

# Peripherals

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This article describes supported add-on peripherals for RouterBOARD hardware devices.

## Cellular modems

Model	Tested RouterOS version	Comments	Format	Passthrough support	Technologies
Alcatel IK40	v6.41RC11	LTE interface, Modem can be configured only through modems configuration WEB page.	USB	N	LTE
Alcatel IK41	v6.48	Config-less LTE interface	USB	N	LTE
Android usb tethering interface	v6.7	Some settings are ignored.	USB	?	LTE
AnyData ADU-E630WH	v6	( aka "USB Wireless HSDPA/UMTS 2.1GHz GSM/GPRS/EGPRS 900/17000MHz /CDMA 1x EVDO Rev.A")	USB		3G
BandRich C501	v5.25 and v6.0		USB	?	LTE
D-link DWM-157	v6.xx	Works! Data Channel: 2, Info Channel: 3, Modem Init: AT+CFUN=1, vendor-id="0x2001" device-id="0x7d02" Some info from modem: > H/W Ver.: B1, F/W Ver.: 2.0.1eu, revision: +CGMR: MOLY.WR8.W1231.DC.WG.MP.V3, 2013/04/09 02:08 Different HW revisions might not work with RouterOS	USB		3G
D-link DWM-222	v6.38	Multiple modem versions with same marketing name exist, only H/W ver: A1 supported as config-less LTE interface	USB	N	
Dell DW5821e	v7.4beta4 and higher	MBIM driver. Revision: T77W968.F1.0.0.5.2.VZ.013 044	M.2		3G,LTE
Dell Wireless 5530 HSPA	v6.1 and higher	Data channel 0, Info channel 0, init: AT+CFUN=1 (needs manually change profile by command AT*ENAP=1,1)	MiniPCI-e		3G
Ericsson F5521gw	v6.x and higher		MiniPCI-e		3G
Fibocom FM150-AE	v7.1beta5	MBIM driver. Revision: 89603.1000.00.01.01.03	M.2		3G, LTE, 5G
Fibocom NL-952-EAU	v7.1beta5	MBIM driver. Revision: 19600.7000.00.04.01.05	M.2		3G, LTE
Marvell PXA1802 based modems	v7.2.2	Vendorid=0x1286 deviceid=0x4e31	mini-PCle		
Huawei E153	v6.31< and higher		USB		3G
Huawei E171	v6.xx	Works! ppp interface, vendorid=0x12d1 deviceid=0x140c	USB		3G
Huawei e3131	v6.xx and higher	ppp interface	USB		3G
Huawei E3372h, E5576h, E8372h	v6.8	Config-less LTE interface for modems with vendor-id="0x12d1" device-id="0x14db"  Models with suffixes -320 and -608 will not work with RouterOS v6, please use v7 instead.	USB	N	LTE

Huawei E3276-150	v6.xx	ppp interface	USB	?	LTE
Huawei E3351	v6.24 and higher		USB		3G
Huawei E3531	v6.24 or 6.40 RC25	There are different versions of this modem E3531-6 works from version 6.40RC25 as ppp, mbim supported only from RouterOS V7	USB		3G
Huawei e398	v6.xx and higher	ppp interface	USB		LTE
Huawei E5377	v6.36.1	MIFI unit. No serial support, but works with IP on LTE interface	USB	?	LTE
Huawei E5673s-609	v6.xx	LTE interface	USB	?	LTE
Huawei K5160	v6.37 v7.0beta6	v6 and v7 - config-less LTE interface v7 - by default will try to use modem in MBIM mode	USB	N	
Huawei K5161	v6.47	Config-less LTE interface	USB	N	
Huawei ME909s-120	v6.28	Recommended modem firmware version 11.617.24.00.00 To reduce LTE interface IP subnet mask to /32 configure modem with at-chat command: /interface lte at-chat [find] input="AT^CUSTFEATURE=3,1"	MiniPCI-e	Y	LTE
Huawei ME909u-521	v6.11		MiniPCI-e	N	LTE
Huawei MU609	v6.11		MiniPCI-e	?	3G
Huawei MU709s-2	v6.28		MiniPCI-e	Y	3G
Jaton MT421e	v6.40RC32	LTE interface with Ethernet emulation (no configuration possible), LTE supported bands 42/43	MiniPCI-e	?	LTE
Netgear Unite Explore 815S	v6.41	MIFI unit. No serial support, but works with IP on LTE interface.	USB	Y	LTE
Novatel USB730L	v6.41RC6	LTE interface	USB	?	LTE
Olivetti Olicard 500	v6.41RC11	ppp interface	USB	?	LTE
Quectel EC20/EC21	v6.xx	ppp interface, there is page in wiki about Quectel: <a href="#">article</a>	MiniPCI-e	?	LTE
Quectel BG77	v6.47	Serial/PPP interface, single AT/modem channel	OEM module	N	IoT
Quectel BG95-M3	v6.47	Serial/PPP interface, single AT/modem channel Will not work in wAP R ac boards.	mini-PCle	N	2G/IoT
Quectel BG96	v6.45	Serial/PPP interface, 2x AT/modem channels	mini-PCle	N	2G/IoT
Quectel EC25	v6.42	ppp/LTE interface, there is page in wiki about Quectel ppp mode: <a href="#">article</a>  RouterOS v6 CDC-ECM mode - LTE interface receive address in modems internal network.  RouterOS v7 MBIM mode - LTE interface uses APN IP address.	MiniPCI-e	?	LTE
Quectel EG25-G	6.48.3	RouterOS v6 CDC-ECM mode - LTE interface receive address in modems internal network.  RouterOS v7 MBIM mode - LTE interface uses APN IP address.  In some boards may be required to disable SIM hot plug detection:  /interface lte set [find] modem-init="AT+QSIMDET=0,1"	MiniPCI-e		GSM, 3G, LTE

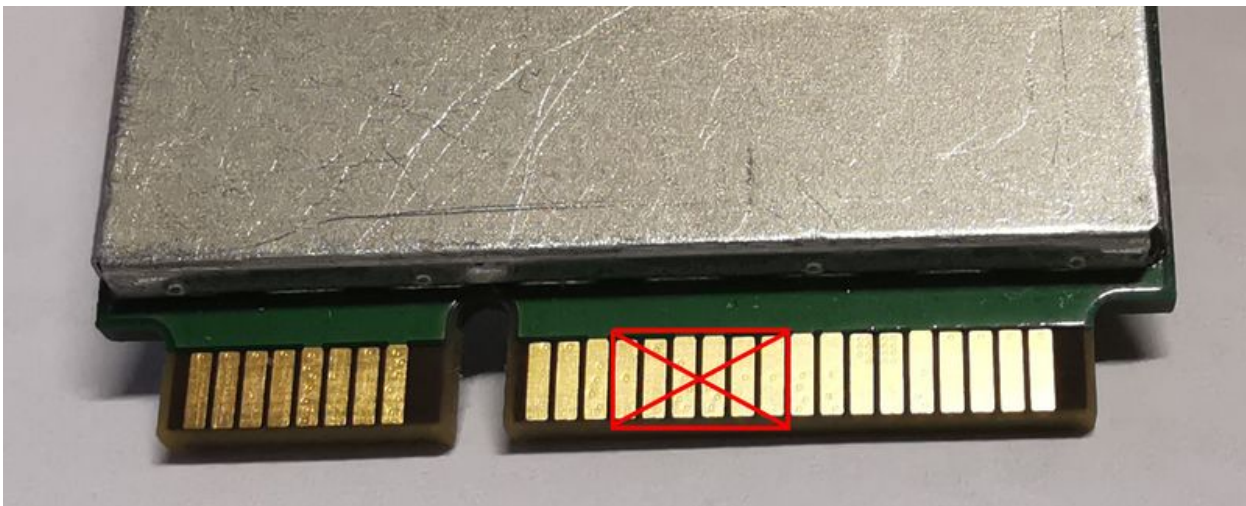
Quectel EM12-G	v7.1beta5	MBIM driver	m.2	Y	3G,LTE
Quectel EP06	v6.42	ppp/LTE interface, there is page in wiki about Quectel: <a href="#">article</a>	MiniPCI-e	?	LTE
Quectel RM500Q-GL	v7.1beta6	MBIM driver	m.2	Y	3G, LTE, 5G
Quectel RM502Q-AE	v7.1beta5	MBIM driver	m.2	Y	3G, LTE, 5G
Quectel UC15	v6.xx	Works, ppp interface	MiniPCI-e		3G
Quectel UC20	v6.xx	Works, ppp interface	MiniPCI-e		3G
R11e-LTE	v6.39.2	LTE interface. Supports multiple APN passthrough.	MiniPCI-e	Y	LTE
Sierra Netgear AirCard 320U	6.41	Customer tested the modem with firmware 03.05.23	USB	N	LTE
Sierra wireless MC73xx	v6.xx(ppp) v7.xx (LTE)	Works! PPP interface. And starting with v7.xx it will support LTE interface. MC7304 tested with firmware SWI9X15C_05.05.67.00	MiniPCI-e	N	LTE
Sierra Wireless MC7430	v6.xx and higher	Data channel 2, Info channel 2, Modem init: AT+CGATT=0, Dial-command: AT+CGATT=1;D*99#, also needs 3.0 pins isolated (PINS:23,25,27,31,33)	MiniPCI-e		LTE
Sierra Wireless MC74xx	v7.1	Basic functionality support for modems with MBIM interface/USB composition	mini-PCIe		
Sierra Wireless MC7455	v7.3beta37	MBIM mode with extended support for USB compositions: <ul style="list-style-type: none"> <li>• 1009 - diag,modem,mbim</li> <li>• 100D - diag,nmea,modem,mbim</li> </ul>	mini-PCIe		
Sierra Wireless MC7710 /MC7700 /MC7750	v5.25, v6.0 and 6.40 RC43	If modem uses firmware 3.5 it should be upgraded to 3.5.23.2 firmware release in order to work in RouterOS correctly again.	MiniPCI-e	N	LTE
SIMcom SIM5360	v6.xx	Works! Using PPP interface, vendor-id="0x05c6" device-id="0x9000"	MiniPCI-e / USB w/ converter		3G
SIMcom SIM7100	v6.xx(ppp) v7.xx (LTE)	Works! PPP interface. And starting with v7.xx it will support LTE interface. vendor-id="0x1e0e" device-id="0x9001"	MiniPCI-e / USB w/ converter	?	LTE
SXT LTE	v6	LTE interface. Old version of SXT LTE	Built-in	N	LTE
SXT LTE kit	v6.42	LTE interface from R11e-LTE/R11e-LTE-US mini-pcie module	Built-in	Y	LTE
Tele2.ru LTE-D402	v6.47	Config-less LTE interface		N	
Telecom NZ T-Stick ZTE MF-181	v6.0rc13	Data Channel=2, Info Channel=2, APN <a href="http://internet.telecom.co.nz">internet.telecom.co.nz</a> , PHONE=*99#. Tested ok for both data and SMS on CCR1016-12G	USB		3G
Telit FN980m	v7.5	AT#USBCFG=2	m.2		LTE, 5G
Telit LE910	v6.xx	ppp interface, vendorid=0x1bc7 deviceid=0x1201	MiniPCI-e	?	LTE
Telit LE910C1	v6.46	Non-configurable from RouterOS	MiniPCI-e		LTE
Telit LM940	v6.44	LTE interface in some cases needs 3.0 pins isolated (PINS:23,25,27,29,31,33)	MiniPCI-e	Y	LTE
Telit LM960	v6.46	LTE interface in some cases needs 3.0 pins isolated (PINS:23,25,27,29,31,33)	MiniPCI-e	Y	LTE

TPS (Turning Point Solution) GCT450	v6.48	Config-less LTE interface	MiniPCI-e	N	
Vodafone (Huawei) K4203	v7.xx	Not supported in ROS v6, but as this modem supports MBIM drivers support will be possible in ROS v7.	USB	?	LTE
Vodafone K4201-Z	v6.8	Some settings are ignored. LTE interface.	USB	?	LTE
Vodafone K4305	v6.7	Some settings are ignored.	USB	?	LTE
Vodafone K5160	v6.37	Some settings are ignored.	USB	?	LTE
Yota LU150	v5.22 and v6.4	Some settings are ignored. Works in Russian markets.	USB	?	LTE
Yota wifi modem	v6.7	Some settings are ignored. Works in Russian markets.	USB	?	LTE
Yota WLTUBA- 107	v6.0	Some settings are ignored. Works in Russian markets.	USB	?	LTE
ZTE 821D	v6.x	Set Info channel = 1, Data channel = 3, Dial command=ATDT	USB		3G
ZTE AC5730	v6.x		USB		3G
ZTE ME3630-E	v6.40RC26	ppp and LTE interface	MiniPCI-e	?	LTE
ZTE MF110	v6.28 and higher	Set info channel = 2, data channel = 2, Dial command=ATM1L3DT	USB		3G
ZTE MF823	v6.8	Some settings are ignored. For some devices it's needed to enter in FACTORY mode to change operating state.	USB	?	LTE
ZTE MF825A	v6.xx	Some settings are ignored.	USB	?	LTE
ZTE MF827	v6.8	Some settings are ignored.	USB	?	LTE
ZTE MF90	v6.44beta32 and higher	LTE interface	USB	N	LTE
Anteniti 3372h-153					



Not all modems are listed. Localized and locked units may have compatibility issues. **All modems using MBIM driver should work by default on RouterOS v7.**

For some modems with USB3.0 support in some cases USB3.0 pins need to be isolated to ensure correct initialization:



## SFP modules

Brand	Model	Rate	Connector /Cable type	Wavelength	Tested with	Works / Doesn't
MikroTik	S-85DLC05D	1,25G	Dual LC, MM	850nm	*Check: <a href="#">SFP/SFP+ compatibility reference table</a>	Natively supported
MikroTik	S-31DLC20D	1,25G	Dual LC, SM	1310nm	*Check: <a href="#">SFP/SFP+ compatibility reference table</a>	Natively supported
MikroTik	S-35LC20D	1,25G	BiDi LC, SM	Tx:1310nm/Rx:1550nm	*Check: <a href="#">SFP/SFP+ compatibility reference table</a>	Natively supported
MikroTik	S-53LC20D	1,25G	BiDi LC, SM	Tx:1550nm/Rx:1310nm	*Check: <a href="#">SFP/SFP+ compatibility reference table</a>	Natively supported
MikroTik	S-RJ01	1000/100/10	RJ45, Cat5/Cat6	N/A	*Check: <a href="#">SFP/SFP+ compatibility reference table</a>	Natively supported
Axiom	AXG91632	1000BASE-LX	Dual LC	1310nm	CRS125-24G-1S-RM	Works!
Finisar	FCLF-8521-3	10/100/1000	RJ45, Cat6	N/A	RB2011LS-IN	Works!
Finisar	FCLF-8521-3-MD	10/100/1000	RJ45, Cat6	N/A	RB2011LS-IN	Works!
Finisar	FTRJ8519P1BNL-B1	10/100/1000 1.25 Gb/s 1000Base-SX Ethernet	Dual LC, MM	850nm	RB2011LS-IN	Works!
Finisar	FTLF8519P2BNL	10/100/1000 1.25 Gb/s 1000Base-SX Ethernet	Dual LC, MM	850nm	RB2011LS-IN	Works!
Finisar	FTRJ1319P1BTL	1.25Gb/s 1000Base-LX Ethernet	Dual LC, SM	1310nm	CCR1009-8G-1S-1S+ and CCR1009-7G-1C-1S+	Works!
Unica	SFP-1.25G-T	1000M	RJ45, Cat6	N/A	RB2011LS-IN	Works!
Dell	FTLX8571D3BCL	1,25G	Dual LC, MM	850nm	RB2011LS-IN	Works!
Unica	GP-3124-L2CD-C	1,25G	Dual LC, MM	1310nm	RB2011LS-IN	Works!
Cisco	GLC-T	1.25G	RJ45, Cat6	N/A	RB2011LS-IN	Works!
Cisco	GLC-SX-MM	1000BASE-SX SFP transceiver module for MMF, 1.25G	Dual LC, MM	850nm	RB2011LS-IN	Works!
Cisco	SFP-GE-L	1000BASE-LX/LH SFP transceiver module for SMF, 1.25G	Dual LC, SM	1300nm	Various MT hardware	Works!
6COM	6C-SFP-T	10/100/1000	RJ45, Cat6	N/A	RB2011LS-IN	Works!
6COM	6C-WDM-0210BSD	1,25G	BiDi SC, SM	Tx:1550nm/Rx:1310nm	RB2011LS-IN	Works!

6COM	6C-WDM-0210ASD	1,25G	BiDi SC, SM	Tx:1310nm/Rx:1550nm	RB2011LS-IN	Works!
6COM	6C-SFP-0310D	1,25G	Dual LC, MM	1310nm	RB2011LS-IN	Works!
6COM	6C-SFP-0301D	1,25G	Dual LC, MM	850nm	RB2011LS-IN	Works!
Ingellen	INSP-T(10/100/1000)	10/100/1000	RJ45, Cat6	N/A	RB2011LS-IN	Works!
Ingellen	INSPL-53-BX	1,25G	BiDi LC, MM	1550/1310	RB2011LS-IN	Works!
Ingellen	INSPL-35-BX	1,25G	BiDi LC, MM	1310/1550	RB2011LS-IN	Works!
Ingellen	INSP-LX-SM	1,25G	Dual LC, SM	1310nm	RB2011LS-IN	Works!
Ingellen	INSP-SX-MM	1,25G	Dual LC, MM	850nm	RB2011LS-IN	Works!
AXCEN	AXGT-R1T4-0511	10/100/1000	RJ45, Cat6	N/A	RB2011LS-IN	Works!
AXCEN	AXGD-37A4-0531	1,25G	BiDi LC, MM	Tx:1550nm/Rx:1310nm	RB2011LS-IN	Works!
AXCEN	AXGD-16A4-0531	1,25G	BiDi LC, MM	Tx:1310nm/Rx:1550nm	RB2011LS-IN	Works!
AXCEN	AXGD-1354-0531	1,25G	Dual LC, MM	1310nm	RB2011LS-IN	Works!
AXCEN	AXGD-5854-0511	1,25G	Dual LC, MM	850nm	RB2011LS-IN	Works!
TP-Link	TL-SM311LS	1,25G	Dual LC, SM	1310nm	RB2011LS-IN	Works!
TP-Link	TL-SM311LM	1,25G	Dual LC, MM	850nm	CCR1036 12G-4S	Works!
OPTIC	OPTIC-SFP-3524S-02-SC	1,25G	BiDi SC, SM	Tx:1310nm/Rx:1550nm	RB2011UAS-RM, RB260GS	Works!
OPTIC	OPTIC-SFP-5324S-02-SC	1,25G	BiDi SC, SM	Tx:1550nm/Rx:1310nm	RB2011UAS-RM, RB260GS	Works!
OPTIC	OPTIC-SFP-S1203-L3302-LC	1,25G	BiDi LC, SM	Tx:1310nm/Rx:1550nm	RB2011UAS-RM, RB260GS	Works!
OPTIC	OPTIC-SFP-S1205-L3302-LC	1,25G	BiDi LC, SM	Tx:1550nm/Rx:1310nm	RB2011UAS-RM, RB260GS	Works!
ROBOFiber	SFP-7120-55	1,25G	Dual LC, SM	1550nm	CCR1036-12G-4S, RB2011	Works!
ROBOFiber	SFP-7120-WA	1,25G	BiDi LC, MM	Tx:1490nm/Rx:1550nm	CCR, RB2011	Works!
ROBOFiber	SFP-7120-WB	1,25G	BiDi LC, MM	Tx:1550nm/Rx:1490nm	CCR, RB2011	Works!
Enguity	SFP-3647603KM.b1310 XT	1,25G	BiDi LC, SM	Tx:1310nm/Rx:1550nm	CCR, RB2011, RB260GS	Works!
Enguity	SFP-3647603KM.b1550 XT	1,25G	BiDi LC, SM	Tx:1550nm/Rx:1310nm	CCR, RB2011, RB260GS	Works!
Enguity	SFP-3647610KM.b1490 XT	1,25G	BiDi LC, SM	Tx:1490nm/Rx:1550nm	CCR, RB2011, RB260GS	Works!
Enguity	SFP-3647610KM.b1550 XT	1,25G	BiDi LC, SM	Tx:1550nm/Rx:1490nm	CCR, RB2011, RB260GS	Works!
AdvOptics MSA	GLC-SX-MM	1,25G	BiDi LC, MM	Tx:1310nm/Rx:1310nm	CCR, RB2011, RB260GS	Works!
AdvOptics MSA	GLC-ZX-SM	1,25G	BiDi LC, SM	Tx:1310nm/Rx:1310nm	CCR, RB2011, RB260GS	Works!
Proline	GLC-BX-D20-PRO	1,25G	BiDi LC, SM	Tx:1490nm/Rx:1310nm	CRS125	Works!
Proline	GLC-BX-D40-PRO	1,25G	BiDi LC, SM	Tx:1310nm/Rx:1490nm	CRS125	Works!
Foundry Networks	E1MG-BXU-AC	1,25G	BiDi LC, SM	Tx:1310nm/Rx:1490nm	RB3011UiAS, hAP ac	Works!

Avago	SFBR-5799APZ	1,25G	Dual LC, MM	850nm	CRS326, CRS112	Works in 1Gbps mode!
Eltex	NTU-SFP-100	1,25G	SC	N/A	RB4011iGS+	Works!

## SFP+ modules

Brand	Model	Distance	Rate	Connector /Cable type	Wavelength	Tested with	Works / Doesn't
MikroTik	S+85DLC03D	300m	10G	Dual LC, MM	850nm	All MikroTik products with SFP /SFP+ interfaces	Natively supported
MikroTik	S+31DLC10D	10km	10G	Dual LC, SM	1310nm	All MikroTik products with SFP /SFP+ interfaces	Natively supported
MikroTik	S+23LC10D	10km	10G	BiDi LC, SM	Tx:1270nm/Rx:1330nm	All MikroTik products with SFP /SFP+ interfaces	Natively supported
MikroTik	S+32LC10D	10km	10G	BiDi LC, SM	Tx:1330nm/Rx:1270nm	All MikroTik products with SFP /SFP+ interfaces	Natively supported
MikroTik	S+DA0001	1m	10G	Twinax Copper	N/A	All MikroTik products with SFP /SFP+ interfaces	Natively supported
MikroTik	S+DA0003	3m	10G	Twinax Copper	N/A	All MikroTik products with SFP /SFP+ interfaces	Natively supported
MikroTik	S+RJ10	various, depending on link rate. Check brochure for more details	10G/5G/2.5G/1G /100M/10M	RJ45 - Cat5E /Cat6/Cat7	N/A	All MikroTik products with SFP+ interfaces	Natively supported
Atop	APSP55B30C DL40	40km	10G	Dual LC, SM	1550nm	CRS series, CCR series devices with SFP+ interfaces	Does NOT work!
Cisco	SFP-10G-LR	10km	10G	Dual LC, SM	1310nm	RB2011LS-IN	Works!
Dell (Finisar)	FTLX8571D3B CL	300m	10G	Dual LC, MM	850nm	Most of SFP/SFP+ MikroTik products	Works!
Juniper (Finisar)	FTLX8571D3B CL-J1	300m	10G	Dual LC, MM	850nm	Most of SFP/SFP+ MikroTik products	Works!
Intel (Finisar)	FTLX8571D3B CV-IT	300m	10G	Dual LC, MM	850nm	Most of SFP/SFP+ MikroTik products	Works!
OEM (Juniper?)	EX-SFP-10GE-SR-OEM	300m	10G	Dual LC, MM	850nm	Most of SFP/SFP+ MikroTik products	Works!
Fiberstore	SFP-10G31-40	40km	10G	Dual LC, SM	1310nm	CRS series, CCR series devices with SFP+ interfaces	Works!
Fiberstore	SFP-10G55-40	40km	10G	Dual LC, SM	1310nm	CRS series, CCR series devices with SFP+ interfaces	Works!
Fiberstore	SFP-10G32-40	40km	10G	BiDi LC, SM	Tx:1330nm/Rx:1270nm	CRS series, CCR series devices with SFP+ interfaces	Works!
Fiberstore	SFP-10G23-40	40km	10G	BiDi LC, SM	Tx:1270nm/Rx:1330nm	CRS series, CCR series devices with SFP+ interfaces	Works!
Optech	OPAK-TX1-00-C	30m	10G	RJ45 - Cat 6a /7 Cable	N/A	CCR, CCR, CSS series devices with SFP+ interfaces	Works, starting with v6.40rc20 RouterOS build.
ProLabs	SFP-10G-T-C	30m	10G	RJ45 - Cat 6a /7 Cable	N/A	CCR, CCR, CSS series devices with SFP+ interfaces	Works, starting with v6.40rc20 RouterOS build.