

# PIKA $\mu$ WARP Hardware Manual

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Version	Date	Comment
Current Version (v. 2)	Jun 20, 2013 03:57	David Modderman: Minor spelling correction
v. 1	Jun 19, 2013 10:30	David Modderman: Initial Release

## 1. Overview

The PIKA  $\mu$ WARP is a small stand-alone networking appliance used for multiple end user applications such as a Voip Firewall, Virtual Private Network, Session Border Controller, etc.

### 1.1. Interfaces

The PIKA  $\mu$ WARP provides the following interfaces:

- Two 10/100BaseT network ports
- One USB 1.1 host with two type A USB jacks (one is used for connecting power to)
- Reset button
- Status LEDs

## 2. Regulatory Information

### 2.1. Compliance

The appliance is certified compliant for use in the United States, Canada, and European Union countries. The following tables list approval information for EMC/EMI, Safety standards. Testing for all regulatory disciplines was performed at Nemko Canada product certification and compliance test facility. The tables list each country or region, its approval standard, registered approval numbers (if any), and a short description of the approval standard.



The term self-declared indicates that the board was tested by a third-party test facility, but does not require an official approval number by a country or region's approval standard authority.

## EMC/EMI

EMC/EMI standards govern the amount of electromagnetic interference and immunity of electrical devices. The following table lists the EMC/EMI approval information for the appliance.

Country / Region	Approval Standard	Approval Number	Approval Description
United States	FCC 47 CFR Part 15, Subpart B, Class A	Self-declared	Rules for EMC/EMI emissions
Canada	ICES-003 Issue 5, Class A	Self-declared	Rules for EMC/EMI emissions
Europe	EN55022: 2010, Class A	Self-declared	Limits and measurement of EM Emissions
Europe	EN 61000 3-2: 2006 +A1 +A2 and EN 61000 3-3:2008	Self-declared	Limits and measurement of EM Emissions
Europe	EN55024: 2010	Self-declared	Limits and measurement of EM Immunity

## Safety

Safety standards govern the human safety of all electrical devices. The following table lists the safety approval information for the appliance.

Country / Region	Approval Standard	Approval Number	Approval Description
United States / Canada	CSA C22.2 No. 950 NRTL/C	2609642	Safety standard for IT and telecom equipment
Europe	EN60950	Self-declared	Safety of IT and electrical business equipment

## RoHS

The appliance and modules are all 2011/65/EU compliant.

## 3. Appliance Description

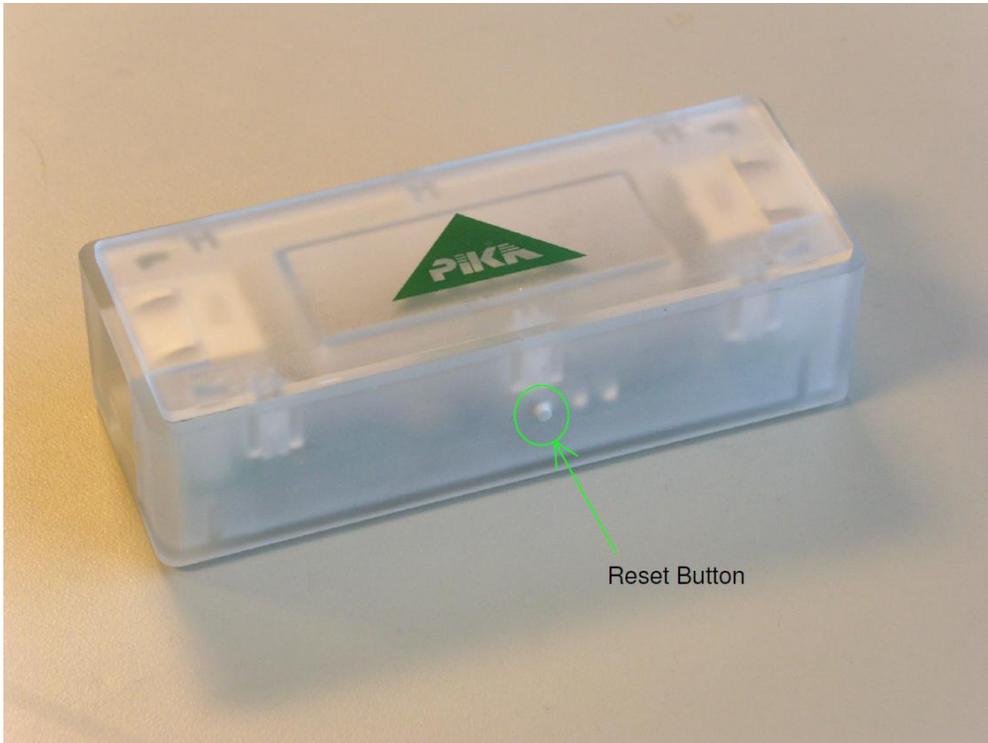
### 3.1. Power

Power is applied to the PIKA  $\mu$ WARP via one of the USB jacks. The two USB jacks are identical and it doesn't matter which one is used to connect the USB power supply to.

The power supply that ships with the unit is 1.5A which also accomodates the 500mA maximum current requirement of the second USB port.

### Reset Button

In the event that the PIKA  $\mu$ WARP needs to be reset, a small pointed object can be inserted into the small hole on the side of the unit.



### 3.2. Ethernet Ports

The two Ethernet ports support comply with 10/100 Base-T IEEE 802.3 standards. The Ethernet connections are provided via standard RJ45 jacks. CAT 5 UTP cable is recommended (CAT 3 UTP can be used for 10Mbps only).

The two Ethernet ports are identical and it doesn't matter which port is used to connect to the VoIP PBX and which port is used to connect to the network.

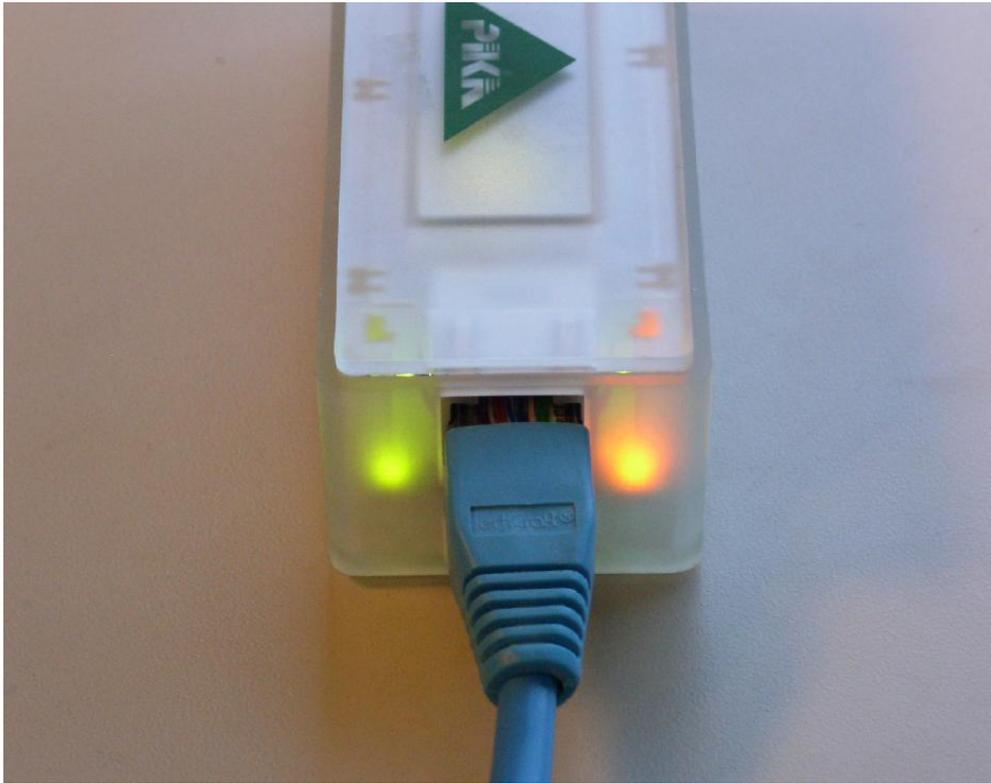
### 3.3. USB

The USB host is USB 1.1 compliant. The signalling lines of the port are routed to both USB connectors so either connector can be used to connect a USB device. The same is true for the USB power connection, either port can be used.

### 3.4. LEDs

There are a total of 13 LEDs on the PIKA  $\mu$ WARP, four of them are used for Ethernet activity and status (two per port), eight of them are used for product status, and one is used as a power indicator.

There are two LEDs beside each Ethernet port, one green and one orange. The green LED indicates link status and the orange LED indicates activity.

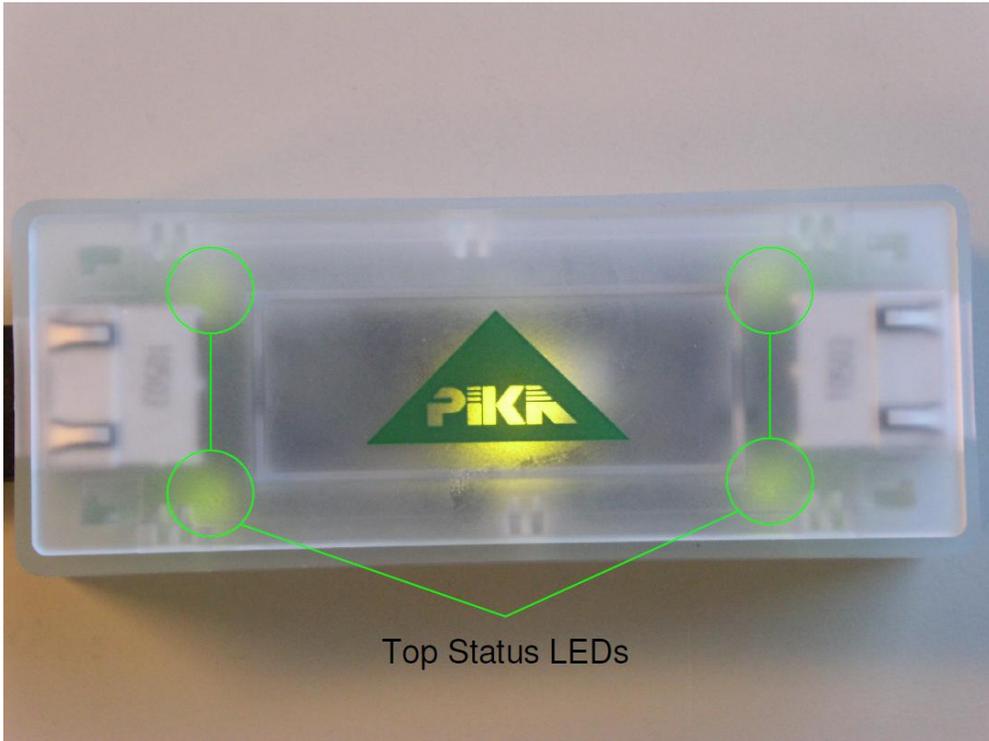


On the top side of the PIKA  $\mu$ WARP there are an additional 5 LEDs. The one in the center under the logo simply indicates when the unit is powered. Its colour is always green.

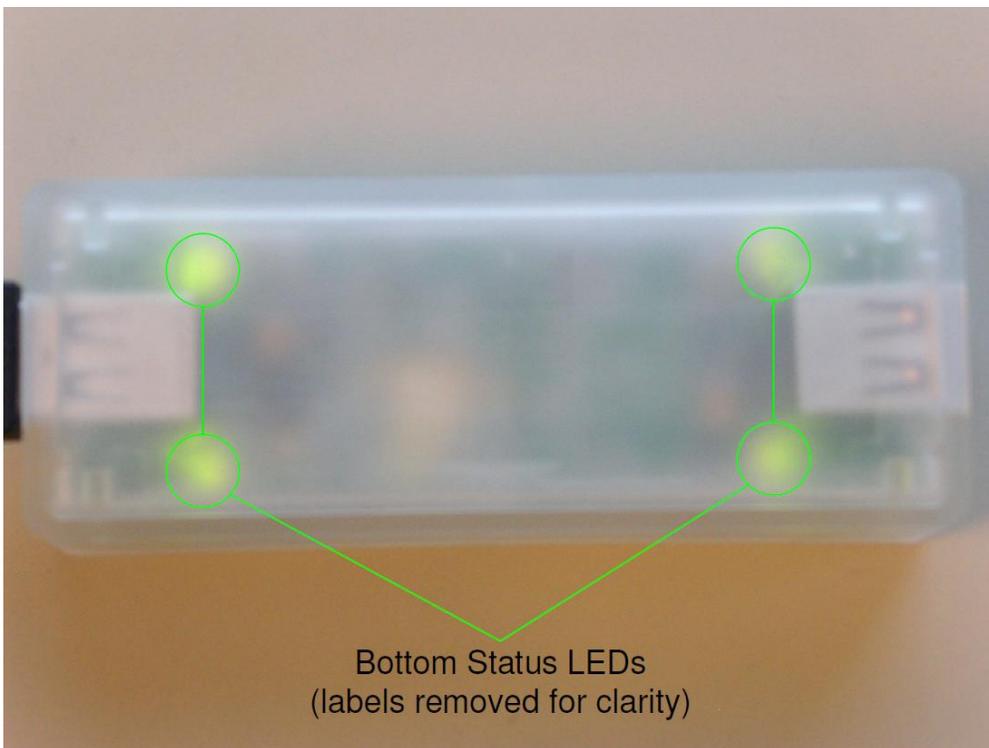
The four LEDs near the corners indicate the status of the PIKA  $\mu$ WARP. There are also 4 LEDs on the bottom of the unit which are wired together with the status LEDs on the top of the unit. These LEDs are bi-colour LEDs and can be either green or red in colour and can be blinking or on solid.

The following table describes the meaning of the status LEDs in different colour and blinking situations:

Status LED State	Description
Solid Green	Application up and running.
Flashing Green	Logging to USB.
Flashing Red	Verifying possible attack.
Solid Red	SIP packets being blocked.



Top Status LEDs



Bottom Status LEDs  
(labels removed for clarity)

## 4. Technical Specifications

### 4.1. Physical Properties

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Dimensions mm	98 x 38 x 28
(inches)	(3.83" x 1.50" x 1.10")
Box Dimensions mm	250 x 170 x 60
(inches)	(9.75" x 6.75" x 2.4")
Box Weight (with power supply) kg	0.3
(lbs)	(0.7)

## 4.2. Power Requirements

Maximum Power Consumption (W) (not including power consumption of any USB device that may be plugged in)	4
Voltage (Vdc)	5
Current (A) (not including current draw of any USB device that may be plugged in)	0.8
Connector Style	USB Type A

## 4.3. Environmental Requirements

Ambient Temperature (degrees C)	0 to +45
Storage Temperature (degrees C)	-20 to +85
Humidity, non-condensing	5% to 95%

## 5. Glossary

Term	Definition
CSA	<b>Canadian Standards Association</b> - An independent organization that establishes and tests safety standards for electronic components and systems for the Canadian marketplace.
EMC	<b>ElectroMagnetic Compatibility</b> .- The sensitivity of a system to EMI.
EMI	<b>ElectroMagnetic Interference</b> - The interference in signal transmission and reception caused by electrical and magnetic fields.
FCC	<b>Federal Communications Commission</b> - The government agency responsible for regulating telecommunications in the United States.

LED	<b>Light Emitting Diode</b> - A semiconductor diode that emits incoherent narrow-spectrum light.
NRTL	<b>Nationally Recognized Testing Laboratory</b> - The U.S. government body that determines if products meet safety standards to provide the assurance these products are safe for use in the workplace.
RJ	<b>Registered Jack</b> - RJ are telephone and data jacks registered with the FCC.
USB	<b>Universal Serial Bus</b> - A standard for providing serial access to interface devices.