

Етаж 5

RJ45 F

RJ45 F

RJ45 F

Етаж 4

RJ45 F

RJ45 F

RJ45 F

Етаж 3

RJ45 F

RJ45 F

RJ45 F

9 x
MikroTik RouterBOARD
hAP Lite RB941 2nD
RB941-2nD

3+ x FTP

3+ x FTP

3+ x FTP

FTP



Patch Panel Shielded



CRS125-24G-1S-RM

CRS125-24G-1S-RM - Cloud Рутер Суич -
напълно функционален Layer3 суич с
инсталирана Router OS Level 5.

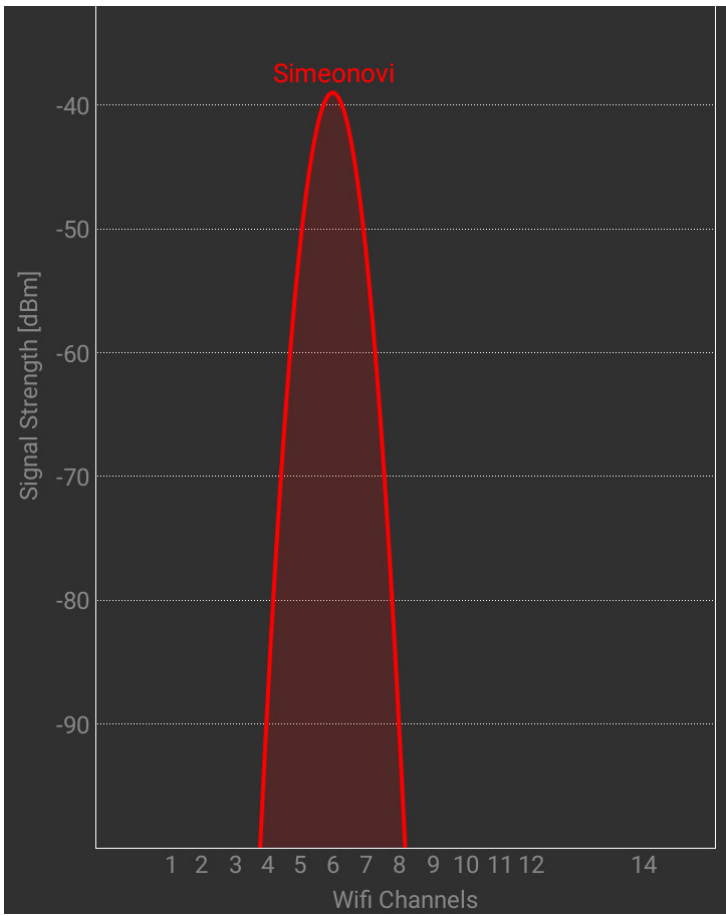
*Етернет, Оптика или 4G
(с допълнителен УСБ модем)
гейтуей връзка с интернет

*RouterOS гейтуей/файървол/VPN
рутер с пасивно охлаждане

*До 25 комутираци порта - 1xSFP и 24x RJ45

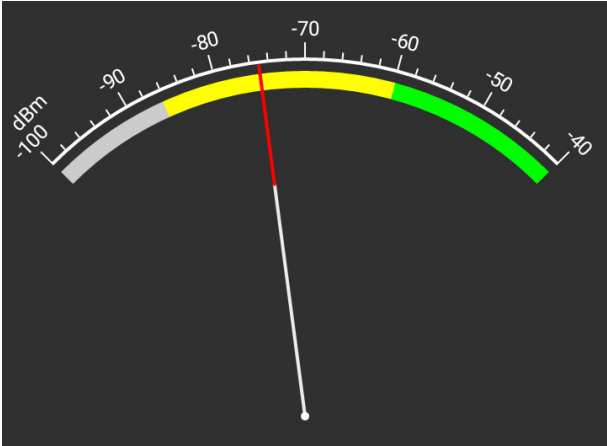
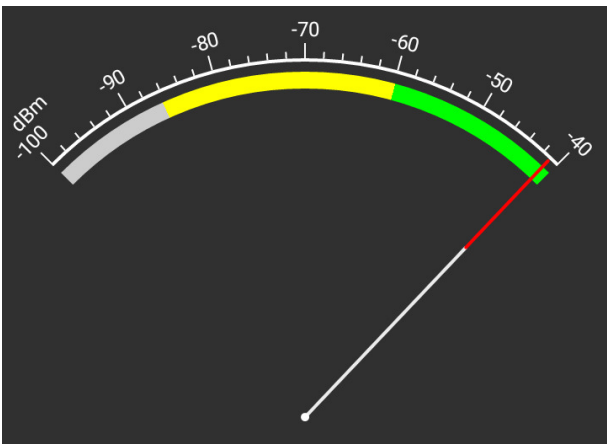
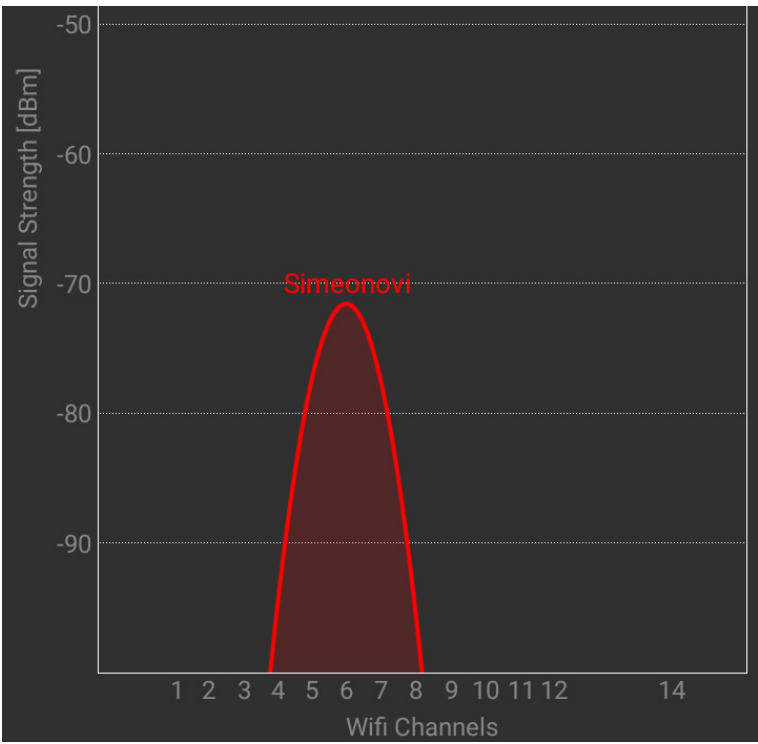
				Мащаб	Маса [kg]		ТОПОЛОГИЯ - ОБЩ ВИД		
				1:1					
				М от ИИО		LAN ТИЛ			
				Лист:	1/2				
				Етап:					
Изм.	Опис	Подпис	Дата	Инж.С:				ID Цифров	-
Разр.	К. Симеонов							ID Вър.Стар	-
Пров.								ID Клиент	-
Техн.									
Утвър.									

ReadMe 1st

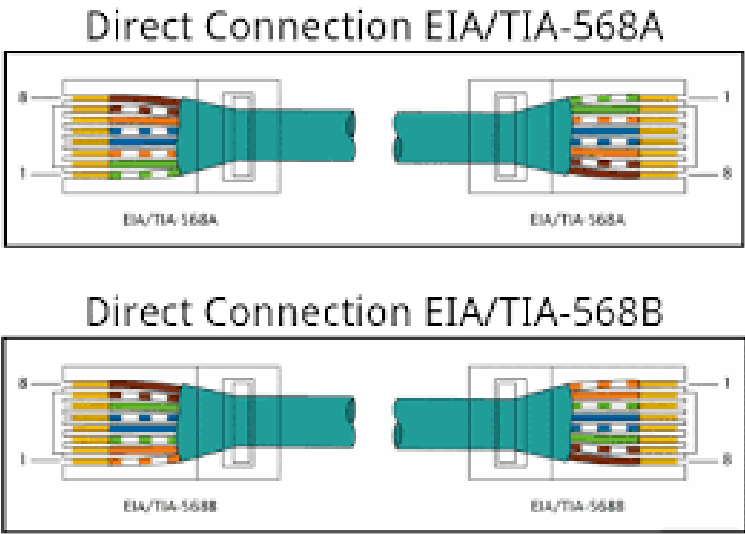
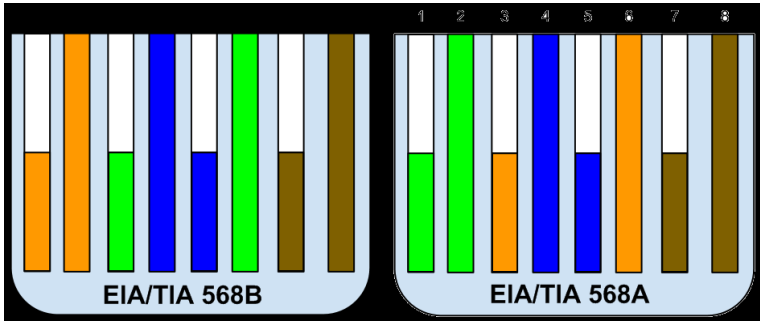


- 1. Топологичната схема на лист1 не е окончателна;
- 2. За проектиране на краен вариант е необходимо задание;
- 3. След това трябва да се измери затихването в разписаните работни места за което:

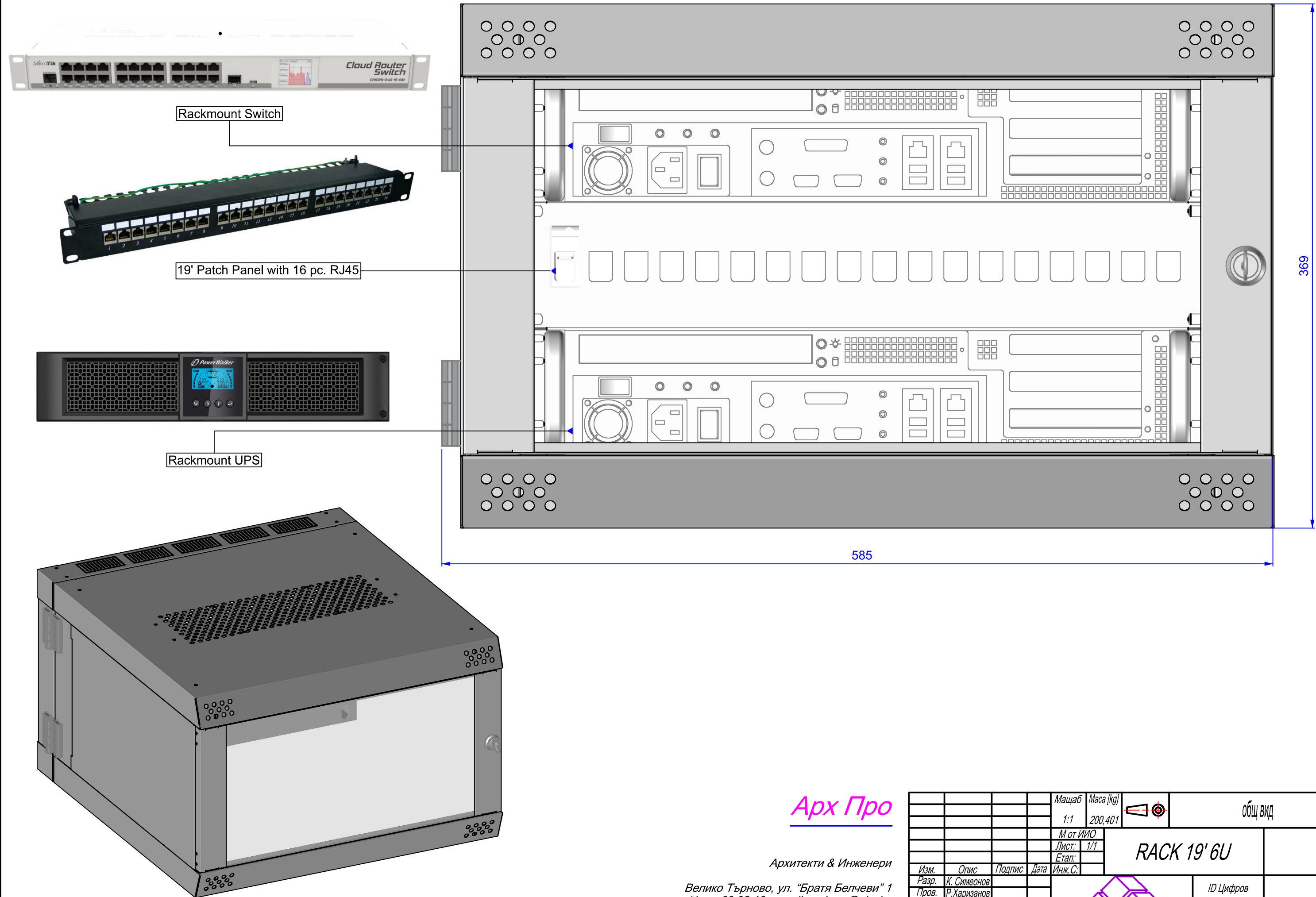
- * посочения хардуер се разполага по схемата на лист 1 етаж по етаж - отстояние отляво и отдясно до край - 5м, средна точка-централно;
- * измерва се нивото на сигнала на 1 м от у-вото - (картинки вляво);
- * проверява се закона за обратните квадрати;
- * на всяко раб.място се измерва сигнала (картинки вдясно);
- * съставя се карта;
- * при необходимост (неравномерно разпределение) точките се разместват и измерването се повтаря до постигне на достатъчна равномерност на полето (напр. жълт сектор);
- 4. Да се обърне особено внимание на разпределението на WiFi каналите хоризонтално на етаж и вертикално между етажите на еквидистантните точки;



- 5. В така определените точки се инсталира Розетка RJ 45 F и се полага кабел FTP building до Patch Panel.
- 6. Връзки в розетки RJ45 F - по схема EIA/TIA 568A (оплетка свободна, изолирана);
- 7. Връзки в Patch Panel - по схема EIA/TIA 568A (оплетка акъм корпус);
- 8. Кабел Patch Panel - RJ45F - FTP AWG 4x2 cat.5e building;
- 9. Кабел Patch Panel - Switch - UTP AWG 4x2 cat.5e flexible - direct;
- 10. Кабел RJ45F-НарLite - UTP AWG 4x2 cat.5e flexible - direct;
- 11. За осигуряване на стабилна работа на хардуера в 19-инчовия RACK е предвиден UPS;
- 12. За осъществяване на WiFi канал за връзка с общата мрежа на ВНВУ е резервиран кабел FTP към розетка в подпокривното пространство. Към него може да бъде подсъединен специализиран хардуер.





				Мощаб	Маса [kg]	ReadMe	
				1:1			
				М от ИИО			
				Лист:	2/2		
				Етап:			
Изм.	Опис	Подпис	Дата	Инж.С:			
Разр.	К. Симеонов						
Пров.							
Техн.							
Утвър.							
				Файл:	LAN 0	ID Цифров	-
						ID Вър.Стар	-
						ID Клиент	-
						Дата:	20/03/2016



Арх Про

Архитекти & Инженери

Велико Търново, ул. "Братя Белчеви" 1
тел./факс.63 02 46; e-mail: archpro@abv.bg

				Мащаб	Маса [kg]		ОБЩ ВИД	
				1:1	200,401			
				М от ИИО	<div>RACK 19' 6U</div>			
				Лист: 1/1				
				Етап:				
Изм.	Опис	Подпис	Дата	Инж.С:	<div></div>			ID Цифров
Разр.	К. Симеонов							ID Вътр.Стар
Пров.	Р.Харизанов							ID Клиент
Техн.								
Утвър.								
				Файл:	LAN1		Дата:	24/02/2016

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.



Power adapter

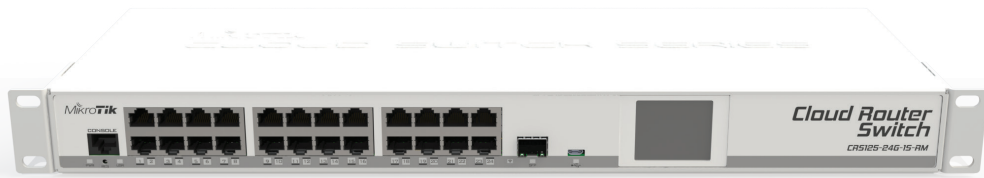
Order code	RB941-2nD
CPU	QCA9531 650MHz CPU
Memory	32MB DDR RAM
Ethernet	4x 10/100 Mbit/s Ethernet with Auto-MDI/X
Wireless cards	Onboard dual chain 2.4GHz 802.11b/g/n QCA9531 wireless module; 10kV ESD protection on each RF port, WPS support via button
Extras	Reset switch
LEDs	Power LED, 4x Ethernet 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

CRS125_{-24G-1S}

Perfect SOHO gateway router and switch

- Ethernet, Fiber, or 4G (with optional USB modem) gateway connection to Internet
- RouterOS gateway/firewall/VPN router
- up to twenty-five gigabit switch ports (1xSFP and 24xRJ45)



CRS125-24G-1S-RM



CRS125-24G-1S-IN

Cloud Router Switch is our new Smart Switch series. It is a fully functional Layer 3 switch, and 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

Two models are available:

1. CRS125-24G-1S-IN - desktop enclosure
2. CRS125-24G-1S-RM - 1U rackmount enclosure

- Fully manageable L3 switch, full wire speed switching
- Configure ports as switch, or for routing
- If required, full RouterOS power right there

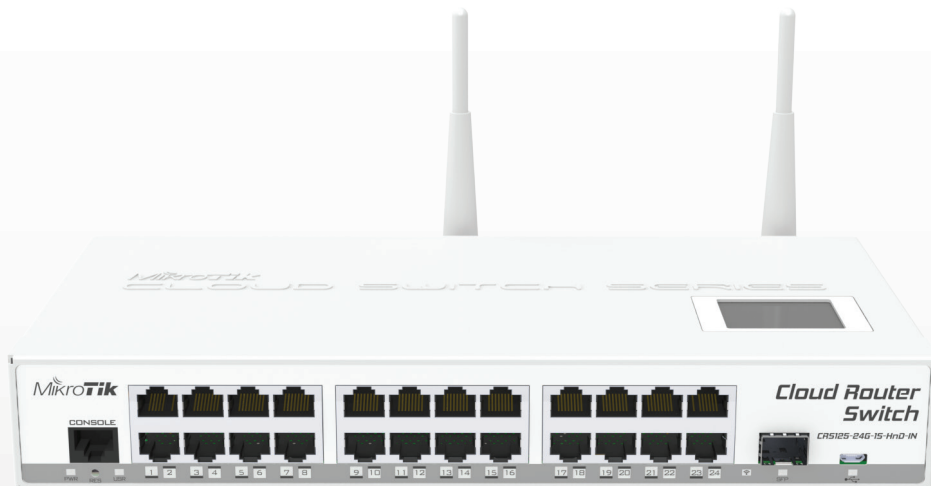
CPU	Qualcomm Atheros AR9344 600 MHz
Memory	128MB
Ethernet	24x 10/100/1000 Mbit/s Gigabit Ethernet with Auto-MDI/X
Expansion	microUSB port
Storage	128MB Onboard NAND with multiple OS partition support
Serial port	One RJ45 serial port
Extras	Reset switch; beeper; voltage and temperature monitoring, touchscreen LCD
Power options	8-28V, 24V 1.2A PSU included
Case dimensions	285x145x45mm
Temperature	-35C to +65C tested
OS	MikroTik RouterOS v6, Level 5 license
Included	CRS switch, power adapter, and USB OTG cable (for 4G dongle or USB drive)

CRS125

-24G-1S-2HnD-IN

Perfect SOHO gateway router, switch, 11n AP all in one box

- Ethernet, Fiber, or 4G (with optional USB modem) gateway connection to Internet
- RouterOS gateway/firewall/VPN router
- up to twenty-five gigabit switch ports (1xSFP and 24xRJ45)
- 1000mW high power 2.4GHz 11n wireless AP



Cloud Router Switch is our new Smart Switch series. It is a fully functional Layer 3 switch, and 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.

What's more - this device has a built in 2.4GHz wireless access point, this means you can have an AP, a router with any number of ports, and a full wire speed smart switch, all in one device - ideal for medium/small businesses and offices. It has 24 Gigabit ports, one SFP cage, a microUSB port and a built in Wireless AP.

- Fully manageable L3 switch, full wire speed switching
- Wireless AP built in
- Configure ports as switch, or for routing
- If required, full RouterOS power right there

CPU	Qualcomm Atheros AR9344 600 MHz
Memory	128MB
Ethernet	24x 10/100/1000 Mbit/s Gigabit Ethernet with Auto-MDI/X
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Temperature	-35C to +65C tested
OS	MikroTik RouterOS v6, Level 5 license
Included	CRS switch, power adapter, and USB OTG cable (for 4G dongle or USB drive)

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