



EW500A0203 User Guide

Connect
Ideas.
Shape
solutions.



Sommario

Introduction.....	3
Hardware description.....	3
EW500A login and status	4
Step 1: Power On	4
Step 2: Connect to your computer	4
Step 3: Login.....	5
EW500A basic programming	6
Wired network	7
Mobile network.....	8
Wireless network	9
EW500A advanced programming	10
Firewall policies.....	10
Traffic rules	11
Port forwarding.....	13



Introduction

ESA EW500A series mobile wifi extender is a compact router mainly intended for IoT 4.0 applications.

It is based on a powerful 32 bits industrial communication processor and real time operating system Linux based.

In the ESA device portfolio it must be used in order to provide wifi or 3G/4G connectivity to the device that do not have integrated wifi peripherals for the internet connection.

Hardware description

- DC power supply (7.5v – 32v)
- RJ45 - LAN port connection
- RJ45 – WAN port connection
- 3G – 4G sim card slot
- Wifi client mode connection
- Wifi antenna
- 3G / 4G antenna



EW500A login and status

Step 1: Power On

Connect the power supply unit to the power connector (12V DC / 1.5 A) or any external power supply (7.5 V DC – 32 V DC).

Step 2: Connect to your computer

Use a standard RJ45 ethernet cable to connect the LAN port to your computer ethernet port.

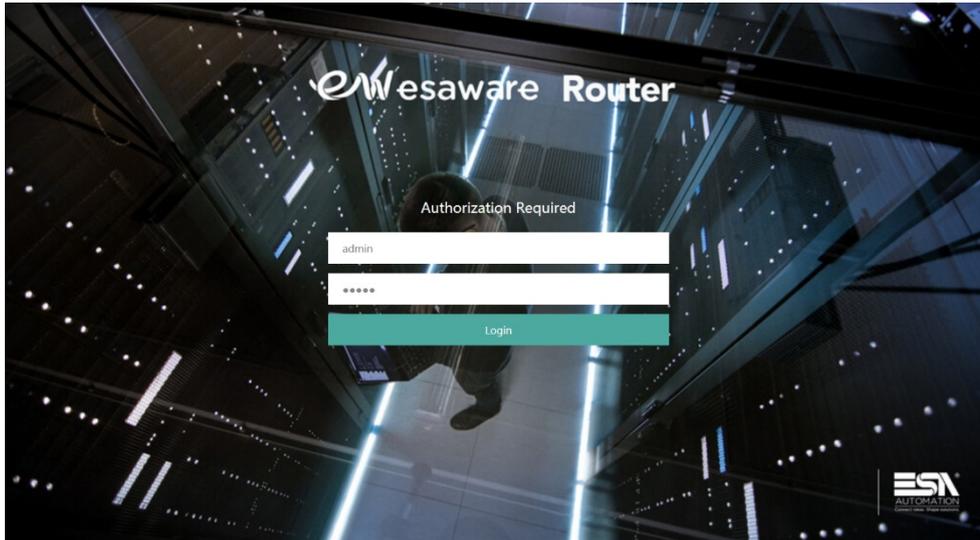
The router is equipped with a DHCP server so you can set DHCP support in your computer ethernet port setting.

The default Ip address of the EW500x LAN port is 196.168.1.1



Step 3: Login

As soon as the ethernet connection is established the following login page is displayed:



The default login parameters are:

Username: admin

Password: admin

Once logged in the page below will be displayed:

The status page of the Esaware Router is shown. It features a dark sidebar on the left with navigation options: System Status, Basic Network, Advanced Network, VPN Configuration, System Management, System Diagnostics, and Logout. The main content area is titled "Status" and contains two tables of system information.

System	
Router Name	MEM
Router Model	AP147 Reference Board
Firmware Version	QSDK Premium Wireless Router V1.0.8.1015
Kernel Version	3.3.8
Local Time	Thu Nov 9 01:31:47 2018
Uptime	1h 21m 11s
Load Average	0.15, 0.09, 0.06
Product Name	EW500A
Product ID	1120R21806250040
Hardware Class	Single Model Single Card
Hardware Version	V1.2
MAC Address	34:0e:68:24:3a:bf
WAN Mode	3G/4G and Wired
Vendor	ESA

3G/4G WAN Status	
Address	10.31.75.0
Gateway	10.31.75.1
DNS	217.200.201.64 / 217.200.201.65
Modem Type	FDD-LTE/TDD-LTE/WCDMA/GSM
Modem Model	QUECTEL EC25-EFA
Modem IMEI	86110703559237
Modem IMSI	222018702541439
Network Operator	TIM WAP
Current Network Standard	AUTO

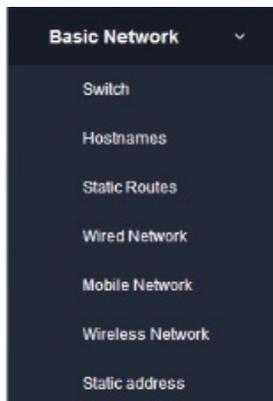


This page will show the current situation:

System informations
3G/4G WAN status
Wired WAN status
DHCP connections

EW500A basic programming

Open the Basic Network Menu in order to display the different connections parameters:



Here below the most important settings necessary for the different possible connections.



Wired network

The below page will be displayed with the parameter settings for both the WAN and LAN connections.

WAN:

The screenshot shows the 'Wired Network' configuration page for the WAN interface. The page title is 'Interfaces - WAN'. Below the title, there is a 'General Setup' tab and an 'Advanced Settings' tab. The 'General Setup' tab is active, showing the following fields:

- Status: Up
- Uptime: 0h 0m 0s
- MAC Address: 34 0A 68 24 3A CD
- et0/0: RX: 0.00 B (0 Pkts.) TX: 0.00 B (0 Pkts.)
- Protocol: DHCP client
- Hostname to send when requesting DHCP: HDM

At the bottom right of the configuration area, there are two buttons: 'SAVE & APPLY' and 'RESET'.

LAN:

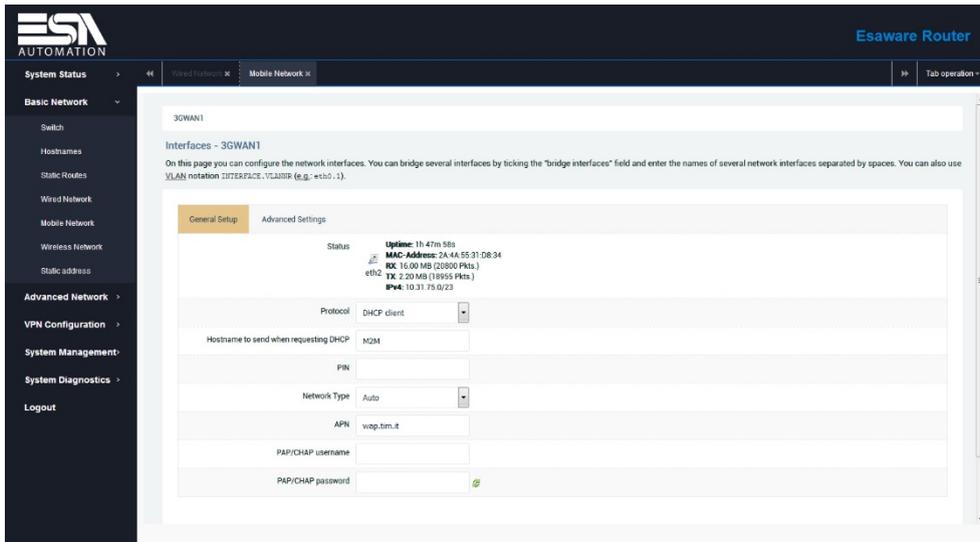
The screenshot shows the 'Wired Network' configuration page for the LAN interface. The page title is 'Interfaces - LAN'. Below the title, there is a 'General Setup' tab and an 'Advanced Settings' tab. The 'General Setup' tab is active, showing the following fields:

- Status: Up
- Uptime: 1h 45m 41s
- MAC Address: 34 0A 68 24 3A BF
- br-lan: RX: 3.15 MB (20682 Pkts.) TX: 19.39 MB (25174 Pkts.)
- IPv4: 192.168.1.1/24, 172.17.16.0/1/24
- Protocol: Static address
- Static address: 192.168.1.1
- IPv4 address: 192.168.1.1
- IPv4 netmask: 255.255.255.0
- IPv4 gateway: (empty)
- IPv4 broadcast: (empty)
- Use custom DNS servers: (empty)



Mobile network

The below page does include all the setting parametrs necessary for a 3G / 4G mobile Network connection.



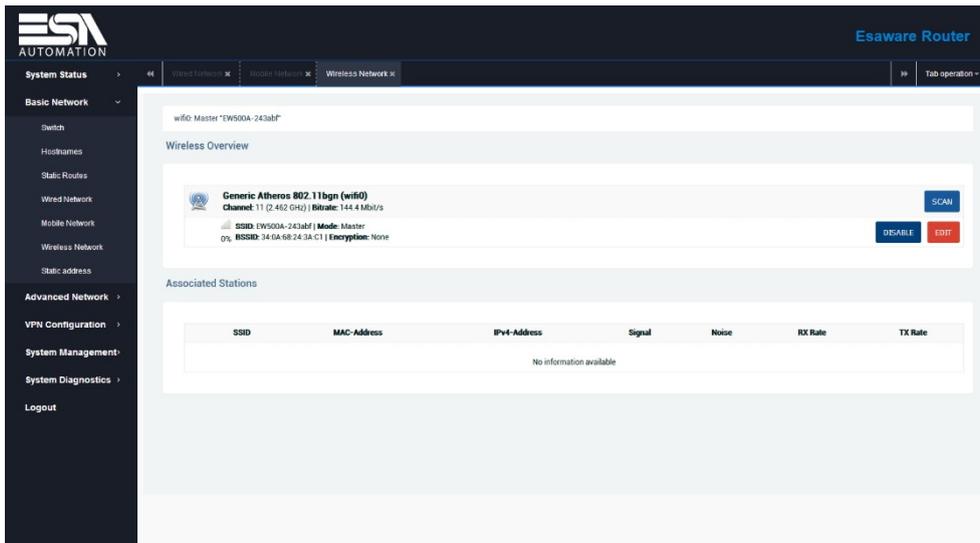
The 3G / 4G antenna must be connected to the 3G/4G connector.





Wireless network

The user can force a SCAN of the wifi connection available, select the one he wants to use and insert the connection password.



The wifi antenna must be connected to the Aux connector.

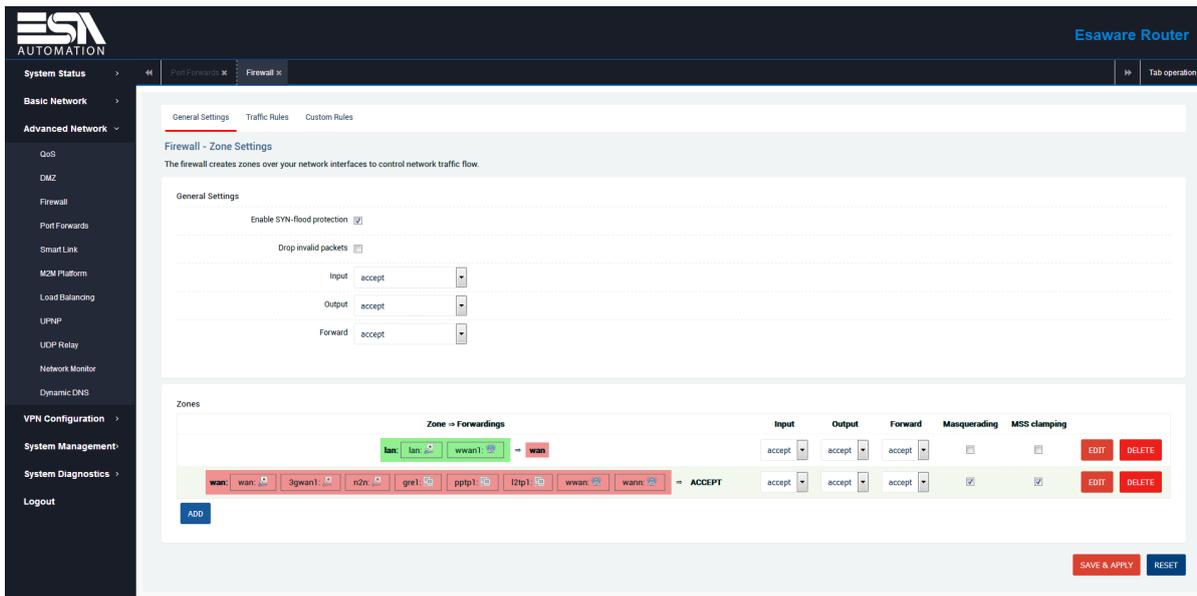




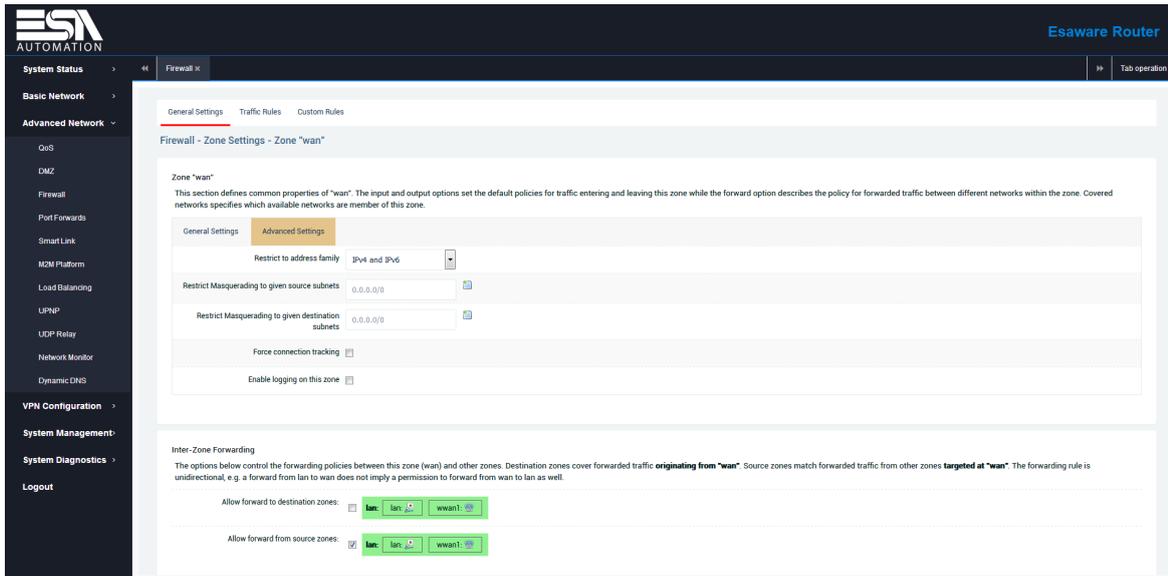
EW500A advanced programming

Firewall policies

In this section the user can define the product firewall policies. This is necessary in case the EW500 is the entry point for the LAN internet connection. The default configuration is intended in order to provide the default filtering configuration for a standard http or https support.



Here below the Advanced setting section where the user can define very strict firewall policies based on Ip address source and destinations and even log all the traffic.



Traffic rules

In this section the user is free to do some traffic restrictions in incoming and outgoing directions by clicking Add New Forward rules.

The restriction can be based on the following parameters:

- Network port
- Ip address
- MAC address

And also based on specific communication protocols.



Esaware Router

System Status
Firewall
Tab operation

- System Status
- Basic Network
- Advanced Network
- QoS
- DMZ
- Firewall
- Port Forwards
- Smart Link
- M2M Platform
- Load Balancing
- UPNP
- UDP Relay
- Network Monitor
- Dynamic DNS
- VPN Configuration
- System Management
- System Diagnostics
- Logout

General Settings
Traffic Rules
Custom Rules

Firewall - Traffic Rules

Traffic rules define policies for packets traveling between different zones, for example to reject traffic between certain hosts or to open WAN ports on the router.

Name	Match	Action	Enable	Sort
Allow-DHCP-Renew	IPv4-UDP From any host in wan To any router IP at port 68 on this device	Accept input	<input checked="" type="checkbox"/>	EDIT DELETE
Allow-Ping	IPv4-ICMP with type echo-request From any host in wan To any router IP on this device	Accept input	<input checked="" type="checkbox"/>	EDIT DELETE
Allow-DHCPv6	IPv6-UDP From IP range FE80:0:0:0:0:0:0:10 in wan with source port 547 To IP range FE80:0:0:0:0:0:0:10 at port 546 on this device	Accept input	<input checked="" type="checkbox"/>	EDIT DELETE
Allow-ICMPv6-input	IPv6-ICMP with types echo-request, echo-reply, destination-unreachable, packet-too-big, time-exceeded, bad-header, unknown-header-type, router-solicitation, neighbour-solicitation, router-advertisement, neighbour-advertisement From any host in wan To any router IP on this device	Accept input and limit to 1000 pkts. per second	<input checked="" type="checkbox"/>	EDIT DELETE
Allow-ICMPv6-Forward	IPv6-ICMP with types echo-request, echo-reply, destination-unreachable, packet-too-big, time-exceeded, bad-header, unknown-header-type From any host in wan To any host in any zone	Accept forward and limit to 1000 pkts. per second	<input checked="" type="checkbox"/>	EDIT DELETE

Open ports on router:

Name	Protocol	External port
<input type="text" value="New input rule"/>	TCP+UDP	<input type="text"/>

New forward rule:

Name	Source zone	Destination zone
<input type="text" value="test"/>	lan	wan

Source NAT

Source NAT is a specific form of masquerading which allows fine grained control over the source IP used for outgoing traffic, for example to map multiple WAN addresses to internal subnets.

Name	Match	Action	Enable	Sort
This section contains no values yet				

New source NAT:

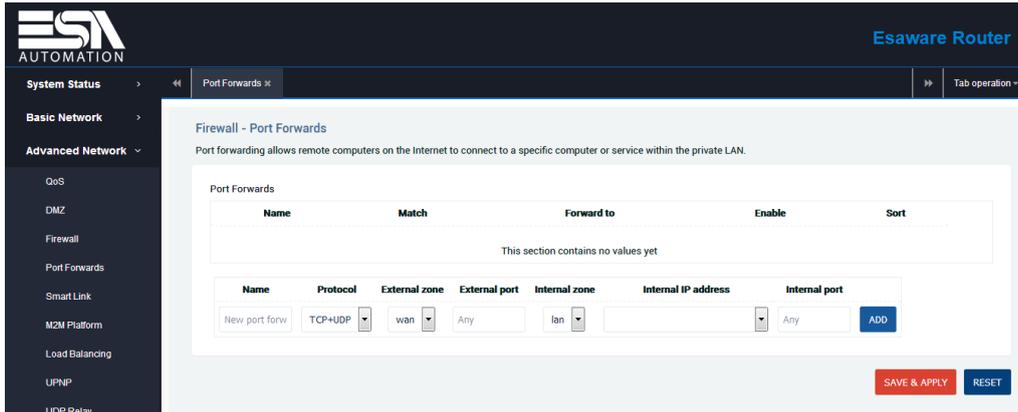
Name	Source zone	Destination zone	To source IP	To source port
<input type="text" value="New NAT table"/>	wan	lan	192.168.1.1 (br-lan)	80



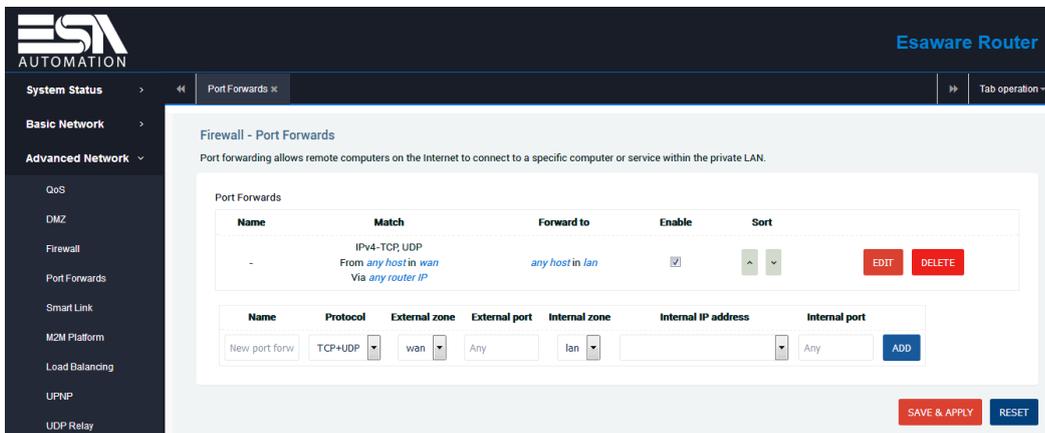
Port forwarding

The user can add port forwarding rules.

Port forwarding allows remote computers to connect a specific computer or service in the private LAN.



In case of more specific filtering required via the Edit button the user can create his own more precise configuration.





Connect
ideas.
shape
solutions.

[ESA S.p.A. | www.esa-automation.com](http://www.esa-automation.com) |