

# MikroTik COUTEDOald PRODUCT CATALOG Q1/Q2 2015



**INTRODUCING 802.11AC AND** 



# Contents



Why MikroTik?	4
RouterOS.	6
MikroTik	7
MUM	8
Academy	9
NetMetal 5	11
NetBox 5	13
SXT ac series	15
SXT 5	17
SXT HG5	19
SXT SA5	21
SEXTANT G	23
QRT Series	25
SXT 2	27
Metal	29
Groove	31
BaseBox	33
OmniTik	
CRS109-8G-1S-2HnD-IN	
CRS 24 port series	39
CRS210-8G-2S+IN	41
CRS212-1G-10S-1S+IN	43
RB260GS series.	45
RB750.	47
PowerBOX	49
RB2011 Series.	51
RB1100AHx2	53
CCR1009-8G-1S-1S+PC	55
CCR1009 Series.	57
CCR1016 Series.	59
CCR1036 Series.	61
CCR1072-1G-8S+	63
mAP 2n	65
cAP 2n	67

nAP Lite	69
RB951 high power series	71
RB2011UiAS-2HnD-IN	73
RB922UAGS-5HPacD	75
RB911G-5HPacD	77
RB411	79
RB433	81
RB435G	83
RB850/450	85
RB800	87
RB953GS-5HnT-RP	89
RB911 Series	91
RB912	93
mANT30 series	95
R11e-5HacD	97
Vireless miniPCI cards	99
R11e	10 <sup>2</sup>
RB44Ge	103
18V PoE converter	105
RB14e	107
SFP transceivers	109
Flex-quide	111



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# Why MikroTik?

MikroTik provides routing and wireless equipment for all possible uses - from the customer location, up to high end data centres.

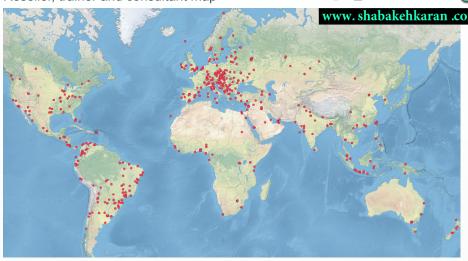
We have an extensive network of trained consultants, training centres and distributors in almost every country of the world.

Established in Europe in 1996, we have 19 years of experience in networking and wireless installations.

Our in-house developed RouterOS software now supports most common and many special features and we are constantly adding new customer requested features.

Build wireless links across seas, internet exchanges between countries, and secure tunnels between banks. MikroTik can do it all.

Reseller, trainer and consultant map



- · Best price/performance
- Millions of RouterOS powered devices currently routing the world
- Nineteen years of developing networking software and hardware
- Over 35'000 RouterOS trained and certified network engineers
- More than 2000 training classes in the last year
- · World wide network of certified consultants
- Offering products that support simple CPEs to complex enterprise networks
- Thousands of pages of documentation, examples, application notes, and guides



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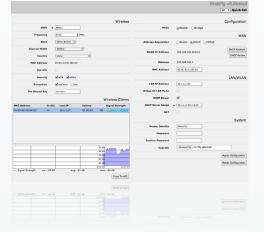
## RouterOS

MikroTik RouterOS is the operating system of MikroTik RouterBOARD hardware.

It has all the necessary features for an ISP - routing, firewall, bandwidth management, wireless access point, backhaul link, hotspot gateway, VPN server and more.

RouterOS is a stand-alone operating system based on the Linux v3.3.5 kernel, and our goal here at MikroTik is to provide all these features with a quick and simple installation and an easy to use interface.

- Powerful QoS control
- RIP, OSPF, BGP, MPLS routing
- P2P traffic filtering
- · Bonding of Interfaces
- · Stateful firewall, tunnels
- (R)STP bridging with filtering
- High speed 802.11a/b/g/n/ac
- Wireless TDMA (Nv2)
- WDS and Virtual AP
- HotSpot Plug-and-Play access
- WinBox GUI and Web admin
- Telnet/mac-telnet/ssh/console
- Real-time configuration and monitoring



## MikroTik



MikroTik is a router software and hardware manufacturer, that offers the most user friendly, up to carrier-class routing and network management solutions. Our products are used by ISPs, individual users and companies for building data network infrastructures all across the world.

There are millions of installations worldwide going back as far as 1996!

Our mission is to make existing Internet technologies faster, more powerful, and affordable to wider range of users.

- Based in Europe
- 140 employees
- Established in 1996
- 19th anniversary this year
- RouterOS in 1997
- RouterBOARD in 2002
- First MUM Prague, Czech Republic in 2006



## MUM

MikroTik User Meeting (MUM) is a conference on MikroTik RouterOS software and RouterBOARD hardware. Ask questions, attend workshops, listen to presentations, talk with specialists and see interesting technology demos by MikroTik and the users themselves - all here, at the MUM!

The Mikrotik User Meeting brings many MikroTik users together at once, so you can get the maximum information in the shortest time.

The MUM has taken place already 77 times, in 36 countries in all continents. Every year, more people attend these great events - every next event breaking the previous attendance record. More than 1900 people attended the conference in Indonesia in 2014! You should come too!



# Academy



Colleges, universities, and schools around the world are starting MikroTik Academy programs to offer students Internet networking courses using MikroTik RouterOS as a learning tool. We are actively enrolling new locations weekly and looking for new applicants.

The are no charges from MikroTik for material, online testing, and online certificates associated with this program. MikroTik Academy program offers schools an excellent networking education program and program materials for little or no cost.

The program courses offer:

- a proven network education program
- official MikroTik RouterOS certification exams
- discounted (and free) hardware and free RouterOS licenses for training classes

If there is an educational institution near you that could be interested in the MikroTik Academy program, please contact us or forward this information to them

Please contact us at training@mikrotik.com.

Official MikroTik Academy Web Page: http://www.mikrotikacademy.com

MikroTik Academy application form: http://www.mikrotikacademy.com/apply



# systems eless











# NetMetal 5



By supporting the 802.11ac wireless standard, the NetMetal allows to use datarates of up to 1.3Gbps (for the T models), 256-QAM modulation and 20/40/80MHz channels. With its huge speed improvements, 802.11ac opens up new possibilities.

The NetMetal is a completely new product in a waterproof enclosure. Its rugged design is made to withstand the toughest conditions, but at the same time is easy to use and can be opened and closed with one hand. The solid aluminium enclosure also works as a reliable heatsink for its high output power radio.

RB922 models have miniPCI-e slot for another wireless card.

Order code	RB921UAGS-5SHPacT-NM	RB921UAGS-5SHPacD-NM	RB922UAGS-5HPacT-NM	RB922UAGS-5HPacD-NM
CPU	QCA9557 720MHz network processor			
Memory	128MB DDR2 onboard memo	ry		
Ethernet	One Gigabit port with Auto-MI	DI/X		
SFP	1x SFP cage available			
Extras	Beeper, signal and status LED	s, voltage and temperature ser	nsors	
Supported channels	20/40/80MHz			
Expansion	USB 2.0 port, 1x MiniPCle slot, SIM slot (requires 3g miniPCle card)			
Power input	PoE in: 8-30V DC on Ether1 (Non 802.3af)			
Consumption	23W	21W	23W	17W
Dimensions	143x247x48mm			
Operating temperature	-40°C +70°C tested			
OS	MikroTik RouterOS, Level 4 license, free product lifetime upgrdes			
Kit includes	RB922/R921 outdoor unit, Power adapter 24V 1.2A, PoE injector, miniPCle mounting screws, DIN rail mount, metal monting ring, 2x plastic mounting loops			

	RB921UAGS-5SHPacT-NM	RB921UAGS-5SHPacD-NM	RB922UAGS-5HPacT-NM	RB922UAGS-5HPacD-NM
Wireless	QCA9880 5GHz 802.11ac	QCA9882 5GHz 802.11ac	QCA9880 5GHz 802.11ac	QCA9882 5GHz 802.11ac
Chains	Triple chain	Dual chain	Triple chain	Dual chain
Connector type		RP-SMA Female	(outside thread)	
Connectors	3x	2x	3x	2x
TX/RX at MCS0	33dBm / -96dBm	31dBm / -96dBm	32dBm / -96dBm	30dBm / -96dBm
TX/RX at MCS7	31dBm / -77dBm	29dBm / -77dBm	29dBm / -77dBm	27dBm / -77dBm
TX/RX at MCS9	27dBm / -71dBm	25dBm / -72dBm	24dBm / -72dBm	22dBm / -72dBm
TX/RX at 6Mbit	33dBm / -96dBm	31dBm / -96dBm	33dBm / -96dBm	31dBm / -96dBm
TX/RX at 54Mbit	31dBm / -81dBm	29dBm / -81dBm	29dBm / -81dBm	27dBm / -81dBm
Frequency range	e 4920-6100 MHz, Operating range limited by Country Regulations			



24V 1.2A Adapter Mounting loops





Metal ring





DIN mount miniPCI screws
To remove this notice, visit: www.iceni.com/unlock.htm

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Using the optionally available Flexquide cable, you can use the Basebox with any 3rd party antenna

## NetBox 5



The NetBox is a dual chain outdoor AP/CPE/Point-to-Point device with RP-SMA connectors for antennas, and a cable hood for protection against moisture. This device supports the new 802.11ac standard for increased wireless speed (866Mbit datarate, and 20/40/80MHz channels).

The case can be opened with one hand, and is protected against the elements. Ethernet and a Grounding wire exits are provided on the bottom, behind a protective door.

Comes with a mounting loop for tower/pole mounting, and a separate DIN rail mount is also provided. Package also includes a PoE injector and power supply unit.

Order code	RB911G-5HPacD
CPU	QCA9557 720MHz network processor
Memory	128MB DDR onboard memory
Ethernet	One Gigabit port with Auto-MDI/X
Wireless	QCA9882 5GHz 802.11ac, 2x RP-SMA connectors, Dual chain
Connector type	RP-SMA Female (outside thread)
Extras	beeper, signal and status LEDs, voltage and temperature sensors
Supported channels	20/40/80MHz
Power input	PoE in: 8-30V DC on Ether1 (Non 802.3af)
Power consumption	12W at 24V
Operating temperature	-40°C +70°C tested
Dimensions	246x135x50mm
OS	MikroTik RouterOS, Level 4 license
Kit includes	Netbox outdoor unit, PoE injector, mounting loop, DIN rail mount, monting ring, power adapter 24V 0.8A

Wireless transmit/receive specifications		
TX/RX at MCS0	30dBm / -96dBm	
TX/RX at MCS7	27dBm / -77dBm	
TX/RX at MCS9	22dBm / -72dBm	
TX/RX at 6Mbit	31dBm / -96dBm	
TX/RX at 54Mbit	27dBm / -81dBm	
Frequency range	4920-6100 MHz, Operating range limited by Country Regulations	



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# 90° SXT ac SXT SA ac





# SXT ac series

The new AC standard is here, with up to 866Mbit over the air datarate, 256-QAM modulation, and 80MHz channels. 802.11ac opens up new possibilities and speeds never possible before.

The SXT ac is a new member in our 802.11ac product lineup, currently three models are available — with regular 28 degree antenna (SXT ac), the SA model with a 90 wide beam-width sector antenna and HG model with hight gain 17dBi antenna. Also supports 802.11a/n mode and is compatible with all legacy RouterBOARD devices, including Nstream and Nv2 protocols. Both devices come with Gigabit Ethernet.

- Up to 1300mW RF output
- Extended temperature range -40°C to +70°C
- Up to 540Mbps user data throughput
- Low latency Point to Point
- Supports passive PoE and 802.3af/at PoE input (15-60V)

Model	RBSXTG-5HPacD	RBSXTG-5HPacD-SA	RBSXTG-5HPacD-HG
CPU	QCA9557 720MHz CPU		
Memory	128MB DDR2		
Gigabit	1x 10/100/1000 Ethernet		
Wireless	Onboard dual chain 5GHz 10kV ESD protection on ea	802.11ac QCA9882 wireless ach RF port	s module;
Supported channels	20/40/80MHz		
Supported modes	CPE, Point to Point, Point t	o Multipoint	
Additional	Reset switch, beeper, USB 2.0 port, voltage and temperature monitors		
LEDs	Power LED, Ethernet LED, 5 wireless signal LED		
PoE in	15-60V DC, Passive and 802.3af/at supported (Mode B. requires crossover cable)		
Dimensions	140x140x56mm		
Max consumption	12W		
Operating temp.	-40°C +70°C tested		
OS	MikroTik RouterOS, Level	4 license	
Package contains		ntegrated antenna, pole mou er, passive Gigabit PoE injec	inting bracket, mounting ring, etor, quick setup guide
Certifications	FCC, CE, ROHS		

	RBSXTG-5HPacD	RBSXTG-5HPacD-SA	RBSXTG-5HPacD-HG
TX/RX at MCS0	30dBm / -96dBm	30dBm / -96dBm	22dBm / -72dBm
TX/RX at MCS7	27dBm / -77dBm	27dBm / -77dBm	30dBm / -96dBm
TX/RX at MCS9	22dBm / -72dBm	22dBm / -72dBm	27dBm / -77dBm
TX/RX at 6Mbit	31dBm / -96dBm	31dBm / -96dBm	31dBm / -96dBm
TX/RX at 54Mbit	28dBm / -81dBm	28dBm / -81dBm Edite	28 with the Demo ve
Antenna	Dual pol. 25deg, 5GHz antenna, 16dBi, -35 dB port to port isolation	Dual pol. 90deg, 5GHZ fix antenna, 130Bi, -35 dB port to port isolation	Prol PD F4Edit 5FHz antenna, 17dBi gain, -30db port to port isolation

# SXT 5

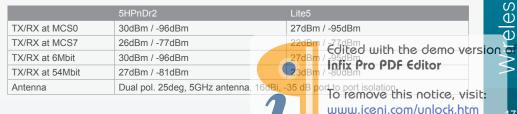




SXT Lite5 provides the best price-performance ratio on the Wireless CPE market. Unit is equipped with powerful 600MHz CPU, 64MB RAM, 16dBi dual polarization antenna, poe, power supply and mounting kit. SXT-5HPnDr2 is the high power version (30dBm TX power).

Complete with a ready to mount enclosure and built-in 16dBi antenna, SXT contains everything you need to make a point to point link, or connect to an AP.

Model	SXT 5	SXT Lite5
Product code	RBSXT5HPnDr2	RBSXT5nDr2
CPU	AR9344 600MHz	
Memory	64MB DDR2	
Ethernet	1x 10/100 Ethernet port	
Wireless cards	Onboard dual chain 5GHz 802.11a/n Ather 10kV ESD protection on each RF port.	ros AR9344 wireless module;
Frequency range	4920-5920MHz (Limited by country regula	tory rules)
Extras	Reset switch, beeper, USB 2.0 port, voltage and temperature monitors	Reset switch, beeper
LEDs	Power LED, Ethernet LED, 5 wireless signal LED	
Power input	PoE in: 5-30V DC Packaged with 24V DC 0.8A power adapter and passive PoE injector	PoE in: 8-32V DC Packaged with 24V DC 0.38A power adapter and passive PoE injector
Dimensions	140x140x56mm	
Max consumption	11W at 24V	8W at 24V
Operating temp.	-40°C +70°C tested	
OS	MikroTik RouterOS, Level 3 license	
Package contains	SXT wireless device with integrated antenna, pole mounting bracket, mounting ring, PoE injector, power adapter, quick setup guide	
Certifications	FCC, CE, ROHS	









(SXT Lite5)







Mounting Ring Pole mounting bracket PoE injector

# SXT HG5



SXT HG5 is a High Gain, High Power wireless device designed and manufactured by MikroTik. The wireless output power for this device is up to 30dBm (1000 mW!).

It is equipped with 5GHz 17dBi 24 degree antenna, Gigabit Ethernet port and RouterOS Level 4 license (can be used as AP, Backbone or CPE). It is powered by our new generation AR9344 CPU, which makes it even more powerful, to ensure you get the maximum throughtput.

Unit comes complete with SXT, PoE injector, power supply and mounting kit.

Product code	RBSXTG-5HPnD-HGr2
CPU	AR9344 600MHz CPU
Memory	64MB DDR2
Ethernet	1x 10/100/1000 Gigabit Ethernet
Wireless cards	Onboard dual chain 5GHz 802.11a/n Atheros AR9344 wireless module; 10kV ESD protection on each RF port
Extras	Reset switch, beeper, USB 2.0 port, voltage and temperature monitors
LEDs	Power LED, Ethernet LED, 5 wireless signal LED
Power input	PoE in: 6-30V DC Packaged with 24V DC 0.8A power adapter and passive PoE injector
Dimensions	140x140x56mm
Max consumption	11W at 24V
Operating temp.	-40°C +70°C tested
OS	MikroTik RouterOS, Level 4 license (AP support)
Package contains	SXT wireless device with integrated antenna, pole mounting bracket, mounting ring, PoE injector, power adapter, quick setup guide
Certifications	FCC, CE, ROHS

TX/RX at MCS0	30dBm / -93dBm
TX/RX at MCS7	26dBm / -71dBm
TX/RX at 6Mbit	31dBm / -92dBm
TX/RX at 54Mbit	28dBm / -77dBm
Antenna	Dual pol. 24deg, 5GHz antenna, 16.5dBi, -30 dB port to port isolation, 1.43 VSWR





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# SXT SA5



SXTG-5HPnD-SAr2 is a low cost, high speed 5GHz outdoor wireless sector access point. It has a 90 degree antenna to provide a wider coverage than our previous SXT units.

Complete with a ready to mount enclosure and built-in 14dBi antenna, the package contains everything you need to set it up in a matter of minutes. The inside of the case is covered in special shielding to improve operation in high interference areas and antenna front to back ratio.

Model	RBSXTG-5HPnD-SAr2
CPU	AR9344 600MHz
Memory	64MB DDR2
Ethernet	1x 10/100/1000 Gigabit
Wireless cards	Onboard dual chain 5GHz 802.11a/n Atheros AR9344 wireless module; 10kV ESD protection on each RF port
Frequency range	4920-5920MHz, Operating range limited by Country Regulations
Extras	Reset switch, beeper, USB 2.0 port, voltage and temperature monitors
LEDs	Power LED, Ethernet LED, 5 wireless signal LED
Power input	PoE in: 8-32V DC Packaged with 24V DC 0.8A power adapter and passive PoE injector
Dimensions	140x140x56mm
Max consumption	11W at 24V
Operating temp.	-40°C +70°C tested
OS	MikroTik RouterOS, Level 4 AP license
Package contains	SXT wireless device with integrated antenna, pole mounting bracket, mounting ring, Gigabit PoE injector, power adapter, quick setup guide
Certifications	FCC, CE, ROHS

TX/RX at MCS0	30dBm / -95dBm
TX/RX at MCS7	26dBm / -73dBm
TX/RX at 6Mbit	30dBm / -96dBm
TX/RX at 54Mbit	27dBm / -80dBm
Antenna	Dual pol. 90 deg, -35dB port to port isolation, 14dBi gain



90°



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# eless



Frequencies	5.17 - 5.825 GHz
Gain	18dBi
VSWR	1.6:1
3 dB Beam-Width, H-Plane	16.8 °
3 dB Beam-Width, E-Plane, typ.	22.8 °
Polarization	Linear, Vertical and Horizontal
Port to Port Isolation	- 35 dB









Mounting Rings Pole mounting bracket Gigabit PoE injector

# SEXTANT G www.shabakehkaran.com

Outdoor point to point solution

The SEXTANT is a 18dBi 5GHz antenna with a built in RB911 router. It has two polarizations to give you all benefits of 2x2 MIMO in 802.11n.

Inside is the high power RB911 dual chain wireless device with high performance, high output power wireless transmitter. It has a Gigabit Ethernet port, to fully utilise the benefit of 802.11n high speed wireless.

Easy to use and quick to deploy, SEXTANT is ideal for point to point links.

Model	
Features	1 Ethernet, Gigabit, High power, Dual chain
CPU	Atheros AR9342 600MHz network processor
Memory	64MB DDR onboard memory
Data storage	onboard NAND memory chip
Ethernet	One Gigabit port with Auto-MDI/X
Wireless	Built in 5GHz 802.11a/n, 2x MMCX connectors
Extras	beeper, signal and status LEDs, voltage and temperature sensors
Expansion -	
Power input PoE in: 8-30V DC on Ether1 (Non 802.3af).	
Operating temp.	-40°C +70°C tested
Dimensions	Ø250mm, height 90mm
Max consumption	11W at 24V
OS	MikroTik RouterOS, Level 3 license (supports wireless CPE/PtP mode)
Included	SEXTANT antenna, power adapter, mounting rings, pole mounting bracket, Gigabit PoE injector

TX power / RX sensitivity	
TX/RX at MCS0	30dBm / -96dBm
TX/RX at MCS7	24dBm / -78dBm
TX/RX at 6Mbit	30dBm / -96dBm
TX/RX at 54Mbit	27dBm / -80dBm
Frequency range	4900-5920MHz



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Model	QRT 5	QRT 2
Frequencies	4.9-5.875 GHz	2.3-2.6 GHz
Gain	23 ± 1 dBi	17dBi
VSWR	1.37 : 1	1.43 : 1
3 dB Beam-Width, H-Plane	10.5°	22°
3 dB Beam-Width, E-Plane, typ.	10.5°	22°
Polarization	Dual, Vertical and horizontal	Dual, Vertical and horizontal
Port to Port Isolation	-50 dB	-50 dB
Cross polarization, min	-25 dB	-25 dB
Front to Back Ratio, min	35 dB	30 dB





**U** bolts



Pole clamp









24V 0.8A adapter Gigabit PoE injector 24V 1.2A Adapter

# QRT Series www.shabakehkaran.com



High power integrated antenna

The QRT is a rugged outdoor flat panel antenna, with a built in RouterBOARD. It has high output power wireless transmitter, and a Gigabit Ethernet port, to fully utilize the benefit of 802.11n high speed wireless.

Easy to use and quick to deploy, QRT is ideal for point to point links.

Two models are available:

- The QRT-5 comes with 5GHz 1000mW wireless and 23dBi antenna
- The QRT-2 comes with 2.4GHz 3200mW wireless and 17dBi antenna

Model	QRT 5 (RB911G-5HPnD-QRT)	QRT 2 (RBQRTG-2SHPnD)	
Features	1 Ethernet, Gigabit, High power, Dual chain		
CPU	Atheros AR9342 600MHz network pro- cessor	Atheros AR7242 400MHz network pro- cessor	
Memory	64MB DDR on	board memory	
Data storage	128MB NAND memory chip		
Ethernet	One Gigabit port with Auto-MDI/X		
Wireless	Built in 5GHz 802.11a/n (AR9342)	Built in 2GHz 802.11b/g/n (AR9582)	
Extras beeper, signal and status LEDs, voltage and temperature senso			
Expansion	-		
Power input	PoE in: 8-30V DC on Ether1 (Non 802.3af).		
Operating temp.	-40°C +70°C tested		
Unit dimensions	309x320x50mm		
Max consumption	11W at 24V	19W at 24V	
OS	MikroTik RouterOS, Level 4 license (su	pports wireless CPE/PtP and AP mode)	
Included	QRT wireless device, precision mounting bracket, U bolts, pole clamp, screw kit, 24V 0.8A power adapter, Gigabit PoE injector	QRT wireless device, precision mounting bracket, U bolts, pole clamp, screw kit, 24V 1.2A power adapter, Gigabit PoE injector	

#### **QRT 5** wireless specifications

	TX power / RX sensitivity	
TX/RX at MCS0	30dBm / -96dBm	
TX/RX at MCS7	24dBm / -78dBm	
TX/RX at 6Mbit	30dBm / -96dBm	
TX/RX at 54Mbit	27dBm / -80dBm	
Frequency range	4900-5920MHz	

#### QRT 2 wireless specifications



# systems eless

# 60° SXT<sub>2</sub> **SXT Lite2** Approximately 60° beamwidth in all polarizations





(SXT Lite2)











Mounting ring Pole mounting bracket Gigabit PoE injector Gigabit PoE injector

# SXT 2



SXT is a low cost, high speed 2GHz outdoor wireless device, now also available as a high power Gigabit, or as a low cost Lite version. SXT can be used for point to point links, as a CPE for point to multipoint installations or even as an AP/Sector (G model) because of it's wide beamwidth antenna.

Complete with a ready to mount enclosure and built-in 10dBi antenna, the package contains everything you need to set it up in a matter of minutes.

Model	SXT 2	SXT Lite2	
Product code	RBSXTG2HnD	RBSXT2nDr2	
CPU	AR7242 400MHz	AR9344 600MHz	
Memory	32MB DDR SDRAM onboard memory	64MB DDR2	
Ethernet	10/100/1000 (Gigabit) Ethernet port L2MTU frame size up to 4076	10/100 Ethernet port	
Wireless	Onboard dual chain 2GHz 802.11b/g/n .10kV E	SD protection on each RF port	
Extras	Reset switch, beeper, USB 2.0 port, voltage and temperature monitors		
LEDs	Power LED, Ethernet LED, 5 wireless signal LED		
Power input	PoE in: 8-30V DC. Packaged with 24V PSU and passive PoE injector		
Dimensions	140x140x56mm		
Power consumption	Up to 7W Up to 8W		
Operating temp.	-40°C +70°C tested		
License	Level 4 license (CPE, PtP or AP as sector) Level 3 license (CPE or PtP modes)		
Package con- tains	SXT wireless device with integrated antenna, pole mounting bracket, mounting ring, PoE injector, power adapter, quick setup guide		
Certifications	FCC, CE, ROHS		

	SXT 2	SXT Lite2
TX/RX at MCS0	32dBm / -95dBm	27dBm / -95dBm
TX/RX at MCS7	25dBm / -74dBm	22dBm / -77dBm
TX/RX at 6Mbit	32dBm / -96dBm	27dBm / -95dBm
TX/RX at 54Mbit	29dBm / -80dBm	23dBm / -80dBm
Antenna	Dual polarization 2GHz antenna, 10dBi, - Beam-Width: H-Plane, E-Plane typ. 60°	18 dB port to port isolation,



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# Metal 5 SHPn 1-)











(only for 2SHPn model)



2x Metal rings

## Metal



Completely waterproof, rugged, and super high powered. The serious outdoor wireless device. Fully sealed, industrial design metal case, powered by RouterBOARD and RouterOS.

It has a built-in N-male connector, and pole attachment points, so you can attach it to an antenna directly, or use a standard antenna cable. LED signal indicators make it easy to install and align.

Shipped complete with power injector, adapter (US type only for 9HPn model) and mounting kit. Available in three versions - 900MHz, 2GHz and 5GHz.

Metal 9HPn is compatable only with another Metal 9HPn. It will not work with any other 900MHz manufacturer product.

- 900MHz model RBMetal9HPn
- 2.4GHz model RBMetal2SHPn
- 5GHz model RBMetal5SHPn

CPU	Atheros AR7241 400MHz network processor	
Memory	64MB DDR SDRAM onboard memory	
Ethernet	One 10/100 Mbit/s Fast Ethernet port with Auto-MDI/X, L2MTU up to 2030	
Wireless	Wireless Built-in 5 GHz, 2 GHz or 900MHz 1x1 MIMO, N-male connector	
Extras	Reset switch, Beeper, Voltage monitor, Temperature monitor	
LEDs	5 wireless signal LEDs, ethernet activity LED (configurable)	
Power input	Passive 8-30V PoE in only. 16KV ESD protection on RF port	
Consumption	Up to ~0,5A at 24V (11.5W)	
Dimensions	177x44x44mm. Must be mounted with ethernet pointing down.	
Operating temperature	-40°C +70°C tested	
Operating system	MikroTik RouterOS Level 4 license (station, point-to-point or AP modes)	
Package contains	Metal unit, mounting loops, PoE injector, angled N connector, 6dBi onmi antenna (only for 2SHPn model), mounting rings, 24V power adapter. (EU, US, UK, AR, AU type available - select one)	

	5SHPn model	802.11a: -93 dBm @ 6Mbps to -77 dBm @ 54 Mbps 802.11n: -93 dBm @ MCS0 to -71 dBm @ MCS7
RX sensitivity	2SHPn model	802.11b/g: -93 dBm @ 6Mbps to -77 dBm @ 54 Mbps 802.11n: -92 dBm @ MCS0 to -72 dBm @ MCS7 40MHz
	9HPn model	900MHz: -93dBm @ 11Mbps -75 dBm @ 54 Mbps
	5SHPn model	802.11a: 31dBm @ 6Mbps to 27 @ Jit & Juliths the demo version 802.11n: 30dBm @ MCSO to 26dBm @ MCSO DF Editor 802.11b/g: 32dBm @ 41/6Mbps to 29dBm @ 54 Mbps
TX power	2SHPn model	802 11n: 32dRm @ MCS0 to 28dRm @ MCS7
	9HPn model	900Mhz: 27 dBm Mbps to 2Topremove this notice, visit:

# systems eless

# SHOOVE SEHEN



(Groove A)











2GHz / 5GHz outdoor unit

Our smallest outdoor series model - a fully featured wireless RouterBOARD powered by RouterOS. Weatherproof, durable and ready to use. It has one 10/100 Ethernet port with PoE support and a built in wireless radio. It has software selectable 2 or 5GHz wireless mode, and high 500mW output power!

With the Nv2 TDMA technology, up to 125Mbit aggregate throughput is possible! It has a built-in N-male connector, and pole attachment points, so you can attach it to an antenna directly, or use a standard antenna cable. LED signal indicators make it easy to install and align.

CPE or AP versions are available. Groove runs RouterOS with all it's features.

CPU	AR9342 600Mhz	
Memory	64MB	
Ethernet	One 10/100 Mbit/s Fast Ethernet port with Auto-MDI/X, L2MTU up to 2030	
Wireless	5 or 2GHz (software selectable) radio, N-male antenna connector	
Extras	Reset switch, Beeper, Voltage monitor, Temperature monitor	
LEDs	5 wireless signal LEDs, ethernet activity LED (configurable)	
Power input	Passive 9-30V PoE in only. 16KV ESD protection on RF port. Up to 0,19A at 24V (4.56W)	
Dimensions	177x44x44mm. Must be mounted with ethernet pointing down	
Operating temp.	-40°C +70°C tested	
RouterOS	52HPn: Level 3 license (station or ptp), A-52HPn: Level 4 license (AP, station or ptp)	
Package contains	Groove unit, mounting loops, PoE injector, 24V power adapter, 2.4/5 GHz Omni antenna (only for Groove A model)	

	5GHz	2GHz
RX sensitivity 802.11a	-93 dBm @ 6Mbps to -77 dBm @ 54 Mbps	-93 dBm @ 6Mbps to -77 dBm @ 54 Mbps
RX sensitivity 802.11n	-93 dBm @ MCS0 20MHz to -76 dBm @ MCS7 40MHz	-93 dBm @ MCS0 20MHz to -76 dBm @ MCS7 40MHz
TX power 802.11a	27dBm @ 6Mbps to 22Bm @ 54 Mbps	27dBm @ 6Mbps to 24Bm @ 54 Mbps
TX power 802.11n	26dBm @ MCS0 to 22dBm @ MCS7	27dBm @ MCS0 to 23dBm @ MCS7
Frequency range	4900-5920MHz	2400MHEdited with the demo ve

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**Mounting loops** 

DIN mount

**Metal ring** 

24V 0.8A Adapter

**Gigabit PoE injector** 



Rendered image shows internals of BaseBox with optional second wireless card



Using the optionally available Flexquide cable, you can use the Basebox with any 3rd party antenna

## BaseBox



The BaseBox in an outdoor wireless device, based on our popular RB912 model, fitted with two SMA connectors for antennas, and a cable hood for protection against moisture. Also available are three additional places for antenna connectors, in case you wish to use the BaseBox miniPCle slot for one more wireless interface to make a dual band device, or a 3G/4G modem.

The case can be opened with one hand, and is protected against the elements. USB, Ethernet and a Grounding wire exits are provided on the bottom, behind a protective door. Two models are available -BaseBox 2 and BaseBox 5 (2 or 5GHz wireless, respectively).

Comes with a mounting loop for tower/pole mounting, and a separate DIN rail mount is also provided. Package also includes a PoE injector and power supply unit.

Model	BaseBox 5	BaseBox 2
Order code	RB912UAG-5HPnD-OUT	RB912UAG-2HPnD-OUT
Features	1 Ethernet, 1 miniPCle, USB, Additional memory, Gigabit, High power, Dual chain, Outdoor case	
CPU	Atheros AR9342 60	OMHz network processor
Memory	64MB DDR	onboard memory
Ethernet	One Gigabit po	ort with Auto-MDI/X
Wireless	Built in 5GHz 802.11a/n, 2x RP-SMA connectors	Built in 2GHz 802.11b/g/n, 2x RP-SMA connectors
Connector type	RP-SMA Female (outside thread)	
Extras	beeper, signal and status LEDs, SIM slot (requires 3g miniPCle card), voltage and temperature sensors	
Expansion	miniPCle slot for 802.11 or 3G (using 3G disables the USB port), USB 2.0 port	
Power input	PoE in: 8-30V DC on Ether1 (Non 802.3af). Consumption: 14W at 24V	
Operating temp.	-40°C +70°C tested	
Dimensions	246x135x50mm	
OS	MikroTik RouterOS, Level 4 license (supports wireless AP mode)	
Kit includes	RB912 outdoor unit, PSU, PoE injector,	mounting loop, DIN rail mount, monting ring

		DD040LIA C OLID D OLIT	
	RB912UAG-5HPnD-OUT	RB912UAG-2HPnD-OUT	-
TX/RX at MCS0	30dBm / -96dBm	30dBm / -96dBm	
TX/RX at MCS7	24dBm / -78dBm	Edited with the demo vers	IOU
TX/RX at 6Mbit	30dBm / -96dBm	Infix Pro PDF Editor	<u> </u>
TX/RX at 54Mbit	27dBm / -80dBm	27dBm / -80dBm	
Frequency range	4900-5920MHz	To remove this notice, visit	:
		www.iceni.com/unlock.htm	







(U-5HnD)



(UPA-5HnD)







# **OmniTik**



OmniTIK is a weatherproof outdoor AP with dual-polarized omni antennas the perfect companion for our SXT, or for any other 5GHz 802.11a/n standard device. Weatherproof, durable and ready to use. It has five 10/100 Ethernet ports, PoE support and a built-in 400mW 802.11a/n wireless radio. It supports Nv2 TDMA technology with up to 200Mbit aggregate throughput.

LED signal indicators on it's back are fully customizable, show Ethernet activity or wireless signal - or any other information from RouterOS. The USB port gives the ability to connect a 3G modem or a storage drive.

The OmniTIK UPA also features power output on it's ethernet ports. Ports 2-5 can power other PoE capable devices with the same voltage as applied to the unit. Less power adapters to worry about.

	OmniTIK U-5HnD	OmniTIK UPA-5HnD
CPU	Atheros AR7241 400MHz network processor	
Memory	32MB DDR SDRAM onboard memory	64MB DDR SDRAM onboard memory
Ethernet	Five 10/100 Mbit/s Fast Ethernet port with A	Auto-MDI/X, L2MTU up to 2030
Wireless	Wireless Built-in 5GHz 802.11a/n 2x2 MIM0	)
Antenna	Two 7.5dBi (+/-1dBi) omni with different pol	arities (ch0 horizontal, ch1 vertical)
Extras	Reset switch, Beeper, USB 2.0 port, Voltage monitor, Temperature monitor	
LEDs	5 programmable LEDs (Ethernetactivity by default), one power LED	
Power input	Passive 9-30V PoE in only. 16KV ESD protection on RF port	
Dimensions	177x44x44mm	
Operating temp.	-40°C +70°C tested	
Operating system	MikroTik RouterOS v5, Level 4 license	
Package contains	OmniTIK unit, mounting bracket, hose clamp, PoE injector, 24V 0.38A PSU (U-5HnD), 24V 2.5A PSU (UPA-5HnD),	
	OmniTIK UPA-5HnD	
Power Output	Supports PoE output on ports 2-5. Max cur software upgrade	rent 500mA per port, 1A per port with

RX sensitivity	802.11a: -96 dBm @ 6Mbps to -80 dBm @ 54 Mbps 802.11n: -96 dBm @ MCS0 to -77 dBm @ MCS7
TX power	802.11a: 26dBm @ 6Mbps to 22dBm @ 54 Mbps 802.11n: 25dBm @ MCS0 to 19dBm @ MCS7
Modulations	OFDM: BPSK, QPSK, 16 QAM, 64QAM DSSS: DBPSK, DQPSK, CCK



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# Cloud Pouter Switch CRS109-8G-15-2HnD-IN MIKROTIK





#### Cloud Router Switch

### CRS109-8G-1S-2HnD-IN

CRS109 has eight Gigabit ports and one SFP port, it also has a built in Wireless Access Point. Our CRS series combines the best features of a fully functional router and a Layer 3 switch, is powered by the familiar RouterOS. All the specific Switch configuration options are available in a special Switch menu, but if you want, ports can be removed from the switch configuration, and used for routing purposes

- · Full wire speed switching
- Configure ports as switch, or for routing
- If required, full RouterOS routing power right there
- Built in 802.11b/g/n Wireless AP 1000mW
- Desktop case
- Color touchscreen LCD

CPU	Qualcomm Atheros AR9344 600MHz
Memory	128MB
Ethernet	8x 10/100/1000 Mbit/s Gigabit Ethernet with Auto-MDI/X
SFP	One 1G Ethernet SFP cage (Mini-GBIC; SFP module not included), DDMI support.
Storage	128MB Onboard NAND with multiple OS partition support
Serial port	One RJ45 serial port
Extras	Reset switch; beeper; voltage and temperature monitoring, touchscreen LCD, microUSB
Power input	8-57V, 24V 0.8A PSU included, PoE in: 10-57V on Ether1
Case dimensions	285x145x45mm
Operating temp.	-20°C +70°C tested
Antennas	2x built in 4dBi swivel antennas
OS	MikroTik RouterOS v6, Level 5 license
Included	CRS switch, power adapter, microUSB type B to USB type A adapter

Datarate	TX power dBm	RX sensitivity
1MBit/s	29	-97
11MBit/s	28	-90
6MBit/s	30	-96
54MBit/s	25	-76
MCS0	30	-96
MCS7	23	-73

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CRS125-24G-1S-2HnD-IN



CRS125-24G-1S-IN



CRS226-24G-2S+IN



CRS125-24G-1S-RM



CRS226-24G-2S+RM

#### Cloud Router Switch

# CRS 24 port series

Cloud Router Switch is our new Smart Switch series. It combines the best features of a fully functional router and a Layer 3 switch, is powered by the familiar RouterOS. All the specific Switch configuration options are available in a special Switch menu, but if you want, ports can be removed from the switch configuration, and used for routing purposes.

#### Five models are available:

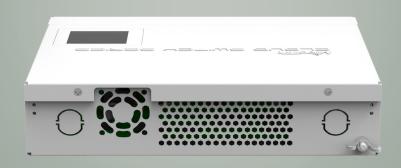
- RM models come with 1U rackmount case
- IN with desktop case
- 2HnD have a 2.4GHz Dual-chain wireless
- 226 series supports SFP+ 10G.

Model	CRS125	-24G-1S	CRS226-	-24G-2S+
Case type	IN, RM	2HnD-IN	IN	RM
CPU	Qualcomm Atheros	AR9344 600 MHz	Qualcomm Atheros	QCA8519 400 MHz
Memory	128	MB	64	MB
Ethernet	24x 10	/100/1000 Mbit/s Giga	bit Ethernet with Auto	-MDI/X
Wireless AP	-	802.11b/g/n built in	-	-
SFP	One 1.25G Etherno GBIC; SFP module supp	not included), DDMI	port supports only n	I.25G/10G modules OG modules. SFP+ nodules up to 10KM ), DDMI support
Expansion	microUs	microUSB port -		-
Storage	128MB Onboard NAND with multiple OS partition support			
Serial port	One RJ45 serial port			
Extras	Reset switch, beeper, voltage and temperature monitoring, touchscreen LCD			
Power input	8-28V, 24V 0.8A PSU included, PoE 8-28V, 24V 1.2A PSU included, PoE in: 8-30V on Ether1		: 8-30V on Ether1	
Case dimensions	285x145x45mm (IN models), 443x145x45mm (RM models)			
Operating temp.	-20°C +70°C tested			
OS	MikroTik RouterOS v6, Level 5 license			
Included	CRS switch, power adapter and USB OTG cable (for 4G dongle or USB drive)  CRS switch, power adapter			

#### CRS125-24G-1S-2HnD-IN wireless specifications

Antennas	2x built in 4dBi swivel antennas
RX sensitivity	802.11g: -96dBm @ 6Mbit/s to -80dBm @ 54Mbit/s 802.11n: -96dBm @ MCS0 to -78dBm @ MCS7
TX power	802.11g: 30dBm @ 6Mbps to 25dBm @ 54 Mbps 802.11n: 30dBm @ MCS0 to 23dBm @ MCS7
Modulations	OFDM: BPSK, QPSK, 16 QAM, 64QAM DSSS: DBPSK, DQPSK, CCK

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Cloud Router Switch

## CRS210-8G-2S+IN

Cloud Router Switch 210-8G-2S+IN is new "small size low cost" member of our CRS series. It comes with eight Gigabit Ethernet ports and two SFP+ cages for 10G connectivity (first port supports 1.25G/10G modules, second port only 10G modules). Product supports 10-57V DC.

Our CRS series combines the best features of a fully functional router and a Layer 3 switch, is powered by the familiar RouterOS. All the specific Switch configuration options are available in a special Switch menu, but if you want, ports can be removed from the switch configuration, and used for routing purposes.

CPU	Qualcomm Atheros 8519 400MHz
CFU	Qualconiin Atheros 6519 400MHZ
Memory	DDR2 64MB
Ethernet	8x 10/100/1000 Mbit/s Gigabit Ethernet with Auto-MDI/X
SFP	2x 10G SFP+ cage (Mini-GBIC; SFP+ module not included), DDMI support.
Storage	128MB Onboard NAND with multiple OS partition support
Serial port	One RJ45 serial port
Extras	Reset switch; beeper; voltage and temperature monitoring, touchscreen LCD
Power options	10-57V, 24V 0.8A PSU included, PoE in: 10-57V on Ether1 (802.3af/at or passive PoE)
Power consumption	13W
Case dimensions	200x144x47mm
Operating temp.	-20°C +70°C tested
OS	MikroTik RouterOS v6, Level 5 license
Included	CRS switch, power adapter, rackmount ears



# Cloud Router Switch MikroTik

Cloud Router Switch

### CRS212-1G-10S-1S+IN

Cloud Router Switch 212-1G-10S-1S+IN is new "small size low cost" member of our CRS series. It comes with one Gigabit Ethernet RJ45 port, ten SFP cages and one 10G SFP+ cage, as well as LCD panel and serial port (RJ45). Product includes indoor desktop case and power supply.

Our CRS series combines the best features of a fully functional router and a Layer 3 switch, is powered by the familiar RouterOS. All the specific Switch configuration options are available in a special Switch menu, but if you want, ports can be removed from the switch configuration, and used for routing purposes.

CPU	Qualcomm Atheros 8519 400MHz
Memory	DDR2 64MB
Ethernet	1x 10/100/1000 Mbit/s Gigabit Ethernet with Auto-MDI/X
SFP	1x 10G SFP+ cage, 10x SFP cages (Mini-GBIC; SFP+ module not included), DDMI support.
Storage	128MB Onboard NAND with multiple OS partition support
Serial port	One RJ45 serial port
Extras	Reset switch; beeper; voltage and temperature monitoring, touchscreen LCD
Power input	8-30V, 24V 1.2A PSU included
Power consumption	20W
Operating temp.	-20°C +70°C tested
Case dimensions	200x144x47mm
OS	MikroTik RouterOS v6, Level 5 license
Included	CRS switch, power adapter







# RB260GS series

The RB260GS is a small SOHO switch. Two models are available, the RB260GS, and the RB260GSP, which features power output on it's ethernet ports. Ports 2-5 can power other PoE capable devices with the same voltage as applied to the unit.

Both devices have five Gigabit Ethernet ports and one SFP cage, switching is done by an Atheros Switch Chip.

The devices are running an operating system designed specifically for MikroTik Switch products - SwOS.

SwOS is configurable from your web browser. It gives you all the basic functionality for a managed switch, plus more: Allows to manage port-to-port forwarding, apply MAC filter, configure VLANs, mirror traffic, apply bandwidth limitation and even adjust some MAC and IP header fields.

Tested and recommended to use with MikroTik SFP modules: S-85DLC05D, S-31DLC20D and S-35/53LC20D (not included)

CPU	Taifatech TF470	
Memory	Embedded 96K SRAM	
Ethernet	Five 10/100/1000 Ethernet ports, Atheros switch AR8327	
PoE output	RB260GSP only: Passive PoE output on ports 2-5. Max current 1A per port, 2A total current limit	
SFP	One fixed Gigabit Ethernet SFP cage with DDMI support (Mini-GBIC; SFP module not included)	
Serial port	No serial port	
LEDs	Power, NAND activity, 5 Ethernet activity LEDs	
Extras	Hardware watchdog	
Power input	PoE in: 8-30V DC on Ether1 (Non 802.3af). Jack: 8-30V DC	
Dimensions	113x138x29mm	
Power consumption	Up to 6W	
Operating temperature	-20°C +70°C tested	
Operating System	MikroTik SwOS	
Included	RB switch, power adapter Edited with the demo ve	



## **RB750**



The RB750 is a small five port ethernet router in a nice plastic case. Not only this is an attractive looking tiny SOHO unit, its price is lower than the RouterOS license alone - there simply is no choice when it comes to managing your wired home network, the RB750 has it all. Small, powerful, affordable and fully featured. There are three models available: RB750, RB750GL which has Gigabit ports, and RB750UP which has PoE power output. RB750UP ports 2-5 can power other PoE capable devices with the same voltage as applied to the unit. Less power adapters to worry about.

Model	RB750, RB750GL, RB750UP
CPU	AR7241 400MHz CPU
Data storage	NAND memory chip
Ethernet	Five Ethernet ports with Auto-MDI/X. Hardware switch chip and port mirror support
LEDs	Power, NAND activity, 5 Ethernet LEDs
Power input	PoE in: 8-30V DC on Ether1 (Non 802.3af). Jack: 8-30V DC
Power output	Only RB750UP: ports 2-5. Max current 500mA per port, 1A per port with software upgrade, 2A total current limit
Operating temp.	-20°C +70°C tested
Dimensions	113x89x28mm
Power consumption	Up to 3W
Operating System	MikroTik RouterOS, Level 4 license
Package contains	RouterBOARD in a plastic case, power adapter

Feature / Model	750	750GL	750UP
CPU MHz	400Mhz	400Mhz	400MHz
RAM MB	32MB	64MB	32MB
PoE output	-	-	Yes
USB	-	-	Yes
Voltage monitor	-	-	Yes
Gigabit LAN	-	Yes	-
RouterOS License	Level 4	Level 4	Level 4



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# **IEC Cord POE** injector **Metal ring Mounting loop** Power adapter **DIN** mount

# **PowerBOX**



The PowerBOX is an outdoor five Ethernet port router with PoE output on four ports. You can use this device to supply power to four PoE capable devices such as our SXT or others. Since the device has a waterproof outdoor case, you can mount it on a tower, or in other outdoor locations.

The unit has five shielded Ethernet ports, four of which can power other PoE capable devices with the same voltage as applied to the unit (max current out is 1A per port, max total out is 2A).

Less power adapters and cables to worry about!

CPU	AR7241 400MHz CPU
Memory	64MB 200MHz DDR RAM, 128MB NAND
Ethernet	5x 10/100 Mbit/s Ethernet with Auto-MDI/X
Extras	Reset switch, voltage and temperature monitors
LEDs	11x LED (5x User LED)
Power input	PoE in: 5-30V Packaged with 24V DC 2.5A power adapter
Dimensions	125x178x48mm
Max consumption	3W at 24V
Operating temp.	-40°C +60°C tested
os	MikroTik RouterOS, Level 4 license



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#### RB2011iLS-IN



#### RB2011iL-IN



RB2011UiAS-IN



RB2011iL-RM



# RB2011 Series

RB2011 are multifunctional routers with 5 Gigabit Ethernet ports and 5 Fast Ethernet ports, and multiple models available. The RB2011iL are lower cost, but the RB2011Ui series have full features.

All RB2011 devices are powered by a new generation Atheros 600MHz 74K MIPS CPU.

Model	RB2011iL	RB2011UiAS	
CPU	Atheros AR9344 600MHz		
Memory	64MB DDR SDRAM onboard memory	128MB DDR SDRAM onboard memory	
Ethernet	Five 10/100 Mbit Fast Ethernet ports with Auto-MDI/X Five 10/100/1000 Mbit Gigabit Ethernet ports with Auto-MDI/X		
Extras	Reset button, Reset jumper		
LEDs	Power, User, Ethernet activity		
Power input	Jack 8-28V DC; PoE in: 8-28V DC on Ether1 (Non 802.3af).		
Power output	500mA on Port 10		
Operating temperature	-20°C +70°C tested		
Board dimensions	214x86mm	214x86mm	
Power consumption	8W max	15W max	
Operating System	MikroTik RouterOS, Level 4 license	MikroTik RouterOS, Level 5 license	
Package includes	RB2011, power supply		

Feature / Model	2011iL-IN	2011iL-RM	2011iLS-IN	2011UiAS-IN	2011UiAS-RM
Enclosure	Desktop	Rackmount	Desktop	Desktop	Rackmount
SFP port	-	-	Yes	Yes	Yes
Power output	on port 10	on port 10	on port 10	on port 10	on port 10
USB	-	-	-	Yes	Yes



## Mikrotik X2 RouterBOARD 1100 AH



# **IEC Cord** Rackmount ears Screw and feet kit

# RB1100AHx2

This device is a high performance 1U rackmount Gigabit Ethernet router. It has thirteen individual gigabit Ethernet ports, two 5-port switch groups, and includes Ethernet bypass capability.

RB1100AHx2 has a dual core 1066MHz CPU with hardware accelerated IPsec encryption, a SODIMM slot for RAM, one microSD card slot, a beeper and a serial port.

It comes preinstalled in a 1U aluminium rackmount case, assembled and ready to deploy.

CPU	PowerPC 1066MHz Dual Core with hardware encryption
Memory	SODIMM DDR Slot; 2GB installed
Boot loader	RouterBOOT, 1Mbit Flash chip
Data storage	Onboard NAND memory chip
Ethernet	Thirteen 10/100/1000 Mbit/s Gigabit Ethernet with Auto-MDI/X Includes switch to enable Ethernet bypass mode in two ports
Storage	Onboard NAND, one microSD slot
Serial port	One DB9 RS232C asynchronous serial port
Extras	Reset switch, beeper, voltage and temperature sensors
Power input	IEC C14 standard connector 110/220V
Operating temp.	-20°C +70°C tested
Fan	Dual fan with failover support mounted at case back
Dimensions	1U case: 44x176x442mm
Operating System	MikroTik RouterOS, Level 6 license
Included	RB router, IEC cord, rackmount ears (aluminum), screw and feet kit (K10)

# routers ernet

## CCR1009-8G-1S-1S+PC

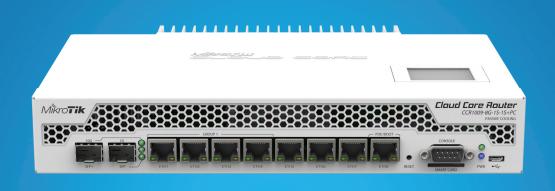
Cloud Core Router

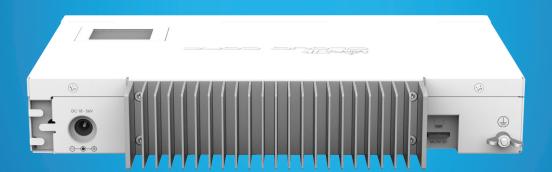
Our popular 9-core Cloud Core Router is now available in a new passive cooling enclosure. This CCR1009 unit is equipped with two heat-pipes and a specially designed heat-sink, so its completely silent.

The unit is powered by an external 24v 2.5A AC/DC adapter and supports power redundancy if you also power it from the PoE input port.

The device comes with a desktop enclosure, but special rackmount brackets are also included, so it can be used either on desk or in rack.

CPU	TILE-Gx8009 (9-cores, 1Ghz per core)
Memory	Built in 2GB RAM 533 Mhz
Ethernet	8x 10/100/1000 Mbit/s Gigabit Ethernet with Auto-MDI/X
SFP	1x SFP cage, 1x SFP+ cage, DDMI support
Expansion	microUSB port, SmartCard slot, MicroSD slot
Storage	128MB Onboard NAND
Serial port	One DB9 RS232C asynchronous serial port
Extras	Reset switch; beeper; voltage, current and temperature monitoring, LCD
Power options	External 18-58V PSU included, Passive PoE input 18-58V
Operating temp.	-20°C +70°C tested
Board dimensions	444x175x47mm
OS	MikroTik RouterOS v6, Level 6 license









# CCR1009 Series

The CCR1009 is a powerful Ethernet router based on the cutting edge TILERA 9 core CPU.

#### Two models are available:

Cloud Core Router

- low-cost model CCR1009-8G-1S with with 1GB of RAM, eight Gigabit Ethernet ports, and one SFP cage (SFP module not included).
- full feature model CCR1009-8G-1S-1S+ with 2GB of RAM, eight Gigabit Ethernet ports, one SFP port and one SFP+ port with 10G support (SFP module not included). CCR1009-8G-1S-1S+ model also have dual power supplies built in for redundancy (if one power line fails, the other one will take over automatically). Also, CCR1009-8G-1S-1S+ supports a Smart card, to store your private key for use in all features that support Certificate based authentication.

Model	CCR1009-8G-1S	CCR1009-8G-1S-1S+	
CPU	Tilera TILE-Gx8009 CPU (9-cores, 1.2Ghz per core)		
Memory	RAM: 1GB DDR3 800 MHz	RAM: 2GB DDR3 800 MHz	
Network interfaces	Eight 10/100/1000 Mbit/s Gigabit Ethernet with Auto-MDI/X		
SFP	1x SFP cage.	1x SFP cage, 1x SFP+ cage. SFP+ port supports only modules up to 10KM LR (long reach).	
Expansion	microUSB port	microUSB port, SmartCard slot, MicroSD slot	
Storage	128MB Onboard NAND		
Serial port	One DB9 RS232C asynchronous serial port		
Extras	Reset switch; beeper; voltage, current and temperature monitoring; speed controlled fan	Reset switch; beeper; voltage, current and temperature monitoring; speed controlled fan, LCD	
Power input	1x IEC C14 power jack AC 110/220V, PoE in 12-58V, 802.3af/at compliant	2x IEC C14 power jacks AC 110/220V, PoE in 12-58V, 802.3af/at compliant	
Max power consumption	34W (with loaded SFP)	35W (with loaded SFP)	
Unit dimensions	444x175x47mm		
Operating temp.	-20°C +70°C tested		
OS	MikroTik RouterO3 v6	(64bit), Level 6 license (1905), Level 6 license (1905)	
Included	router in a 1U case, IEC power cable, USB cable, rackmount ears		



CCR1009-8G-1S

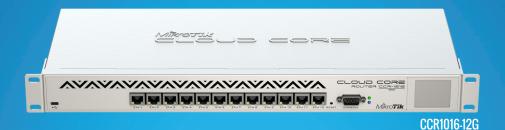


CCR1009-8G-1S-1S+



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CCR1016-12S-1S+





Cloud Core Router

# CCR1016 Series

CCR1016 is an industrial grade router with a cutting edge 16 core Tilera CPU. If you need many millions of packets per second - Cloud Core Router is your best choice.

Two models are available. **CCR1016-12G** has twelve Gigabit ethernet ports, a serial console cable and a USB port.

CCR1016-12S-1S+ has twelve SFP ports and one SFP+ port for 10G connectivity. It is available in a 1U rackmount case and also has a serial console port, a touchscreen LCD and a USB port.

Model	CCR1016-12G	CCR1016-12S-1S+	
CPU	Tilera Tile-Gx16 CPU (16-cores, 1.2Ghz per core)		
Memory	Two SODIMM DDR3 slots, 2x 1GB installed (no hw or software max limit)	2GB built-in RAM	
Ethernet	Twelve 10/100/1000 Mbit/s Gigabit Ether- net with Auto-MDI/X	-	
SFP	-	Twelve SFP ports and one SFP+ port	
Expansion	microUSB port		
Storage	512MB Onboard NAND	128MB Onboard NAND	
Serial port	One DB9 RS232C asynchronous serial port		
Extras	Reset switch; beeper; voltage, current and temperature monitoring; speed controlled fan		
Power input	1x PSU unit built in, 110/220V. IEC C14 standard connector	2x PSU units built in, 110/220V. IEC C14 standard connectors	
Dimensions	442x185x45mm	442x195x45mm	
Operating temp.	Max ambient temperature 60°C @ 1.2GHz	Max ambient temperature 60°C @ 1.2GHz	
OS	MikroTik RouterOS v6, Level 6 license		
Included	router in a 1U case, IEC power cable, usb cable	router in a 1U case, IEC power cable, RJ45 SFP 10/100/1000M copper module	





CCR1036-12G-4S



CCR1036-8G-2S+









Cloud Core Router

# CCR1036 Series

Cloud Core Router is an industrial grade Ethernet router with a cutting edge 36 core TILERA CPU. These are our top of the line routers and can deliver up to 42 million packets per second, or 28 Gigabits throughput (CCR1036-8G model).

Two models are available, the CCR1036-12G-4S has 12 Gigabit ports and 4 SFP ports. The CCR1036-8G-2S+ has 8 Gigabit ports, and two SFP+ ports for 10G connectivity. Both of the units are also available with 16GB of RAM (-EM upgrade).

Model	CCR1036-12G-4S	CCR1036-8G-2S+	
CPU	Tilera Tile-Gx36 CPU (36-cores, 1.2Ghz per core)		
Memory	Two SODIMM DDR3 slots, 2x2GB installed (no hw or software max limit)  "-EM" models: 2x8GB RAM installed		
Ethernet	Twelve 10/100/1000 Mbit/s Gigabit Eight 10/100/1000 Mbit/s Gigabit Ethernet with Auto-MDI/X with Auto-MDI/X		
SFP	Four 1.25G Ethernet SFP cage (Mini- GBIC; SFP module not included), DDMI support	Two 10G Ethernet SFP+ cages (Mini-GBIC; SFP module not included), DDMI support. SFP+ port supports only modules up to 10KM LR (long reach).	
Expansion	microUSB port		
Storage	1GB Onboard NAND		
Serial port	One DB9 RS232C asynchronous serial port		
Extras	Reset switch; speed controlled fan; beeper; voltage, current and temperature monitoring		
Power input	IEC C14 standard connector 110/220V (PSU included), up to 60W power consumption		
Board dimensions	355x145mm55mm		
Operating temp.	Max ambient temperature 60°C @ 1.2GHz		
OS	MikroTik RouterOS v6, Level 6 license		
Included	Router in a 1U case, power cable, usb cable, rackmount ears		



# Cloud Core Router 🛑





#### Cloud Core Router

## CCR1072-1G-8S+

Our new flagship router, the CCR1072, is powered by a Tilera 72 core CPU, each core is clocked at 1GHz, making this our most powerful product.

The unit comes equipped with two removable (hot plug) power supplies for redundancy, smart card slot, eight SFP+ ports and 16GB of built in ECC RAM.

Thanks to the unique 72 core processor and ports that are directly connected to the CPU, CCR1072 is capable of up to 70 million packets per second throughput for small packets.

#### **New generation CPU**

- 72 core CPU
- 1GHz clock per core
- State of the art TILE GX architecture

#### **Highest performance**

- packet throughput
- up to 80 Gbps big packet
   Color touchscreen LCD throughput

#### Full set of features

- up to 70 million pps small
   1U rackmount case
  - 8x SFP+ ports

  - · Ports directly connected to CPU

CPU	Tilera Tile-Gx72 CPU (72-cores, 1Ghz per core)	
Memory	Built in 16GB ECC RAM	
Ethernet	One 10/100/1000 Mbit/s Gigabit Ethernet with Auto-MDI/X	
SFP	Eight 10G Ethernet SFP+ cages (Mini-GBIC; SFP module not included), DDMI support	
Expansion	1x microUSB, 1x regular USB 2.0, full size Smart Card slot.	
Storage	1GB Onboard NAND, microSD slot	
Serial port	One RJ45 serial port	
Extras	Reset switch; speed controlled fans; beeper; voltage, current and temperature monitoring	
Power options	2x IEC C14 standard connectors 110/220V (Two redundant PSU)	
Power consumption	100W	
Operating temp.	Max ambient temperature 60°C @ 1.2GHz	
Product dimensions	443x310x44.5mm	
OS	MikroTik RouterOS v6, Level 6 license	



# mAP 2n



The mAP is a tiny size wireless Access Point with full RouterOS capabilities. It is very portable, since it accepts power from a wide variety of sources - USB, PoE and power jack.

In addition to using this device as a small and portable AP, it also works as a PoE injector - the second Ethernet port provides up to 500mA of power to another device, for example, you can connect a SXT CPE device to it.

- PoE in 10-57V
- Built in 2,4GHz AP
- microUSB for a 3G/4G modem, or for power input
- Station or AP mode wireless
- Passive PoE output (same as input voltage)

D	D 4 DOADD 4D0
Product code	RouterBOARD mAP 2n
CPU	Qualcomm Atheros AR9331 400 MHz
RAM	64MB DDR2
Ethernet	2x 10/100 Mbit/s Ethernet with Auto-MDI/X
Storage	16MB built in flash storage
Wireless	AR9331, 2GHz 802.11b/g/n built in
Antenna	1.3dBi built in
Power input	Passive PoE 10-57V, 24V 0.8A PSU included, supports powering from USB
Power output	Pasive PoE output, up to 500mA on Ether 2
Power consumption	2W
Case dimensions	68x68x19mm
Operating temp.	-20°C +70°C tested
OS	MikroTik RouterOS v6, Level 4 license
Included	mAP device, 24V 0.8A power adapter, microUSB type B to USB type A adapter.

Datarate	TX power dBm	RX sensitivity	
1MBit/s	17	-96	
11MBit/s	17	-88	
6MBit/s	15	-92	
54MBit/s	11	-73	
MCS0	15	-92	
MCS7	10	-70	
	·		

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**USB Adapter** 

24V 0.8A Adapter

# cAP 2n



RouterBOARD cAP-2n is our first 2.4GHz ceiling AP. Inconspicuously designed, it blends into the environment, perfect for hospitality business like hotels, airports, shopping malls etc.

cAP 2n supports 802.11b/g/n and can be powered by PoE. It's a perfect companion for the MikroTik CAPsMAN (controlled AP system manager), allowing you to control all your AP devices from one central location.

Unlike traditional controller software, which requires a separate PC/Mac to run, our CAPSMAN runs on any existing RouterBOARD device in your network. No need for a separate controller machine.

Everything is included to get you started, wall/ceiling mount, PoE injector, power adapter and even the screws and screw anchors.

CPU	Atheros AR9331-AL1A 400MHz network processor
Memory	64MB DDR RAM
Ethernet	One 10/100 Mbit/s Fast Ethernet port with Auto-MDI/X
Wireless	Wireless Built-in 2.4 GHz 802.11b/g/n, one chain
Extras	Reset switch
LEDs	5x LEDs, 1x user LED
Power input	Passive PoE input, 12-56V
Consumption	2W
Dimensions	ø 185mm, height: 31mm
Operating temperature	-20°C +70°C tested
Operating system	WISP AP (level 4) license
Package contains	24V 0.38A power adapter, PoE injector, ceiling mount base, ceiling mount attachment
Antenna	Max gain 2dBi

802.11b/g	RX Sensitivity	TX Power
1Mbit	-96	17dBm
11Mbit	-88	17dBm
6Mbit	-92	15dBm
54Mbit	-73	11dBm
802.11n	RX Sensitivity	TX power
MCS0	-92	15dBm
MCS7	-70	10dBm





24V 0.38A Adapter





Ceiling mount base Ceiling mount attachment



PoE injector



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# hAP Lite

The home Access Point lite (hAP lite) is an ideal little device for your apartment, house or office.

It supports button triggered WPS, for the convenience of not typing a complicated password when somebody wants to have wireless internet access, and can also be told to change to cAP mode and join a CAPsMAN centrally managed network by the push of a button.

Of course, the device runs RouterOS with all the features, bandwidth shaping, firewall, user access control and many others.

The hAP lite is equipped with a powerful 650MHz CPU, 32MB RAM, dual chain 2.4GHz onboard wireless, four Fast Ethernet ports and a RouterOS L4 license. USB power supply is included.

Order code	RB941-2nD
CPU	QCA9531 650MHz CPU
Memory	32MB DDR RAM
Ethernet	4x 10/100 Mbit/s Ethernet with Auto-MDI/X
Wireless cards	Onboard dual chain 2.4GHz 802.11b/g/n QCA9531 wireless module; 10kV ESD protection on each RF port, WPS support via button
Extras	Reset switch
LEDs	Power LED, 4x Ethernet LED, user LED
Power input	Packaged with 5V DC 0.7A power adapter
Dimensions	113x89x28mm
Max consumption	3W at 5V
Operating Temp	-20C +70C tested
OS	MikroTik RouterOS, Level 4 license (AP support)

TX/RX at 1Mbps	22dBm / -96dBm	
TX/RX at 11Mbps	22dBm / -89dBm	
TX/RX at 6Mbps	20dBm / -93dBm	
TX/RX at 54Mbps	18dBm / -74dBm	
TX/RX at MCS0	20dBm / -93dBm	
TX/RX at MCS7	16dBm / -71dBm	
Antenna	1.5dBi gain	
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## RB951 high power series

The RB951 High Power is a wireless SOHO AP with a new generation AtherOS CPU and more processing power. It has 600MHz CPU, 128MB RAM, high power 2.4GHz 1000mW 802.11b/g/n wireless AP with antennas built in and USB port for external 3G/4G modem. The device is very small and will look good in any home or office, wall mounting anchor holes are provided.

#### Two models are available:

- The RB951G-2HnD has five Gigabit Ethernet ports;
- The RB951Ui-2HnD has five 10/100Mbps Ethernet ports and PoE output function for port 5 - it can power other PoE capable devices with the same voltage as applied to the unit. Maximum load on the port is 500mA.

Model	RB951G-2HnD	RB951Ui-2HnD	
Features	Gigabit, USB, 2GHz, 802.11n, dual chain	USB, power injector, 2GHz, 802.11n, dual chain	
CPU	Atheros AR9344 600MHz CPU		
Memory	128MB DDR2 onboard memory		
Ethernet	Five independent 10/100/1000 Gigabit Ethernet ports	Five independent 10/100 Ethernet ports	
LEDs	Power, NAND activity, 5 Ethernet LEDs, wireless activity LED		
Power input	PoE in: 8-30V DC on Ether1 (Non 802.3af). Jack: 8-30V DC		
Power out	-	PoE out passive on port 5, same voltage as input, max: 500 mA	
Dimensions	113x138x29mm		
Power consumption	Up to 7W		
Operating temp.	-20°C +70°C tested		
Operating System	MikroTik RouterOS, Level 4 license		
Package contains	RouterBOARD in a plastic case, power adapter (12V, 1A)	RouterBOARD in a plastic case, power adapter (24V 0.8A)	

Antennas	2x2 MIMO PIF antennas, max gain 2.5dBi
RX sensitivity	802.11g: -96dBm @ 6Mbit/s to -80dBm @ 54Mbit/s 802.11n: -96dBm @ MCS0 to -78dBm @ MCS7
TX power	802.11g: 30dBm @ 6Mbps to 25dBm @ 54 Mbps & 802.11n: 30dBm @ MCS0 to 23dBm @ MCS7
Modulations	OFDM: BPSK, QPSK, 16 QAM, 6 QAM DSSS: DBPSK, DQPSK, CCK

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## RB2011UiAS-2HnD-IN

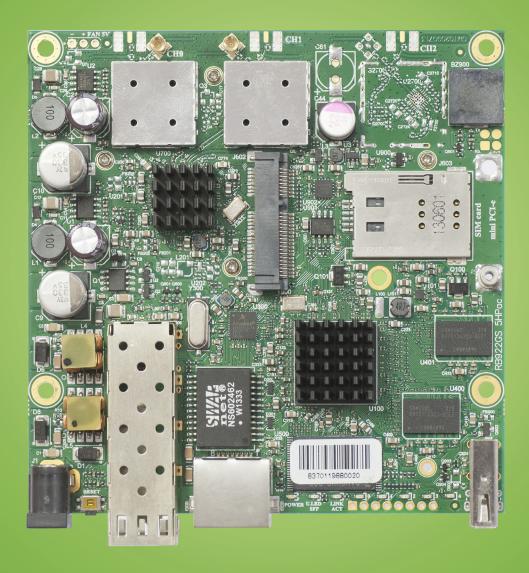
RouterBOARD 2011UiAS-2HnD has most features and interfaces from all our Wireless routers. It's powered by the new Atheros 600MHz 74K MIPS network processor, has 128MB RAM, five Gigabit LAN ports, five Fast Ethernet LAN ports and SFP cage (SFP module not included!). Also, it features powerful (up to 1W!) dual chain 2.4Ghz 802.11bgn wireless, RJ45 serial port, microUSB port and RouterOS Level 5 license.

RB2011UiAS-2HnD-IN comes with desktop enclosure, two indoor antennas for wireless, power supply and touchscreen LCD panel.

General specifications	
CPU	Atheros AR9344 600MHz
Memory	128MB DDR2 SDRAM onboard memory
Ethernet	Five 10/100 Mbit Fast Ethernet ports with Auto-MDI/X Five 10/100/1000 Mbit Gigabit Ethernet ports with Auto-MDI/X
Wireless	Built in 2GHz dual chain 802.11b/g/n wireless device Also includes two 2.5dBi swivel antennas
Expansion	One fixed Gigabit Ethernet SFP cage (Mini-GBIC; SFP module not included)
Extras	Reset button, Reset jumper, RJ45 serial port, LCD panel, Temperature and Voltage sensors, powered micro-B USB connector, Beeper
Power input	Jack 8-28V DC; PoE in: 8-28V DC on Ether1 (Non 802.3af). 11W max consumption
Power output	500mA on Port 10
Operating temperature	-20°C +70°C tested
Dimensions	214mm x 86mm
Operating System	MikroTik RouterOS, Level 5 license
Package includes	RB2011, power supply, USB cable

Feature / Model	2011UiAS-2HnD-IN
Enclosure	Desktop
SFP port	Yes
Serial port	Yes
USB	Yes
Wireless	Yes
Antennas	2x built in 4dBi swivel
LCD display	Yes

802.11b/g	RX Sensitivity	TX Power	802.11n	RX Sensitivity	TX power	
1Mbit	-96	30dBm	MCS0/8 20MHz	€dited with t	he demo ve	rsion of
11Mbit	-80	28dBm	MCS0/8 40MHz	Infix Pro PDF		
6Mbit	-96	30dBm	MCS7/15 29/4Hz	-76	25dBm	
54Mbit	-80	27dBm	MCS7/15 40MHz	To remove th	is office vis	it.
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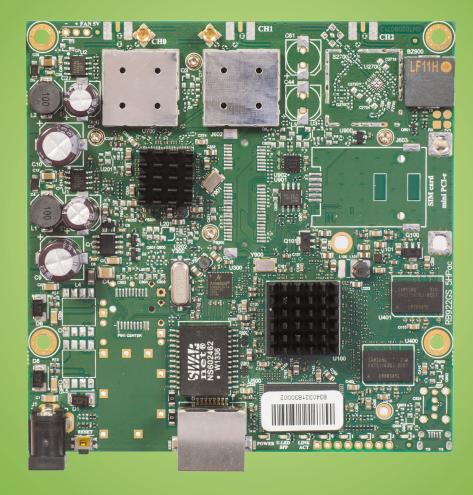


## RB922UAGS-5HPacD

The RB922 is a very versatile wireless router, perfect for assembling your own solution. It supports the new 802.11ac standard for high speed wireless (up to 866Mbit datarate and 20/40/80MHz channels). The device has ports and slots for many uses: 1x SFP cage, miniPCle slot with SIM for 3G/4G modem, USB port, Gigabit Ethernet port and two MMCX connectors for the built in 802.11ac radio.

Order code	RB922UAGS-5HPacD
CPU	QCA9557 720MHz network processor
Memory	128MB DDR2 onboard memory
Ethernet	One Gigabit port with Auto-MDI/X
Wireless	QCA9882 5GHz 802.11ac, 2x MMCXconnectors, Dual chain
Supported channels	20/40/80MHz
SFP	1x SFP cage available
Extras	Beeper, signal and status LEDs, voltage and temperature sensors
Expansion	USB 2.0 port, 1x MiniPCle slot, SIM slot (requires 3g miniPCle card)
Power input	PoE in: 8-30V DC on Ether1 (Non 802.3af). Consumption: 17W
Operating temp.	-40°C +70°C tested
Dimensions	105x105mm
os	MikroTik RouterOS, Level 4 license

Wireless transmit/receive specifications				
TX/RX at MCS0	30dBm / -96dBm			
TX/RX at MCS7	27dBm / -77dBm			
TX/RX at MCS9	22dBm / -72dBm			
TX/RX at 6Mbit	31dBm / -96dBm			
TX/RX at 54Mbit	27dBm / -81dBm			
Frequency range	4920-6100 MHz, Operating range limited by Country Regulations			



## RB911G-5HPacD

The RB911 series devices are perfect for building low cost CPE devices, and now a new model has been added to our line up - with 802.11ac support, to reach speeds not possible before.

The RB911 series are small wireless routers with an integrated wireless cards. They are equipped with powerful 720Mhz CPU, providing superb value for money.

These devices include RouterOS, the operating system which can be a router, firewall, bandwidth manager, a CPE and more, all at the same time. All devices have built-in 16kV ESD protection on the RF port.

Order code	RB911G-5HPacD
CPU	QCA9557 720MHz network processor
Memory	128MB DDR2 onboard memory
Ethernet	One Gigabit port with Auto-MDI/X
Wireless	QCA9882 5GHz 802.11ac, 2x MMCX connectors, Dual chain
Supported channels	20/40/80MHz
Extras	Beeper, signal and status LEDs, voltage and temperature sensors
Power input	PoE in: 8-30V DC on Ether1 (Non 802.3af). Consumption: 12W
Operating temp.	-40°C +70°C tested
Dimensions	105x105mm
OS	MikroTik RouterOS, Level 3 license

Vireless transmit/red X/RX at MCS0	30dBm / -96dBm	
X/RX at MCS7	27dBm / -77dBm	
X/RX at MCS9	22dBm / -72dBm	
X/RX at 6Mbit	31dBm / -96dBm	
X/RX at 54Mbit	27dBm / -81dBm	
requency range	4920-6100 MHz, Operating range limited by Country Regulations	<
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#### RB411AR



## **RB411**

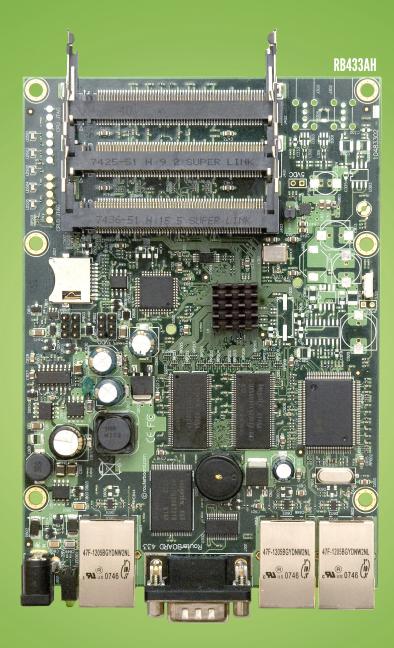
Perfect for building custom AP and CPE devices

The RB411 are our low cost customizable routers with one Ethernet and one miniPCI slot. The new RB411L series are lower cost, and don't have some of the ports present on other RB411 devices. There are six models in the RB411 series.

Use this device in an outdoor case for a AP/CPE device, or a point to point wireless link installation. The miniPCI slot allows you to choose your own preferred wireless card model.

NAND memory chip
One 10/100 Mbit/s Ethernet port with Auto-MDI/X
One MiniPCI Type IIIA/IIIB slot
Reset switch, beeper
Power, NAND activity, 5 user LEDs
PoE in: 8-28V DC on Ether1 (Non 802.3af).
-40°C +70°C tested
105x105mm
1,4W board only, 10W available to minIPCI card
MikroTik RouterOS

Feature / Model	411L	411	411U	411AR	411AH	411GL
CPU MHz	300	300	300	300	680	680
RAM MB	32	32	32	32	64	64
Power jack	-	yes	yes	yes	yes	yes
Serial port	-	yes	yes	yes	yes	-
USB	-	-	yes	-	-	yes
miniPCI express	-	-	yes	-	-	-
Integrated wireless	-	-	-	2.4GHz	-	-
Gigabit LAN	-	-	-	-	-	yes
RouterOS License	Level 3	Level 3	Level 4	Level 4	Level 4	Level 4



## **RB433**



## Perfect for building custom AP devices

The RB433 is a multi port device. Use it in an outdoor case for a sector AP installation, or for a wireless backhaul. Three ports give you plenty of configuration options for many wireless scenarios.

New to the RB433 family is the RB433L series - a light version with only the most essential features and available at a lower cost.

We currently have four different models in the RB433 series.

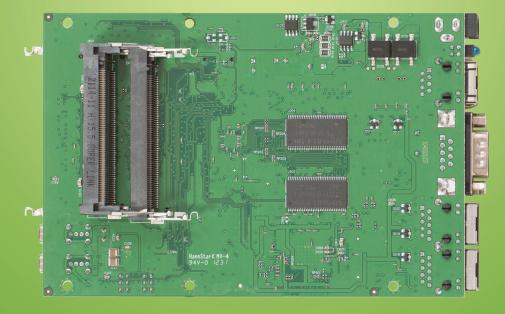
CPU	Atheros AR7130/ AR7161
Memory	DDR SDRAM onboard memory
Boot loader	RouterBOOT
Data storage	NAND memory chip
Ethernet	Three 10/100 Mbit/s Ethernet ports with Auto-MDI/X
miniPCI	Three MiniPCI Type IIIA/IIIB slots
Extras	Reset switch, beeper, voltage monitor
LEDs	Power, NAND activity, 5 user LEDs
Power input	PoE in: 8-28V DC on Ether1 (Non 802.3af), Power jack (8-28V DC)
Operating temperature	-40°C +70°C tested
Dimensions	105x154mm
Power consumption	2W board only, 14W available to minIPCI cards
Operating System	MikroTik RouterOS

	433UL	433	433AH	433GL
CPU MHz	300Mhz	300Mhz	680Mhz	680Mhz
RAM MB	64MB	64MB	128MB	128MB
Serial port	-	yes	yes	-
USB	yes	-	-	yes
Gigabit LAN	-	-	-	Yes
RouterOS License	Level 4	Level 4	Level 5	Level 5



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## **RB435G**



Five miniPCI slots and three Gigabit Ethernet ports give you enough connectivity options to use the RB435G as the central part of your network. Now with Gigabit ports, to properly utilize all the speed 802.11n with Nv2 wireless.

Five miniPCI slots to be used for four sectors and a backbone, or any other configuration you need.

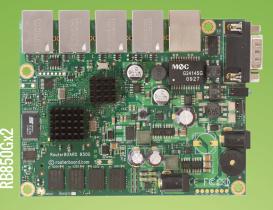
The two USB 2.0 ports can be used for extending storage, adding a 3G wireless modem for backup connectivity, for a mobile installation or all together.

The RB435G comes with a 680MHz Atheros CPU and is preinstalled with a Level 5 RouterOS license.

CPU	Atheros AR7161 680MHz	
Memory	256MB DDR SDRAM onboard memory	
Boot loader	RouterBOOT	
Data storage	NAND memory chip and microSD slot for expansion	
Ethernet	Three 10/100/1000 Gigabit Ethernet ports with Auto-MDI/X	
miniPCI	Five miniPCI Type IIIA/IIIB slots	
Expansion	Two USB 2.0 ports with powering (5V 1A supply)	
Extras	Reset switch, beeper, temperature, voltage and current monitors	
Serial port	One DB9 RS232C asynchronous serial port	
LEDs	Power, NAND activity, 5 user LEDs	
Power input	PoE in: 8-28V DC on Ether1 (Non 802.3af). Jack: 8-30V DC	
Operating temperature	-40°C +70°C tested	
Dimensions	105x154mm	
Power consumption	~4.5W without extension cards	
Output to cards	19W without any cooling, up to 40W with active cooling	
Operating System	MikroTik RouterOS, Level 5 license	T.
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# RB850/450



The RB450/RB850 is our five Ethernet port RouterBOARD line with DB9 RS232C serial port.

Three models with same form factor are available:

- RB450 basic model with 300Mhz CPU, 32MB RAM and five 10/100Mbps Ethernet ports;
- RB450G- advanced model with 680Mhz CPU, 256MB RAM, five Gigabit Ethernet ports and microSD slot;
- RB850Gx2 new generation model with dual core CPU, 512MB RAM, five Gigabit Ethernet ports and microSD slot.

Model	RB850Gx2	RB450G	RB450
CPU	P1023 500MHz (Dual core)	AR7161 680MHz	AR7130 300MHz
Memory	512MB DDR3 667MHz RAM	256MB DDR SDRAM	32MB DDR SDRAM
Data storage	512MB NAND memo	ory chip, microSD slot	128MB NAND memory chip
Ethernet	Five 10/100/1000 Mbit/s Gigabit ports with Auto-MDI/X, Hardware switch chip and port mirror support		Five 10/100 Mbit/s Ethernet ports with Auto-MDI/X, Hardware switch chip and port mirror support
Extras	Reset switch, beeper, voltage and temperature monitors	Reset switch, beeper, voltage and temperature monitors	Reset switch, beeper, voltage and temperature monitors
Serial port	One D	B9 RS232C asynchronous se	rial port
LEDs	Po	ower, NAND activity, 5 user LE	:Ds
Power input	PoE in: 8-28V	DC on Ether1 (Non 802.3af).	Jack: 8-30V DC
Operating temp.		-40°C +70°C tested	
Power consumption	8W	6W	4W
Dimensions		90x115mm	lited with the demo v
RouterOS License		Level 5	



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## **RB800**



The RB800 is an advanced high performance wireless platform. It has four miniPCI slots, three Gigabit Ethernet ports, two daughterboard connectors, a miniPCI-e slot and a compact flash slot.

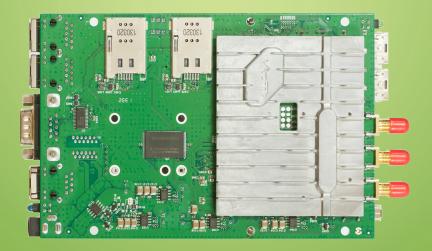
The two daughterboard connectors allow you to expand the number of wired and wireless ports, and the new high power CPU is capable of supporting them all. You can use various daugherboards to expand the number of interfaces on this device - RB502 and RB604 are available separately.

Combined with RouterOS - RB800 is the most powerful and sophisticated wireless router, firewall and bandwidth manager. With many expansion options. Our top of the line wireless device.

CPU	MPC8544 800MHz
Memory	256MB DDR2 SDRAM onboard memory
Boot loader	RouterBOOT
Data storage	NAND memory chip, CF slot on back
Ethernet	Three 10/100/1000 Mbit/s Ethernet ports with Auto-MDI/X
miniPCI	4 x miniPCI, 1 x miniPCI-e
Expansion	PCI daughterboard port
Extras	Reset switch, beeper, 4x fan headers, voltage and temperature sensors
Serial port	One DB9 RS232C asynchronous serial port, One serial port header
LEDs	Power, 1x User LED
Power input	PoE in: 36-56V DC (including power over datalines) Power jack: 10-56V DC
Operating temperature	-40°C +70°C tested
Dimensions	140x200mm
Operating System	MikroTik RouterOS, Level 6 license



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## RB953GS-5HnT-RP

RouterBOARD 953GS-5HnT-RP is our first product with 5GHz 3x3 MIMO Triple Chain support. It has powerful (up to 1600mW!) Atheros QCA9558 802.11a/n wireless chip with three RPSMA connectors onboard.

RB953GS-5HnT-RP is equipped with new Scorpion 720Mhz CPU, 128MB RAM and three Gigabit Ethernet ports, to take advantage of high-speed 3x3 MIMO wireless. Moreover, it comes with two SFP cages to accommodate FTTH requirements.

Handy additions are two miniPCI-express slots and two SIM slots, for multiple 3G/4G connections or wireless expansion.

Unit comes with preinstalled RouterOS Level 5 license.

Model	953GS-5HnT-RP				
CPU	QCA9558 720MHz				
Memory	128MB DDR2 onboard memory				
Data storage	NAND 128MB memory chip				
Ethernet 3x10/100/1000 Gigabit Ethernet ports with Auto-MDI/X					
Wireless Built-in 5GHz 802.11a/n, three chains, 3x RPSMA connectors					
miniPCle	2x MiniPCle slots for 802.11 or 3G (using 3G disables the USB port)				
SFP	2x SFP cages				
Switching chip	AR8327				
Extras	PCB temperature monitor, voltage monitor, 2x fan headers, beeper, 1x USB, 2x SIM slots (for use with 3G modems that need to be installed in the miniPCle slot)				
Serial Port	1x DB9 RS232C asynchronous serial port, 1x serial port header				
LEDs	9x total, 6x user LEDs				
Power input	PoE in: 8-30V, Power jack: 8-30V DC				
Operating temperature	-40°C +70°C tested				
Dimensions	183x105x24mm				
Power consumption	25W				
Operating System	MikroTik RouterOS, WISP AP (Level 5) license				
	TX power / RX sensitivity				
TV/DV -+ MOCO					
TX/RX at MCS0	32dBm / -96dBm				
TX/RX at MCS7	29dBm / -77dBm				
TX/RX at 6Mbit	32dBm / -96dBm  30dBm / -81dBm  Edited with the demo vers				
TX/RX at 54Mbit	Joadin 7 - Gradin				
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	TX power / RX sensitivity	
TX/RX at MCS0	32dBm / -96dBm	
TX/RX at MCS7	29dBm / -77dBm	
TX/RX at 6Mbit	32dBm / -96dBm	
TX/RX at 54Mbit	30dBm / -81dBm	
Frequency range	4900-5920MHz	

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## RB911G-5HPnD





## **RB911 Series**



Perfect for building low cost CPE devices

The RB911 is a small CPE type RouterBOARD wireless router with an integrated wireless card. It's equipped with powerful 600Mhz CPU and 64MB RAM, providing superb value for money.

These devices include RouterOS, the operating system which can be a router, firewall, bandwidth manager, a CPE and more, all at the same time.

RB911 series include several models. See below table for their differences.

	RB911-5Hn	RB911-5HnD	RB911-2Hn	RB911G-5HPnD	RB911G-2HPnD	
Band	5GHz	5GHz	2.4GHz	5GHz	2.4GHz	
Chains	1	2	1	2	2	
Gigabit	-	-	-	+	+	
High Power	-	-	-	+	+	
Power jack	-	-	-	+	+	
Consumption	5W	7W	4W	11W	11W	
Beeper	-	-	-	+	+	
Voltage monitor	-	-	-	+	+	
PCB temperature monitor	-	-	-	+	+	
Max TX power	23dBm	26dBm	24dBm	30dBm	30dBm	
Dimensions			105x105mm			
Power input		PoE in: 8-3	0V DC on Eth 1 (N	lon 802.3af)		
Operating temp.		-4	10°C +70°C teste	ed		
RouterOS Licence	WISP CPE (Level 3) license					



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## **RB912**



The RB912 is a small wireless router with an integrated high power wireless card and an additional miniPCle slot for 802.11 wireless, or 3G card. Both 2GHz and 5GHz models are available. The Gigabit port helps to utilize the full potential of 802.11n wireless speeds.

The integrated wireless card is capable of up to 1000mW output power. It has built in 16kV ESD protection on both the Ethernet and the MMCX ports.

Model	RB912UAG-5HPnD	RB912UAG-2HPnD				
Features	1 Ethernet, 1 miniPCIe, USB, Additional memory, Gigabit, High power, Dual chain					
CPU	Atheros AR9342 600MHz network processor					
Memory	64MB DDR onboard memory					
Data storage	onboard NANI	D memory chip				
Ethernet	One Gigabit port	with Auto-MDI/X				
Wireless	Built in 5GHz 802.11a/n, 2x MMCX connectors	Built in 2GHz 802.11b/g/n, 2x MMCX connectors				
Extras		M slot (requires 3g miniPCle card), perature sensors				
Expansion	miniPCle slot for 802.11 or 3G (using 3	G disables the USB port), USB 2.0 port				
Power input	PoE in: 8-30V DC on Ether1 (Non 802.3af).					
Operating temp.	-40°C +70°C tested					
Dimensions	105x1	05mm				
Max consumption	14W a	at 24V				
OS	MikroTik RouterOS, Level 4 licer	nse (supports wireless AP mode)				

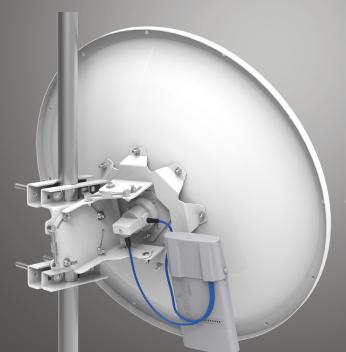
	RB912UAG-5HPnD	RB912UAG-2HPnD
TX/RX at MCS0	30dBm / -96dBm	30dBm / -96dBm
TX/RX at MCS7	24dBm / -78dBm	24dBm / -78dBm
TX/RX at 6Mbit	30dBm / -96dBm	30dBm / -96dBm
TX/RX at 54Mbit	27dBm / -80dBm	27dBm / -80dBm
Frequency range	4900-5920MHz	2400MHz-2500MHz
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Available separately, the Radome reduces wind load, protects reflector surfaces from harsh environment.



MTAD-5G-30D3-PA (With precision alignment mount) FlexGuide

## mANT30 series

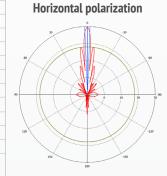


mANT30 is a professional class 5 GHz 30dBi dish antenna, built to the highest industry standards. Built to seamlessly accomodate our BaseBox and NetMetal series products, also NetBox, but can be used for any pole mounted wireless device due to the adequate length of the included FlexGuide cable.

Two antennas are available, with a standard type mount (MTAD-5G-30D3), and with a precision alignment mount (MTAD-5G-30D3-PA). The antennas come packaged with all necessary accessories and cables.

## **Electrical Specifications**

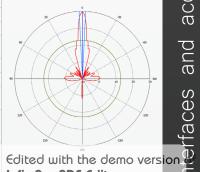
Frequency Range	4.7-5.875 GHz
Gain	30 dBi typically
Polarization	Dual (Vertical and Horizontal)
3dB Beamwidth	3 deg
Standards	Complies with EN 302 326 DN1, DN2, DN3, DN5
VSWR	≤ 1.4 typ, ≤ 1.8 max
Port to Port Isolation	>40dB min
Front-to-Back Ratio	>30 dB
Cross Polarization	>40 dB
Power Rating	100 watts
Impedance	50 ohms
Elevation adjustment range	+/- 20 deg (MTAD-5G-30D3), +/- 15 deg (MTAD-5G-30D-PA)



## **Physical/Environmental Specifications**

Diameter x Depth	70 x 45cm (27.5 x 17.8in)
Weight neto	5.7kg (12.6 lbs) PA and 4.8kg (10.7 lbs) standard version
Reflector	Aluminum
Outdoor Rating	ETSI EN 300 019-2-4
Wind Survivability	201kph (125mph)
Wind Load (125 mph)	181.4kg (400 lbs)
Operating temperature	-40°C 70°C tested
Pole Mount Diameter Range	(MTAD-5G-30D3): 3 to 7cm (1.2 to 2.75in) (MTAD-5G-30D-PA): 3 to 10cm (1.2 to 3.9in)
Connector (2)	RP-SMA Female (outside thread)
Packaged size	73x73x20cm (29x29x8in)
Packaged weight	(MTAD-5G-30D3): 7.5 kg (16.5 lbs), (MTAD-5G-30D3-PA): 8.4 kg (18,5)
Compatible with	Can directly mount Basebox and other future RouterBOARD devices, or accept any pole- mounted device
Package includes	FlexGuide RPSMA RF Cables (RP-SMA-male to RP-SMA-male) x 2pcs; Bracket for mounting BASEBOX series radio; Self-Bonding Tape for insulating the RF cables x 2 slices; Precise alignment mechanisms (PA Version only)

### **Vertical polarization**



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# R11e-5HacD



The new AC standard is here, with up to 866Mbit datarate and 256-QAM modulation and 80MHz channels. 802.11ac opens up new possibilities and speeds never possible before.

R11e-5HacD is our new 802.11ac card in miniPCle format, perfect for any RoutrBOARD with miniPCle slot, such as BaseBox, NetBox, NetMetal, RB800, RB912, RB922, RB953 or x86 devices with RouterOS.

The card features built-in LED indicators for wireless mode, connection status (connected, searching, disabled), TX and RX activity and wireless signal strength - just looking at the card will help with installation and alignment.

Chipset	QCA9882
Frequency range	4920-6100 MHz, Operating range limited by Country Regulations
Standards	802.11ac
Max output power	500 mW
Format	miniPCle
Dimensions	50x30x13mm
Connectors	2x MMCX
Supported channels	20/40/80MHz
Features	9 LED indicators, ESD protection
Temperature	Starting -5°C to +65°C; Operating -40°C to +70°C
MAX power consumption	4.5W
TX/RX at MCS0	26dBm / -96dBm
TX/RX at MCS7	23dBm / -77dBm
TX/RX at 6Mbit	27dBm / -96dBm
TX/RX at 54Mbit	23dBm / -81dBm



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Model	R5S	HPn	R25	SHPn	R!	52H	R5	2Hn	R52	n-M
802.11a	RX	TX	RX	TX	RX	TX	RX	TX	RX	TX
6Mbit	-93	29dBm		-	-90	24dBm	-97	25dBm	-97/-95	21dBm
54Mbit	-77	25dBm		-		19dBm	-80	21dBm	-80/-79	19dBm
802.11b	RX	TX	RX	TX	RX	TX	RX	TX	RX	TX
1Mbit			-93	32dBm	-92	25dBm	-93	24dBm	-95/-94	23dBm
11Mbit			-77	30dBm	-87	25dBm	-93	24dBm	-92	23dBm
802.11g	RX	TX	RX	TX	RX	TX	RX	TX	RX	TX
6Mbit			-93	32dBm	-90	25dBm	-94	25dBm	-95/-94	25dBm
54Mbit			-77	29dBm	70	20dBm	-81	22dBm	-80	21dBm
802.11n 2.4GHz	RX	TX	RX	TX	RX	TX	RX	TX	RX	TX
	100	1.7	11/1	17	100	1.7	100	1.7	IVA	
MCS0 20MHz	-	-	-93	32dBm	-	-	-94	25dBm	-95/-94	23dBm
MCS0 20MHz			-93	32dBm			-94	25dBm	-95/-94	23dBm
MCS0 20MHz MCS0 40MHz			-93 -93	32dBm 31dBm			-94 -92	25dBm 24dBm	-95/-94 -91	23dBm 21dBm
MCS0 20MHz MCS0 40MHz MCS7 20MHz			-93 -93 -74	32dBm 31dBm 28dBm			-94 -92 -78	25dBm 24dBm 21dBm	-95/-94 -91 -77	23dBm 21dBm 20dBm
MCS0 20MHz MCS0 40MHz MCS7 20MHz MCS7 40MHz			-93 -93 -74 -72	32dBm 31dBm 28dBm 27dBm			-94 -92 -78 -75	25dBm 24dBm 21dBm 20dBm	-95/-94 -91 -77 -74	23dBm 21dBm 20dBm 20dBm
MCS0 20MHz MCS0 40MHz MCS7 20MHz MCS7 40MHz 802.11n 5GHz	- - - - RX	- - - TX	-93 -93 -74 -72	32dBm 31dBm 28dBm 27dBm			-94 -92 -78 -75 <b>RX</b>	25dBm 24dBm 21dBm 20dBm <b>TX</b>	-95/-94 -91 -77 -74 <b>RX</b>	23dBm 21dBm 20dBm 20dBm <b>TX</b>
MCS0 20MHz MCS0 40MHz MCS7 20MHz MCS7 40MHz 802.11n 5GHz MCS0 20MHz	- - - - <b>RX</b> -93	- - - - <b>TX</b> 28dBm	-93 -93 -74 -72 <b>RX</b>	32dBm 31dBm 28dBm 27dBm <b>TX</b>	- - - RX	- - - - TX	-94 -92 -78 -75 <b>RX</b> -97	25dBm 24dBm 21dBm 20dBm <b>TX</b> 24dBm	-95/-94 -91 -77 -74 <b>RX</b> -97/-95	23dBm 21dBm 20dBm 20dBm <b>TX</b> 21/19

## Wireless miniPCI cards

We are offering wide range of miniPCI wireless cards for expansions, covering from 2.192GHz up to 6.100GHz, with output power from 50mW up to 1600mW.

We have a cards that features built-in LED indicators for wireless mode, connection status (connected, searching, disabled), TX and RX activity and wireless signal strength - just looking at the card will help with installation and alignment.

See the tables for more information on specifications.

Model	R5SHPn	R2SHPn	R52H	R52Hn	R52n-M
Chipset	Atheros AR9220	Atheros AR9223	Atheros AR5414	Atheros AR9220	Atheros AR9220
Frequency range (MHz)	4800-6075	2192-2539	4920-6100 2192-2539	4800-6100 2200-2700	4800-6100 2200-2700
Standards	802.11a/n	802.11b/g/n	802.11a/b/g	802.11a/b/g/n	802.11a/b/g/n
Max output power	800mW	1600mW	316mW	316mW	316mW
Format			miniPCI		
Dimensions	60x60x19mm (incl. heatsink)	60x60x19mm (incl. heatsink)	60x45x3mm	60x45x7mm	60x45x
Connectors	1x MMCX (single chain)	1x MMCX (single chain)	Two U.fl connectors	2 X MMCX Antenna Connector	2 X MMCX Antenna Connector
Features	9 LED indicators, ESD protection	9 LED indicators, ESD protection			
Temperature	Starting -5°C to +65°C Operating -30°C to +65°C	Starting -5°C to +65°C Operating -30°C to +65°C	Operating -20°C to +70°C	Operating -50°C to +60°C	Operating -20°C to +60°C
Power consumption	Up to 10W at maximum power	Up to 10W at maximum power	3.5W	ldle: 0.4W Max:7W	Max:2.4W





## **R11e**



High power wireless cards in miniPCI-e format. Ideally suited for the BaseBox, NetBox, NetMetal, RB800, RB912, RB922 or RB953 or our miniPCle adapter card - RB14e/RB14eU.

The card features built-in LED indicators for wireless mode, connection status (connected, searching, disabled), TX and RX activity and wireless signal strength - just looking at the card will help with installation and alignment.

Three models are available:

R11e-2HnD (2GHz, uFl connector, small heatsink) R11e-2HPnD (2GHz, MMCX, high output power, larger heatsink) R11e-5HnD (5GHz, MMCX, larger heatsink)

Model:	2HnD	2HPnD	5HnD
Chipset	AR9580		
Frequency range	2312-2732 MHz		4920-6100MHz
Standards	802.11b/g/n	802.11b/g/n	802.11a/n
Max output power	800mW	1000mW	500mW
Format	miniPCle		
Dimensions	51x30x6mm	51x30x13mm	51x30x13mm
Connectors	2x uFL	2x MMCX	2x MMCX
Features	9 LED indicators, ESD	protection	
Temperature	Starting -5°C to +65°C;	Operating -40°C to +	70°C
MAX power consumption	5W	7W	5W
TX/RX at MCS0	29dBm / -96dBm	30dBm / -96dBm	26dBm / -96dBm
TX/RX at MCS7	24dBm / -76dBm	24dBm / -76dBm	23dBm / -76dBm
TX/RX at 6Mbit	29dBm / -96dBm	30dBm / -96dBm	27dBm / -96dBm
TX/RX at 54Mbit	24dBm / -80dBm	24dBm / -76dBm	24dBm / -76dBm



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## RB44Ge



Four port Gigabit server adapter

The brand new Gigabit Ethernet card features four 10/100/1000T Gigabit Ethernet ports on a single card, giving you the opportunity to add even more ports to your router, and saving valuable PCle slots. Bring maximum throughput and port density to your device, and with PCle - bus speed is no longer the limit.

The card use the high end Atheros AR8131/M chip:

- Checksum offload features for IP, TCP, and UDP, lowering CPU utilization and optimizing network performance
- Wake-On- LAN (WOL) and AMD Magic PacketTM.
- IEEE 802.3x compliant flow control support
- Interrupt coalescing
- Advanced DSP architecture implementing digital adaptive equalization, echo and crosstalk cancellation
- Cable Diagnostic Test (CDT) for open, short cable, cable length detection, and incorrect or mismatched impedance.
- Intelligently reduces power based on cable length detected
- Green Ethernet feature support
- Supports Energy Star 4.0
- Two brackets included, low profile and regular

General specifications		
Chip	Atheros AR8131M	
Format	PCIe 4X	
Ethernet	Four independent 10/100/1000 Mbit Gigabit Ethernet ports with Auto-MDI/X	
Dimensions	150x69mm (excluding bracket)	
Operating System	RouterOS, Windows, Linux	



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24V

Passive PoE

Telecom PoE

802.3af 802.3at

## 48V Gigabit PoE converter

This device lets you use any 48V PoE source (including Passive PoE, Telecom PoE, 802.3af and 802.3at) to power RouterBOARD devices.

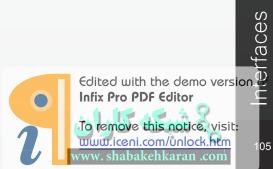
Simply plug any 48V PoE powered ethernet cable into one port, and any 8-30V capable RouterBOARD device into the other. This device is capable to provide high power output - up to 24W (up to 1A at 24V).

You can power it with virtually any 36-57V PoE solutions available on market today (Passive, Telecom, 802.3af and 802.3at PoE plus supported)

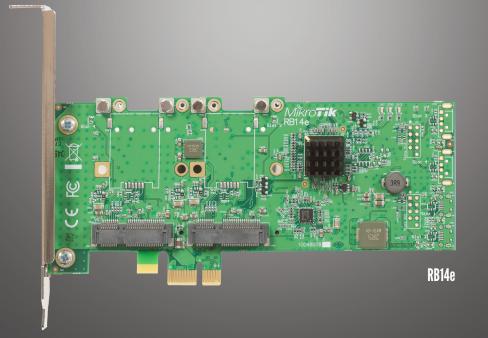
The device is a rugged metallic design, with high capacity components and integrated heatsink design. The case also has mounting holes so you can attach it to a wall.

Ethernet shield pins are inside the Ethernet connectors, so that shielded ethernet can be used, to ground either at the converter itself, or at the devices at both ends.

Name	RouterBOARD POE-CON-HP
Ethernet	Two Gigabit Ethernet ports with grounding pins - one input, one output.
Dimensions	107x66x24mm
Power Input	36-57V (Passive, Telecom, 802.3af and 802.3at PoE plus supported)
Power Output	24V 1A
Output pins	4,5 "+"; 7,8 "-"







## RB14e



RB14e is an adapter card for using four miniPCle wireless cards in a PC with a PCle slot. This gives you the ability to use our new R11e wireless interfaces in conventional PC computers.

Another model, the RB14eU is available for using 3G miniPCle cards, in addition to wireless cards. For this purpose, SIM card slots are provided for all four interfaces, as well as USB ports to ensure USB connectivity to the host PC, which is required for 3G miniPCle cards.

Use this new adapter to expand your connectivity and upgrade your device to use the latest miniPCle interface cards.

Each comes with both low and regular profile brackets. Brackets include holes for mounting SMA connectors, or for using as cable exit holes.

Model:	RB14e	RB14eU
Form factor	PCle x1	
Number of miniPCle slots	4	
USB to PC connectors	-	6
Intended use	Wireless cards	Wireless cards and 3G cards
Bracket includes	Both normal, and low profile. Holes for	cables provided (6/8)
SIM slot	-	4



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Model	Specifications
S-85DLC05D	1.25G, 850nm Dual LC connector, 550m, MM, DDMI
S-31DLC20D	1.25G, 1310nm Dual LC connector, 20km, SM, DDMI
S-3553LC20D two module kit	S-35LC20D:1.25G SM, 20km, T1310nm/R1550nm, LC, DDMI S-53LC20D:1.25G SM, 20km, T1550nm/R1310nm, LC, DDMI
S+85DLC03D	SFP+ module 10G MM 300m 850nm LC-connector DDMI
S+31DLC10D	SFP+ module 10G SM 10km 1310nm LC-connector, DDMI
S+2332LC10D two	S+23LC10D: 10G, SM, 10KM, Tx:1270nm Rx:1330nm, LC, DDMI

Transmit	Min	Тур	Max	Unit
Output Opt. Power				dBm
Receive				
Avg Rx sensitivity	-	-	-24	
Max Received pwr		-		dBm
LOS De-assert		-	-24	
LOS Assert		-	-	

#### S-85DLC05D (1.25G, 550m module)

Transmit	Min	Тур	Max	Unit
Output Opt. Power	-9	-	-3	
Receive				
Avg Rx sensitivity	-0	-	-20	
Max Received pwr	-2	-	-	
LOS De-assert	-	-	-24	
LOS Assert	-35	-	-	dBm

#### S+31DLC10D (10G, 10KM module)

Transmit	Min	Тур	Max	Unit
Output Opt, Power	-6	-	0.5	
Receive				
Receiver sensitivity	-	-	-14.4	
Max Received pwr	0.5	-		
LOS De-assert	-	-	-15	
LOS Assert	-30	-	-	

#### S+85DLC03D (10G, 300m module

Transmit	Min	Тур	Max	Unit
Output Opt, Power	-7.3			dBm
Receive				
Receiver sensitivity			-9.9	dBm
Max Received pwr				dBm
LOS De-assert			-13	dBm
LOS Assert	-30			dBm

#### S+2332LC10D, S+23LC10D and S+32LC10D modules (10G, 10KM modules)

Transmit	Min	Тур	Max	Unit
Output Opt. Power	-5			dBm
Receive				
Avg Rx sensitivity			-14	dBm
Max Received pwr	0.5			dBm
LOS De-assert			-18	dbm
LOS Assert	-30			dBm

## SFP transceivers



To complement our SFP cage equipped devices, several types of SFP modules are available for the most popular SFP use scenarios.

We currently offer two SFP models, one SFP module kit, two SFP+ modules, two Direct Attach cable kits and one SFP to RJ45 fiber to copper module.







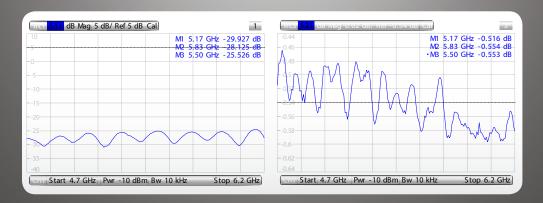
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and





# Flex-guide super low loss cable assembly



A super low loss RPSMA cable for superior connection quality, suited for indoor and outdoor use, this cable provides superior matching and loss values.

The name of this cable comes from combining the words "flexible" and "waveguide", to denote the high end features of this product.

The inner conductor is silver plated copper, and both connectors are soldered, not crimped, for the best possible signal quality. Ideally suited for our BaseBox and other products with RPSMA connectors, and works with most antennas.

Product order code	ACRPSMA	accessorie
RPSMA	Soldered on both ends	SC
Connector type	RP-SMA Male (inside thread)	S
Inner conductor	Silver plated copper	S
Frequency	up to 6 GHz	$\ddot{\circ}$
Total signal loss at 6GHz	0.59 (Includes connectors. See chart for details)	$\sigma$
Matching	Better than -20dB	~~
Suited for	outdoor use	and
Cable length	500mm (19.7")	$\vec{\sigma}$
Outer diameter	4.2mm (0.2")	
Min. bending radius static	8mm (0.3")	S
Min. bending radius repeated	40mm (1.6")	rface
Operating temperature	-55 to 125C	$\tilde{\sigma}$
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