The commands to do this are below:

```
ip_address -h 192.168.2.1 -l 192.168.2.254
```

```
load -r -b 0x80400000 vmlinux.ap400.bin.l7
```

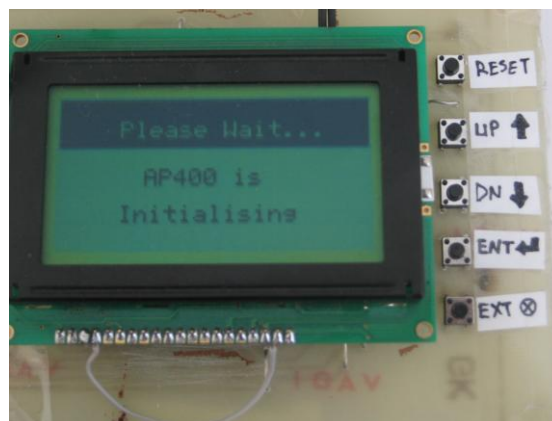
```
fis create -l 0x00080000 -f 0xBF70000 -e 0x80041040 -r 0x80041000 vmlinux
```

```
load -r -b %{FREEMEMLO} sqfs.ap400.bin
```

```
fis create -l 0x00140000 -f 0xbfc20000 -e 0 rootfs
```

2.2) OPENING THE DEVICE

When the data, power and Ethernet cables are attached correctly, if you plug in the Power Adaptor, the device will start working. After connecting the Power Adaptor the user should wait until AP-400 complete its initialization. The opening of the device is shown in Picture 2.



Picture 2

2.3) USING THE BUTTONS

As shown in the pictures, the product has 5 buttons. These are RESET, UP, DN, ENT, EXT.

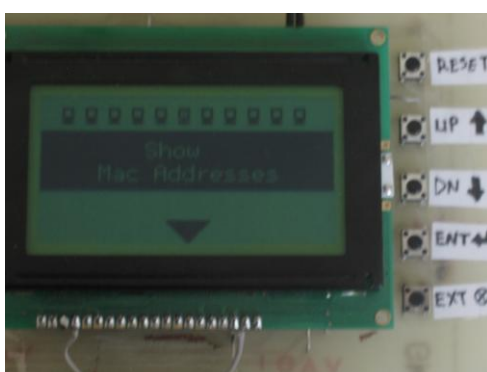
- UP button is for going up in menus.
- DN button is for going down in menus.
- ENT button is for entering to a menu.
- EXT button is for exiting from a menu.
- RESET button is for resetting the LCD display.

2.4) THE USER MENU

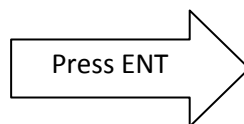
There are three items in user menu, namely “Show Mac Addresses”, “Show Number of Connected Users” and “Change SSID”.

2.4.1) Show Mac Addresses

As shown in pictures 3 and 4, if the user presses the ENT button when the menu cursor is on “Show Mac Addresses” item, he/she is going to see the Mac addresses on LCD if there are computers which are connected to AP-400.



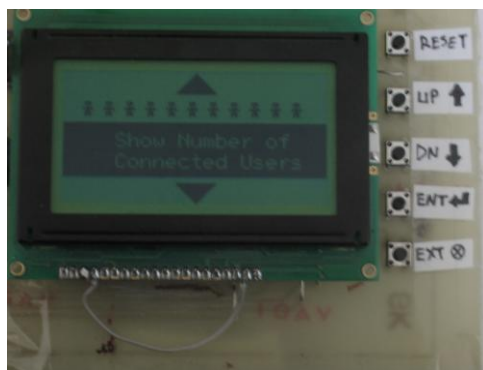
Picture 3



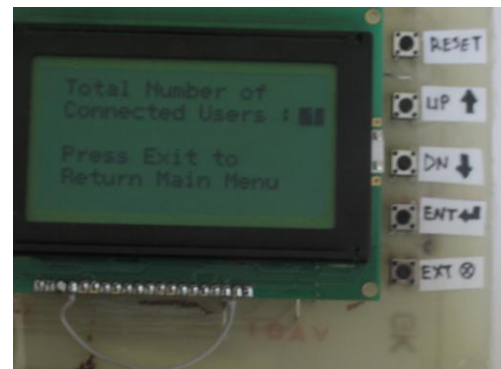
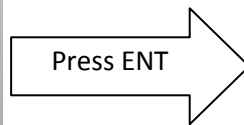
Picture 4

2.4.2) Show Number of Connected Users

As shown in pictures 5 and 6, if the user presses the ENT button when the menu cursor is on “Show Number of Connected Users” item, he/she is going to see the number of connected users on LCD if there are computers which are connected to AP-400.



Picture 5



Picture 6

2.4.3) Change SSID

If the user presses the ENT button when the menu cursor is on “Change SSID” item, he/she will be able to change the SSID of AP-400. By using UP and DN buttons, the user can switch between characters. When the user presses ENT button, the cursor heads to the right and when he/she presses ENT two times the new SSID will be entered.