



LINK
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BATTERY PoE at2 MANUAL

OpenWrt 19.07.5

Portable device for alignment and testing of PoE
Internet antennas, ip cameras, router.

Important:

Set a static IP in the Wi-Fi "www.linktechs.net" network.

First time, charge until the battery stops blinking.

If it does not turn on, put switch on off state and charge it.

The unit is in bridge mode, transparent, everything which is on the LAN can be found on the Wi-Fi.





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Functions

Top Button:

- One click, Wi-Fi Turn On
- Fast double click, Wi-Fi Turn Off
- Long last click button, led light Turn On

24V / 48V Button

- One click, PoE and WiFi Turn on (For Change this, see at the end of the manual)
- Long last click button, PoE and WiFi Turn Off
- Fast double click, Show Test

Display:

- Battery level.
- PoE voltage
- Ethernet Status ICON
 - switched off - router off
 - full – ethernet at 100 Full Duplex
 - half – Problems with ethernet cable
 - unplg – Cable Not Plugged In
- Power delivered
- config done – When the script is successful
- config failed – When the script fails

Reset:

- Pressed to startup, firmware update
- Pressed 30 seconds, factory reset.

PowerLink AT2

- Blue Sx Ethernet
- Red Wi-Fi
- Yellow Battery
- Orange Dx Power

Yellow Battery Led:

- In charging = Blink
- End of Charge = On
- In discharging = ON
- Low Battery = Blink





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Features:

- 1.5 inch TFT RGB display
- Passive Power Over Ethernet Device, Ubiquiti, Mikrotik, Cambium, ecc.
- switchable 24V and 48V - 30W PoE.
- Will power up 802.3at devices using 8 wires
- WiFi 2.4 GHz - Optional 5GHz AC Module
- 14000mA/h for charging external devices.
- Short-circuit, Overload, Temperature, Low Output Voltage protection.
- Automated preparation of CPE antenna. Via Linux script
- OpenWrt / Ledu, HTML menu, working opkg repository
- VLAN support
- Iperf3 -s always active
- Samba 3, for files and memory sharing, USB flash memory.
- Works Perfectly with Several Manufacture Apps -- EasyUBNT, Tik-App, Ubuntu, Cambium
- IEEE 802.3 (Pin 4 e 5 +24V, Pin 7 e 8 GND)
- For old Cambium CPE you have to create a LAN cable with reversed power pin.
- One-year warranty.
- USB Out (Charge/LED)
- Wi-Fi
- PoE On
- Accessory:
 - Hard Case
 - USB Cable
 - LAN Cable
 - 5Ghz AC module
- 280 grams
- 86x103x30mm
- MT7620 chipset 2.4GHz
- Two PCB antennas.

WiFi Speed:

2.5 Ghz Width 40Mhz = 86 Mbps

2.5 Ghz Width 20Mhz = 43 Mbps

Optional USB AC Stick

AC 5Ghz Width 80Mhz = 292Mbps

AC 5Ghz Width 40Mhz = 150Mbps

AC 5Ghz Width 20Mhz = 72 Mbps





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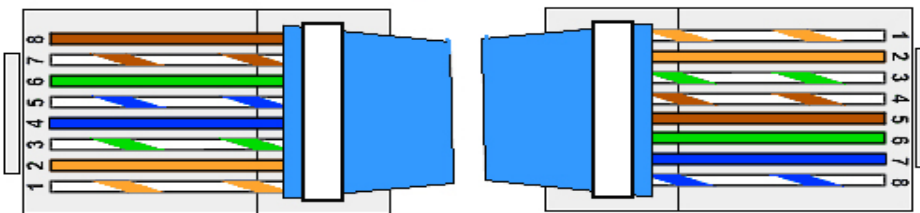
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Pinout



- 1 Data Pair 1
- 2 Data Pair 1
- 3 Data Pair 2
- 4 + VDC
- 5 + VDC
- 6 Data Pair 2
- 7 - VDC
- 8 - VDC

For 24V Cambium CPE you have to buy a LAN cable with reversed power pin.



Accessory:

Cambium Cable



3 Vie cable, for LAN speed test





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IP Address: IP device 192.168.1.69 -- No DHCP Master and No DHCP Server enabled.

Ssh username root password geva

Automated preparation of CPE antenna.

On the PowerLink AT, through ssh connection:

/root/CpConf.sh	daemon for CPE configuration
/root/OnCpScript.sh	executed on the CPE for its configuration
/root/system.cfg	copied on the CPE for its configuration
/root/icons.sh	daemon that controls icon on TFT

On HTML page of router -> System -> Startup -> Local Startup

iperf -s&

/root/icons.sh &

#!/root/CpConf.sh &

1. Remove comment (#) on the last line, for enable auto CPE conf.
2. Customize OnCpScript.sh for your requirement.
3. Copy your CPE configuration file, system.cfg
4. Examples work on the Ubiquiti AirOs CPE





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Iperf3

Iperf3 -s always running

You can call

`iperf3 -c 192.168.1.69`

On any linux device, CPE, PC, ecc.

This Ethernet Test:

```
root@PowerLinkAT:/# iperf3 -s
```

```
-----  
Server listening on 5201  
-----
```

```
Accepted connection from 192.168.1.30, port 50542
```

```
[ 5] local 192.168.1.69 port 5201 connected to 192.168.1.30 port 50544
```

[ID]	Interval		Transfer	Bitrate
[5]	0.00-1.02	sec	11.4 MBytes	93.5 Mbits/sec
[5]	1.02-2.01	sec	11.1 MBytes	94.2 Mbits/sec
[5]	2.01-3.01	sec	11.2 MBytes	94.1 Mbits/sec

```
-----  
[ ID] Interval          Transfer      Bitrate  
[ 5] 0.00-9.02      sec    106 MBytes  99.1 Mbits/sec
```

receiver

```
geva@PC: iperf3 -c 192.168.1.69
```

```
Connecting to host 192.168.1.69, port 5201
```

```
[ 5] local 172.20.207.228 port 37390 connected to 192.168.1.69 port 5201
```

[ID]	Interval		Transfer	Bitrate	Retr	Cwnd
[5]	0.00-1.00	sec	12.1 MBytes	101 Mbits/sec	0	225 KBytes
[5]	1.00-2.00	sec	11.4 MBytes	95.6 Mbits/sec	0	236 KBytes
[5]	2.00-3.00	sec	11.5 MBytes	96.1 Mbits/sec	0	236 KBytes
[5]	3.00-4.00	sec	10.9 MBytes	91.7 Mbits/sec	0	236 KBytes

```
-----  
[ ID] Interval          Transfer      Bitrate      Retr  
[ 5] 0.00-9.48      sec    107 MBytes  95.1 Mbits/sec    0  
[ 5] 0.00-9.48      sec     0.00 Bytes  0.00 bits/sec
```

sender
receiver





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Samba3 and USB flash key

USB flash memory FAT32

mounted in /mnt/usbkey

Android and Linux shared as:

192.168.1.69/usbkey

Samba3 not work with windows 10, but you can enable it. (Search in google)

Repository:

If you set working gateway, repository work, and you can add the modules you need, for example to enable SAMA, GSM dongle, or other drives, the flash free is about 1Mb.





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Upgrading Firmware

3 available solutions

1. USB thumbdrive, small capacity, formatted FAT32, firmware "BatteryPoE_at2.bin"
At startup the firmware is updated.
2. Keep reset pressed at startup, Power led blink and you can see Firmware Page of Uboot at address <http://192.168.1.69/index.html>
3. On HTML page of the router, you can find system, backup, update.

Uboot:

FIRMWARE UPDATE

You are going to update **firmware** on the device.
Please, choose file from your local hard drive and click **Update firmware** button.

openwrt-19.0...ysupgrade.bin

WARNINGS

- do not power off the device during update
- if everything goes well, the device will restart
- you can upload whatever you want, so be sure that you choose proper firmware image for your device





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Special Function:

Connecting to the console, in ssh, and send command for:

echo AutoOff=NO > /dev/ttyS0

Disable Auto WiFi Off, Turning the PoE Off

echo AutoOff=YES > /dev/ttyS0

Enable Auto WiFi Off, Turning the PoE Off **(Default)**

echo AutoOn=NO > /dev/ttyS0

Disable Auto WiFi On, Turning the PoE On

echo AutoOn=YES > /dev/ttyS0

Disable Auto WiFi On, Turning the PoE Off **(Default)**

Optional 5GHZ AC USB Stick

If left in the USB socket, the automatic ON and OFF function of the router is not work.

You must turn it on and off by pressing the button.

