Wireless Workshop

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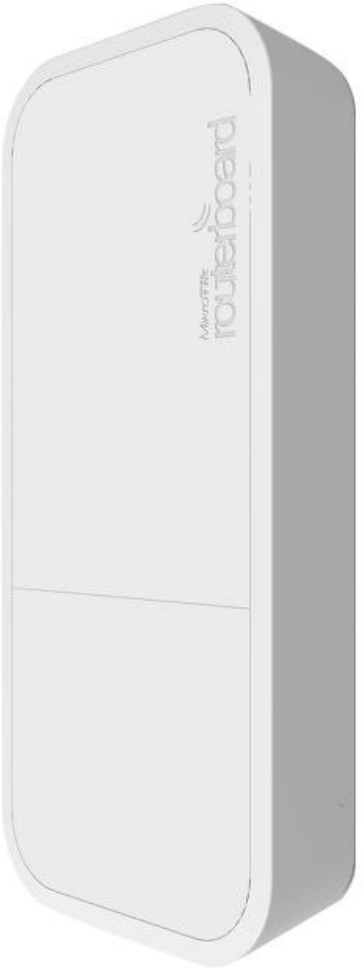
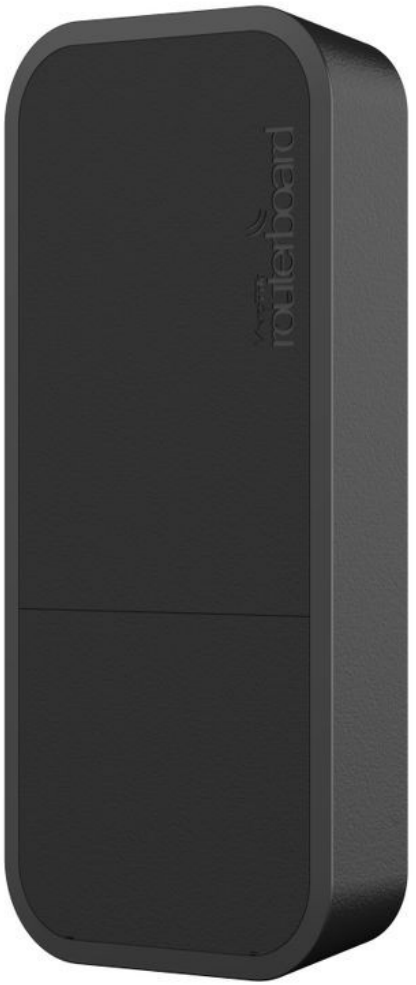
Overview

- Gift from MikroTik – wAP
- Wireless-rep package

wAP



Black and White edition



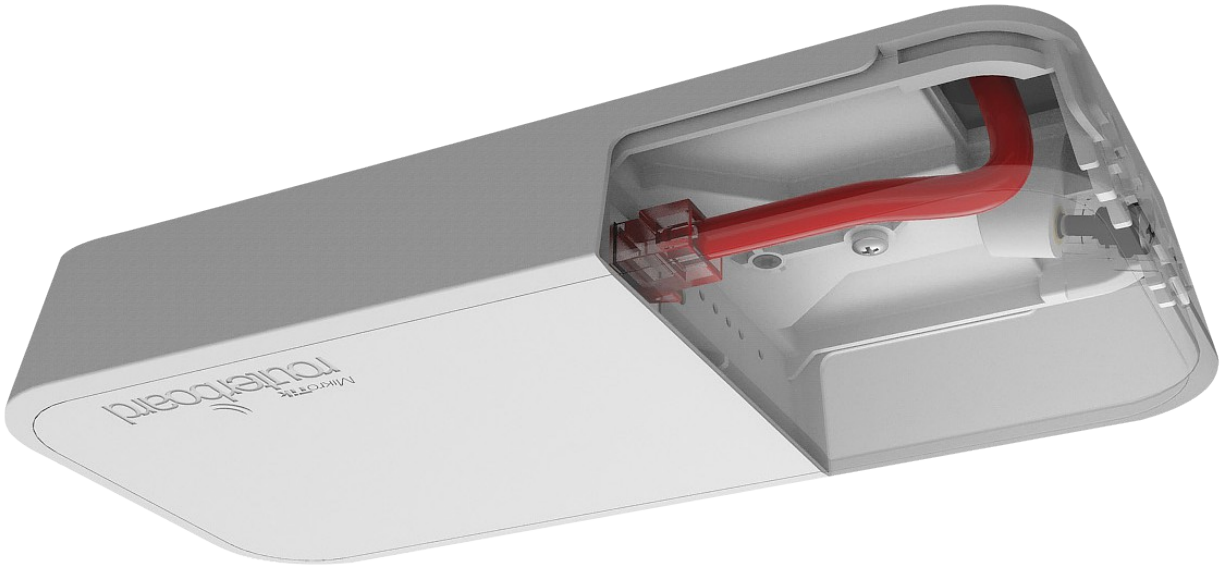
Specification

- CPU 650 MHz
- RAM 64 MB
- Flash 16 MB
- Wireless 802.11b/g/n dual-chain
- Gain 2dBi antennas
- Ethernet 10/100Mbps
- Voltage 11-57V
- Consumption up to 4W
- Operating Temperatures -40C to +70C
- Dimensions 185 x 85 x 30 mm

Features

- 2 chain Wireless radio
- Jack and PoE power option
- Wide input Voltage (11-57V)
- Supports 802.3af/at and Passive PoE
- Low Power Consumption
- High Operating Temperatures
- Suitable for indoor and outdoor
- Waterproof case design

Usage Cases



Use it on the ceiling!

- The WAP comes bundled with all the necessary things to be mounted on ceiling
- Cable breakout provides ability to run cable through the ceiling

Usage Cases

Use it on the wall!

- Wall mounting is easy thanks to the provided drill template and screw anchor. Everything included

New wAP ac

- CPU 720 MHz
- RAM 64 MB
- Flash 16 MB
- Wireless 802.11b/g/n dual-chain
- Wireless 802.11a/n/ac triple-chain
- Gain 2dBi antennas
- Ethernet 10/100/1000Mbps
- Voltage 11-57V with 802.3at POE
- Consumption up to 12W
- Operating Temperatures -30C to +70C
- Dimensions 185 x 85 x 30 mm

Wireless-rep package

- Repeater setup
- Background scan
- Virtual Wireless Interfaces
- WPS client
- New Wireless Scan features
- Scan-list Step support
- Station Roaming support
- G/N band support
- CAPsMAN additional settings enabled
- CAPsMAN Rates support

Repeater Setup

- Allow to receive signal from the AP and repeat the signal using the same physical interface locally for connecting other clients
- Allows to extend wireless service for the wireless clients
- Steps that this setup command does:
  - Configure wireless interface to connect to the AP
  - Create a Virtual AP interface
  - Create Bridge interface
  - Adds both (main and virtual) interfaces to bridge ports

Background Scan

- Supported for 802.11 protocol only
- Working conditions
  - Wireless interface should be enabled
  - For AP mode – when operating on fixed channel
  - For Station mode – when connected to AP
- Supported also on Virtual interfaces
  - Scan is only performed in channel where master interface is running

Virtual Wireless Interfaces

- Supported for 802.11 protocol only
- Virtual AP and Client interface can be added on the same physical interface
- Multiple Virtual Wireless interfaces can be added
- Background scan is supported on Virtual Wireless Interfaces and is only performed in channel where master interface is running

WPS Client Support

- Allows wireless client to get Pre-Shared Key configuration of the AP that has WPS Server enabled
- Gets information from any WPS Server running or can be specified to get only with specific SSID or MAC address
- Received configuration is shown on the screen and can be also saved to a new wireless security profile

Wireless Scan features

- Scan to file
  - Allows to save the scan results in a CSV format file
  - Supported with background scan
- Scan Round setting
  - Allows to do full scan of the scan-list and then stop scanning
  - Useful for remote scans on the clients
  - Supported with background scan as well

Scan-list Step feature

- Scan-list Step feature allows to make compact scan-list entries
- To make scan-list from 5500-5700 with 20mhz step now you need just one entry:
  - Scan-list=5500-5700:20
  - In system it will create scan-list with such frequencies: 5500,5520,5540,5560,5580,5600,5620,5640,5660, 5680,5700

Station Roaming support

- Supported for 802.11 protocol only
- While connected to AP station does periodic background scans to look for a better AP
- When a better AP is found station roams to the new AP
- Time intervals between scans becomes shorter when signal becomes worse
- Time intervals between scans becomes longer when signal becomes better

G/N Band Setting

- Regular Wireless Interface and CAPsMAN supports '2ghz-g/n' band setting
  - basic-rates – 6-54Mbps
  - supported – 6-54Mbps
  - ht-basic-mcs – None
  - ht-supported-mcs – 0-23

CAPsMAN Settings

- CAPsMAN now supports the following settings:
  - distance – default value is 'indoors'
  - hw-retries
  - hw-protection-mode
  - frame-lifetime
  - disconnect-timeout

CAPsMAN Rates support

- CAPsMAN supports Rates configuration tab:
  - Basic – B and A/G basic-rates
  - supported – B and a/G supported data-rates
  - ht-basic-mcs – N basic-rates
  - ht-supported-mcs – N supported data-rates
  - vht-basic-mcs – AC basic rates
  - vht-supported-mcs – AC supported data-rates

Try at home

- Install wireless-rep package
- Use Repeater function on wAP