



Mikrotik

Soluciones LTE y sus Aplicaciones

MUM Honduras 2020

Delci Castillo

Quality Industrial Construction



Delci Castillo

Quality Industrial Construction

Honduras

Ing. Proyectos | Diseño | Soporte | Asesorías

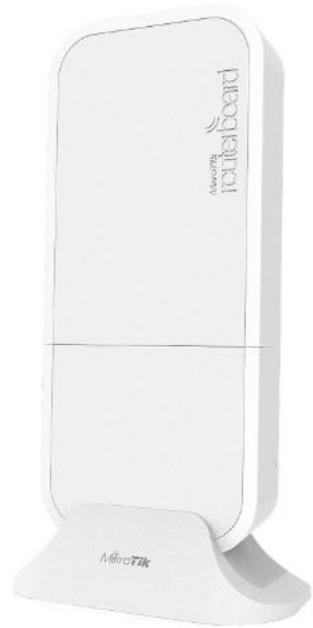
Certificaciones MTCNA, MTCRE – 2018

proyectos@qic-llc.com

+504 94388659

+504 25440131

LTE APs



wAP LTE kit
wAP ac LTE kit
wAP ac LTE6 kit



LtAP mini LTE kit



mANT LTE 50



LtAP LTE kit
LtAP LTE6 kit

Áreas Remotas



SXT LTE kit

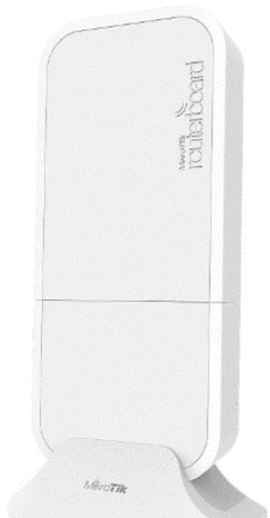
SXT LTE6 kit



LHG LTE kit

LHG LTE6 kit

wAP LTE kit



- El wAP LTE es un pequeño punto de acceso inalámbrico resistente a la intemperie 2.4GHz.
- Módem celular incorporado 2G, 3G y 4G (LTE). 802.11b / g / n.
- Un puerto LAN Ethernet 10/100 para sus dispositivos con cable
- 2 dBi, 4dbi (LTE Downlink, 50Mbps Uplink)



AC:

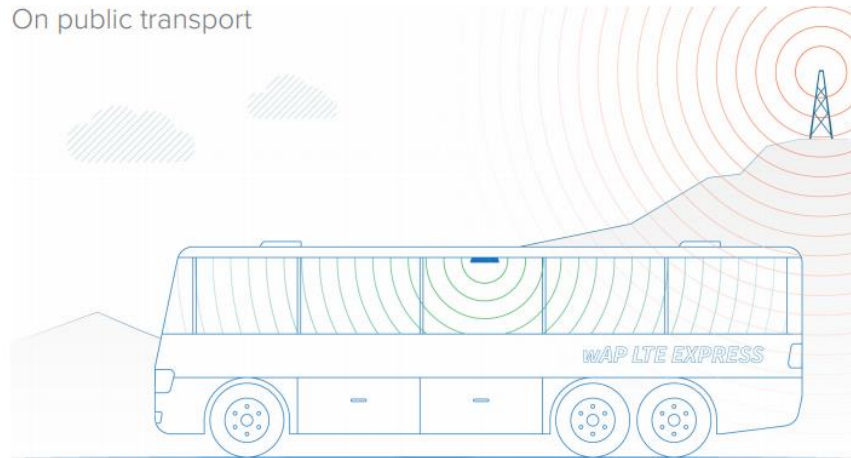
2.4 GHz 802.11b/g/n dual-chain, 5 GHz 802.11a/n/ac dual-chain.

Dos Puertos Gigabit

2.5 dBi, 4dbi (LTE: 150 Mbps Downlink, 50 Mbps Uplink)

WAP LTE

On public transport



For home use



On the pole



LtAP mini LTE kit



5 dBi gain

- AP 2.4 GHz 802.11b/g/n, dual-chain, en carcasa resistente
- miniPCle para LTE
- **Dos ranuras SIM**
- GPS incorporado,
- Antena 1.5 dBi, hasta 3.5dbi con conector uFL
- Un Puerto ethernet 10/100
- LTE 4 (150Mbps Downlink, 50Mbps Uplink)
- Puerto serial para otros dispositivos.
- 10-57 V PoE-in puerto ethernet, jack dc y microUSB.
- Bandas 1,2,3,7,8,20,38 and 40

LtAP LTE kit (Heavy Duty)



- CPU Dual-core, 880 MHz, 128MB RAM
- AP de 2.4 GHz 802.11b/g/n dual-chain, carcasa resistente
- LTE instalado en la ranura miniPCle, segunda ranura miniPCle para expansiones
- **Tres ranuras Mini SIM,**
- Puerto Gigabit Ethernet,
- GPS incorporado, puerto serial, USB 3.0
- Alimentación (conector DC, POE-in)
- Antena 2.5 dBi
- LTE 4 (150 Mbps Downlink, 50 Mbps Uplink)
- RouterOS, licencia nivel 4
- -40°C .. +70°C

Torres, transporte público, transporte roaming entre países, camiones de comida o logística, invierno, entorno desértico

SXT LTE kit



2G/3G/4G/LTE
 SIM slot 2 (Micro SIM)
 Cat 4: 150 Mbit/s downlink y 50 Mbit/s uplink
 RouterOS licencia 3
Antena LTE 9dBi
 2 puertos ethernet 10/100, **2do POE out**

SXT LTE6 kit

LHG LTE kit



2G/3G/4G/LTE
 SIM slot 1 (Mini SIM)
 Cat 4: 150 Mbit/s downlink y 50 Mbit/s uplink
 RouterOS licencia 3
Antena LTE 21dBi
 1 puerto ethernet 10/100

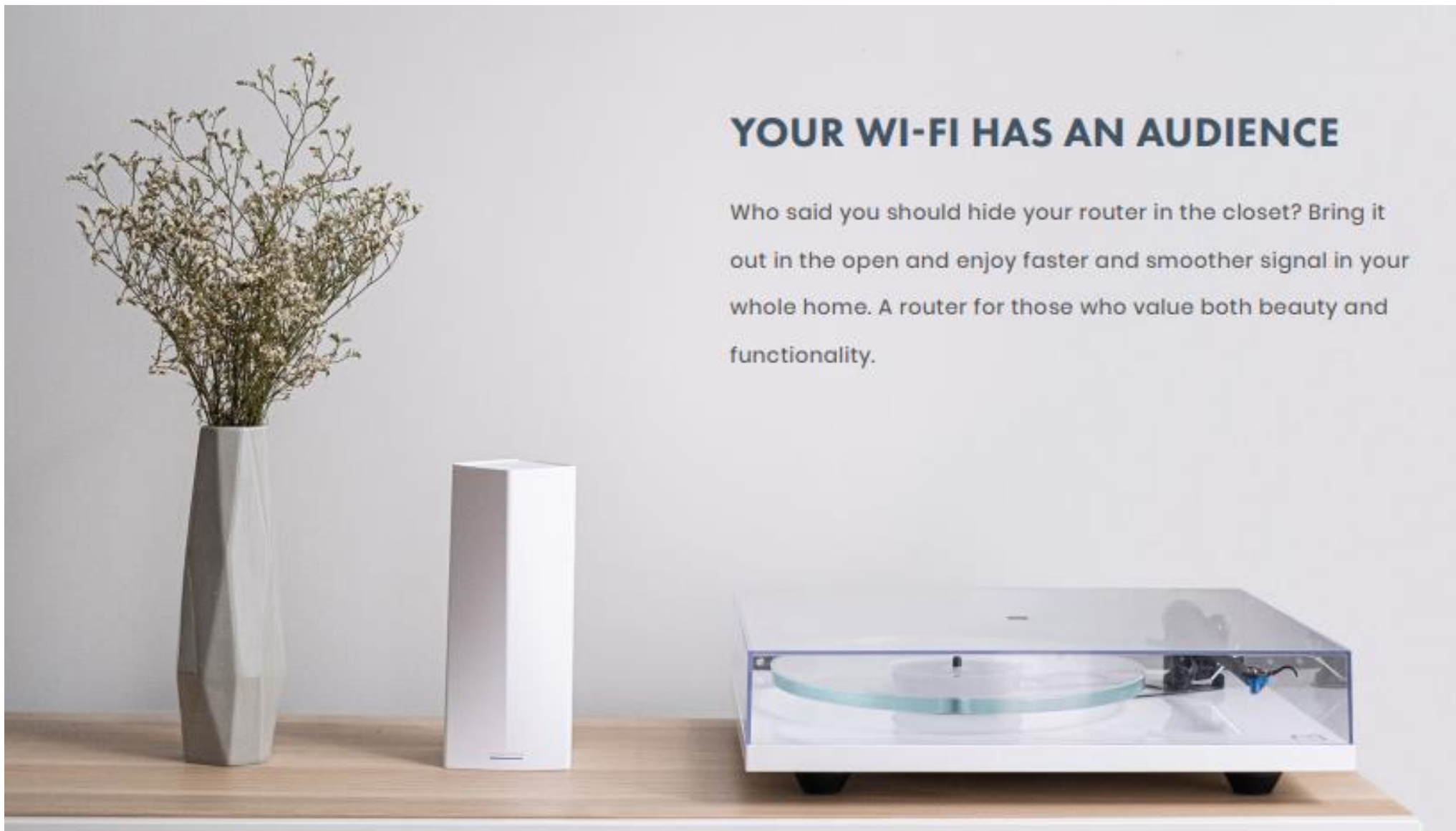
LHG LTE6 kit

Para ubicaciones remotas que están dentro de la cobertura de la red celular

Audience LTE6 kit



- Belleza y funcionalidad
- Access Point de Tres bandas (una 2.4 GHz & dos 5 GHz : 5.18 - 5.3 GHz, 5.5 - 5.85 GHz)
- Soporta LTE y tecnología mesh.
- CPU 4 core IPQ-4019 716 MHz, RAM 256 MB
- Test de cobertura libre de 1858 m² (20,000 pies cuadrados)
- Antena 3.5 dBi (2,4GHz) 4.5 dBi (5GHz)
- Antena LTE 4dBi
- 2 puertos Ethernet 10/100/1000
- RouterOS, licencia nivel 4
- 1 Micro SIM
- **LTE 6 (300 Mbps Downlink, 50 Mbps Uplink)**



YOUR WI-FI HAS AN AUDIENCE

Who said you should hide your router in the closet? Bring it out in the open and enjoy faster and smoother signal in your whole home. A router for those who value both beauty and functionality.

Aplicaciones:

- Respaldo en Torres de ISPs.
- Respaldos corporativos.
- Respaldo en el hogar.
- Para clientes que están fuera de cobertura de la red.
- Clientes móviles.
- Roaming para transporte.
- Flotas de vehículos, buses, camiones, ambulancias.
- Video vigilancia
- Cadenas de restaurantes, farmacias, oficinas remotas.
- Sector gobierno, militar, educativo.

Caso de éxito:



wAP LTE kit



Caso de éxito:

wAP LTE kit

Ambulancias

Vehículos para recuperación de desastres
COPECO, Honduras



Configuración de los Equipos Descargar Winbox

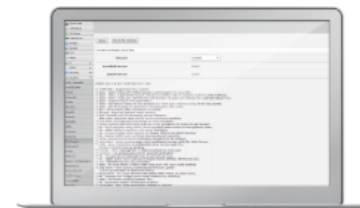
mikrotik.com/download 🔍

Upgrading RouterOS

If you are already running RouterOS, upgrading to the latest version can be done by clicking on "Check For Updates" in QuickSet or System > Packages menu in WebFig or WinBox.

See the [documentation](#) for more information about upgrading and release types.

To manage your router, use the web interface, or download the maintenance utilities. Winbox to connect to your device, Dude to monitor your network and Netinstall for recovery and re-installation.



WinBox ▾
The Dude ▾
Netinstall ▾

WinBox 3.20 (64-bit)

WinBox 3.20 (32-bit)

RouterOS ?

	6.44.6 (Long-term)	6.46.2 (Stable)	6.47beta19 (Testing)	7.0beta4 (Development)
MIPSBE	CRS1xx, CRS2xx, CRS312-4C+8XG, CRS326-24S+2Q+, DISC, FiberBox, hAP, hAP ac, hAP ac lite, LDF, LHG, iAP mini, mANTBox, mAP, NetBox, NetMetal, PowerBox, PWR-Line, QRT, RB9xx, SXTsq, cAP, hEX Lite, RB4xx, wAP, BaseBox, DynaDish, RB2011, SXT, OmniTik, Groove, Metal, Sextant, RB7xx, hEX PoE			
Main package	📄	📄	📄	📄
Extra packages	📄	📄	📄	📄

Conectarse al Equipo con Winbox

WinBox v3.20 (Addresses) [Window Title Bar]

File Tools

Connect To: Keep Password
 Login: Open In New Window
 Password:

Managed Neighbors

MAC Address	IP Address	Identity	Version	Board	Uptime
C4:AD:34:2A:5C:B1	192.168.88.1	Mikro Tik	6.45.3 (st...	RBwAPR-2nD	00:14:52

Session Settings Dashboard

Safe Mode Session: Quick Set

Quick Set

- CPE
- PTP Bridge AP
- PTP Bridge CPE
- WISP AP
- Home AP
- Basic AP
- LTE
- LTE AP**
- CAP

MikroTik-1214E2

auto MHz

2GHz-B/G/N

Country: no_country_set

MAC Address: []

Use Access List (ACL)

WiFi Password: []

WPS Accept

- Guest Wireless Network

Guest Network: []

- Wireless Clients

MAC Address	In ACL	Last IP	Uptime	Sta
-------------	--------	---------	--------	-----

Signal Strength: []

Copy To ACL Remove From ACL

- LTE

PIN: []

APN: internet

- Status

Current Operator: AT&T

EARFCN: 5110

RSRP: -109 dB

- Internet

IP Address: 0.0.0.0

Firewall Router

- Local Network

IP Address: 192.168.88.1

Netmask: 255.255.255.0 (/24)

DHCP Server

DHCP Server Range: 192.168.88.10-192.168.88.254

NAT

UPnP

- System

Router Identity: MikroTik

Check For Updates Reset Configuration

Password: []

Confirm Password: []

OK Cancel Apply

Session Settings Dashboard

Safe Mode Session: LTE Quick Set

LTE

Band: [] PIN: [] APN: **broadband**

- Status

Current Operator: AT&T
EARFCN: 5110
SINR: []

RSRP: -109 dB

Internet

IP Address: 0.0.0.0
 Firewall Router

Local Network

IP Address: 192.168.88.1
Netmask: 255.255.255.0 (/24)
 DHCP Server
DHCP Server Range: 192.168.88.10-192.168.88.254
 NAT
 UPnP

VPN

VPN Access
VPN Address: []

System

Router Identity: MikroTik
[Check For Updates] [Reset Configuration]

Password: []
Confirm Password: []

inactive

Session Settings Dashboard

Safe Mode Session:

LTE Quick Set

- LTE -

Band: []
PIN: []
APN: broadband

- Status -

Current Operator: AT&T
EARFCN: 2428
SINR: []

- Internet -

IP Address: 10.12.167.0
 Firewall Router

- Local Network -

IP Address: 192.168.88.1
Netmask: 255.255.255.0 (/24)
 DHCP Server
DHCP Server Range: 192.168.88.10-192.168.88.254
 NAT
 UPnP

VPN -

VPN Access
VPN Address: []

- System -

Router Identity: MikroTik

Password: []
Confirm Password: []

RSRP: -113 dB

RSSI: -71 dB

active

Session Settings Dashboard

Safe Mode Session: LTE Quick Set

- LTE

Band: []
 PIN: []
 APN: broadband

- Status

Current Operator: AT&T
 EARFCN: 675
 SINR: []

- Internet

IP Address: 10.29.98.114
 Firewall Router

- Local Network

IP Address: 192.168.88.1
 Netmask: 255.255.255.0 (/24)
 DHCP Server
 DHCP Server Range: 192.168.88.10-192.168.88.254
 NAT
 UPnP

- VPN

VPN Access
 VPN Address: []

- System

Router Identity: MikroTik

RSRP: -106 dB

	RSSI	SINR (dB)	RSRQ (dB)	RSRP (dBm)	EC/Io (dB)
Technology	LTE and 3G	LTE only	LTE only	LTE only	HSPA+ and EVDO
Excellent	> -65	> 12.5	> -5	> -84	> -2
Good	-65 to -75	10 to 12.5	-6 to -10	-85 to -102	-2 to -5
Fair	-75 to -85	7 to 10	-6 to -10	-103 to -111	-5 to -10
Poor	< -85	< 7	< -11	< -112	< -10

Gracias!

Delci Castillo

Quality Industrial Construction

Honduras

Ing. Proyectos | Diseño | Soporte | Asesorías

proyectos@qic-llc.com

+504 94388659