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MERIDIAN ROUTER user interface manual

MERIDIAN5G PRODUCTS: CLASSIC ROUTER, DOME ROUTER

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1. Introduction

User interface of Meridian router can be accessed using any web browser from yacht's local network via router's local IP address.

Authentication page will prompt you for login and password. Please use the following credentials to log in:

- Name: shipadmin
- Password: ship

To change the default password / add new users, please contact out support.

MERIDIAN5G						
Login						
Name	shipadmin					
Password	••••					
LOGIN NOW						

2. Dashboard

MAIN MENU -> DASHBOARD

2.1. Overview

Dashboard presents most important information about the status of router overall and each of its 4 modems. Here is an overview of this screen:



2.2. General Information

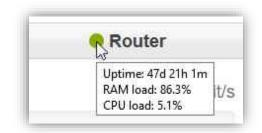


2.3. Router Status

links			Router	wnload speed	Total upload speed
Mainboard		Ŧ	0.036 Mbit/s	•	4 Mbit/s
emperatures	Speedtest		Last hour peak download speed: $0.080 \; \text{Mbil/s}$	Last hour peak upload speed: 0.886	3 Mbit/s

- Number of active links shows how many independent channels are used by the router to send your data
- Mainboard temperatures indicate CPU and BOARD temperatures if green, there is nothing to worry about
- **Speed test button** runs single speed test between Meridian router and data center counterpart first 15 seconds of download test, then 15 seconds of upload test.
- Total download and upload speeds show aggregated speed over all active links
- Last hour peak download and upload speeds show peak speeds reached by the router in the last hour. They depend, among other factors, on network load, radio conditions, and yacht's data demand.

Hover over the router status indicator to see system uptime and current RAM and CPU load



2.4. Modem Information

		Modem ON/OFF switch
Instantaneous download and upload speeds	Modem #1 Monaco Telecom	
	0.006 Mbit/s	• 0.1km indice from the mobile of
Modem status info	9 0.1 km 🕐 23ms	antenna 23ms shows
Access detailed information about the modem under	SIM No.: 8937710330000331774F IMSI: 212103300033177	 IMEI is a uni SIM No. is a card
'More info'	SIM status: SIM OK IMEI: 867826050022326 Carrier IP: 10.23.13.76 In roaming: No	• Carrier IP sh modem by the mo
	Powered on: Yes Registered in network: Yes Packet data session: Up IP assigned: Yes Ping status: Up Data link: Up	
	Less info ∧	

 0.1km indicates distance travelled by the signal from the mobile carrier's cell tower to the modem's antenna

23ms shows ping latency (round trip time)

- IMEI is a unique hardware identifier of the modem
- SIM No. is a unique identifier (ICCID) of the SIM card

• **Carrier IP** shows an IP address assigned to each modem by the mobile core network

3. Settings

3.1. Router Configuration

MAIN MENU -> SETTINGS -> ROUTER CONFIGURATION

Router configuration page allows to configure:

- Router-wide settings (LAN and Data center):
 - o IP address and subnet mask for the primary, 'Eth0' Ethernet/LAN interface
 - Secondary 'Eth1' Ethernet/LAN interface IP and mask are not configurable. Use this interface for support / direct emergency access to the router.
 - Aggregation DC IP (not configurable), which is your IP address in case of link aggregation.
 - o [Optional] Link aggregation or Load balancing modes of traffic routing.
 - 1. Link aggregation: traffic is split between modems on the router and combined back together in our Data Center. You are provided with static public IP in the region of choice (usually, UK or US).
 - 2. Load balancing: traffic is split between modems on the router, but no Data Center counterpart is involved. You are assigned multiple different dynamic IP addresses by network carrier.
 - [Optional] "Support link" toggle, available in Load balancing mode (enabled by default).
 Enables or disables remote connection for Meridian support engineers.

LAN settings				
Eth0 IP addr/mask Eth1 IP addr/mask	172.20.70.1/24			
		Data center settings		
Aggregation DC IP	134.213.210.17	Link aggregation mode		

- Mobile carrier settings, per modem
 - Data mode: 3G only, 3G+4G, 3G+4G+5G, 4G only, 4G+5G
 - o Carrier selection: Automatic or Manual
 - o Manual selection: From list of preset carriers or from network scan results
 - In case of manual carrier selection from preset carriers, select the carrier to lock on from drop-down menu, containing the list of pre-defined mobile carriers per country.

- o In case of manual carrier selection from network scan,
 - 1. Perform network scan using "New network scan" button on any of activated modems. Note: scan can take up to 5 minutes, and packet data would be disabled.
 - 2. Select carrier to lock on from drop-down menu, containing the list of mobile carriers available in your current location
 - 3. You can use network scan results from any modem (but actual carrier availability depends on the SIM card used)

Modem #1 Carrier configuration	Modem #2 Carrier configuration	Modem #3 Carrier configuration	Modem #4 Carrier configuration
Data mode	Data mode	Data mode	Data mode
Select data mode: 4G+5G 🗸	Select data mode: 4G only 🗸	Select data mode: 4G+5G 🗸	Select data mode: 4G+5G 🗸 🗸
Carrier selection	Carrier selection	Carrier selection	Carrier selection
Manual	Automatic	Automatic	Automatic
From network scan	From preset carriers		
Select network scan:	Select carrier:		
Modem #1 scan (0h:0m ago) 🗸	Monaco: Monaco Telecom 10 (21 🗸		
Select carrier:			
4G Monaco Telecom (21210, alliv			
New network scan			

Network scan results example:

Γ	From network scan	
	Select network scan:	
[Modem #4 scan (14d ago)	\sim
	Select carrier:	
	3G Orange (20801, allowed)	\sim
	3G Orange (20801, allowed)	
Ш	3G SFR (20810, allowed)	
	3G Free (20815, allowed)	K
	3G BYTEL (20820, allowed)	
	3G TIM (22201, allowed)	
	4G Orange (20801, allowed)	
	4G SFR (20810, allowed)	
	4G Free (20815, allowed)	
	4G 208 16 (20816, allowed)	
	4G BYTEL (20820, allowed)	
ы	4G ILIAD (22250, allowed)	
	4G I WIND (22288, allowed)	
	4G 3 ITA (22299, allowed)	

- 4G bands configuration, per modem
 - Use "All LTE bands" checkbox to enable all supported 4G-LTE bands on the modem.
 - Use "High bands (Europe)" and "Low bands (Europe)" to enable either only high frequency or only low frequency 4G-LTE bands used by European carriers.
 - Use "High bands (North America)" and "Low bands (North America)" to enable either only high frequency or only low frequency 4G-LTE bands used by North American and Caribbean carriers
 - Use corresponding checkboxes to enable only desired 4G-LTE bands manually.

4G bands configuration	4G bands configuration	4G bands configuration	4G bands configuration
All LTE bands	All LTE bands	All LTE bands	All LTE bands
✓ High bands (Europe)	High bands (Europe)	High bands (Europe)	High bands (Europe)
✓ Low bands (Europe)	✓ Low bands (Europe)	Low bands (Europe)	✓ Low bands (Europe)
High bands (North America)			
Low bands (North America)			
Show enabled 4G bands V	Show enabled 4G bands ∨	Show enabled 4G bands ∨	Show enabled 4G bands ∨

4G bands configuration	4G bands configuration	4G bands configuration	4G bands configuration
All LTE bands	All LTE bands	All LTE bands	All LTE bands
🗹 High bands (Europe)	High bands (Europe)	High bands (Europe)	High bands (Europe)
🖌 Low bands (Europe)	Low bands (Europe)	Low bands (Europe)	Low bands (Europe)
High bands (North America)	High bands (North America)	High bands (North America)	High bands (North America)
Low bands (North America)	Low bands (North America)	Low bands (North America)	Low bands (North America)
B1 (2100) B25 (1900) B2 (1900) B26 (850) B3 (1800) B28 (700) B4 (1700) B29 (700) B5 (850) B30 (2300) B7 (2600) B32 (1500) B8 (900) B34 (2000) B12 (700) B38 (2600) B13 (700) B39 (1900) B14 (700) B41 (2600) B17 (700) B41 (2600) B18 (800) B42 (3500) B19 (800) B66 (2100) B20 (800) B71 (600)			□ B1 (2100) B25 (1900) □ B2 (1900) B26 (850) □ B3 (1800) ✓ B28 (700) □ B4 (1700) B29 (700) □ B5 (850) B30 (2300) □ B7 (2600) B32 (1500) ☑ B8 (900) B34 (2000) □ B12 (700) B38 (2600) □ B13 (700) B39 (1900) □ B14 (700) B40 (2300) □ B17 (700) B41 (2600) □ B18 (800) B42 (3500) □ B19 (800) B66 (2100) ☑ B20 (800) □
Hide enabled 4G bands \land	Hide enabled 4G bands 🔥	Hide enabled 4G bands 🔥	Hide enabled 4G bands \land

- 5G bands configuration
 - 5G mode: "SA and NSA" enables operation in both 5G Standalone and 5G Non-standalone networks. "Disable SA" and "Disable NSA" turn off support for corresponding 5G network types.
 - Use "All 5GNR SA bands" checkbox to enable all supported 5GNR Standalone bands.
 - Use "All 5GNR NSA bands" checkbox to enable all supported 5GNR Non-standalone bands.
 - Use corresponding checkboxes to enable only desired 5GNR bands manually.

5G bands configuration	5G bands configuration	5G bands configuration	5G bands configuration
5G mode: SA and NSA 🗸	5G mode: SA and NSA 🗸	5G mode: SA and NSA 🗸	5G mode: SA and NSA 🗸
☑ All 5GNR SA bands ☑ All 5GNR NSA bands	All 5GNR SA bands All 5GNR NSA bands	All 5GNR SA bands All 5GNR NSA bands	All 5GNR SA bands
5G SA bands	5G SA bands	5G SA bands	5G SA bands
Image: matrix and matrix		✓ n1 (2100) ✓ n38 (2600) ✓ n2 (1900) ✓ n40 (2300) ✓ n3 (1800) ✓ n41 (2600) ✓ n5 (850) ✓ n48 (3600) ✓ n7 (2600) ✓ n66 (2100) ✓ n8 (900) ✓ n71 (600) ✓ n12 (700) ✓ n77 (3700) ✓ n20 (800) ✓ n79 (3500) ✓ n25 (1900) ✓ n79 (4500) ✓ n28 (700) ✓ n70	♥ n1 (2100) ♥ n38 (2600) ♥ n2 (1900) ♥ n40 (2300) ♥ n3 (1800) ♥ n41 (2600) ♥ n5 (850) ♥ n48 (3600) ♥ n7 (2600) ♥ n66 (2100) ♥ n8 (900) ♥ n71 (600) ♥ n12 (700) ♥ n77 (3700) ♥ n20 (800) ♥ n78 (3500) ♥ n25 (1900) ♥ n79 (4500) ♥ n28 (700) ♥
5G NSA bands	5G NSA bands	5G NSA bands	5G NSA bands
	✓ n1 (2100) ✓ n38 (2600) ✓ n2 (1900) ✓ n40 (2300) ✓ n3 (1800) ✓ n41 (2600) ✓ n5 (850) ✓ n48 (3600) ✓ n7 (2600) ✓ n66 (2100) ✓ n8 (900) ✓ n71 (600) ✓ n12 (700) ✓ n77 (3700) ✓ n20 (800) ✓ n78 (3500) ✓ n25 (1900) ✓ n79 (4500) ✓ n28 (700) ✓ n12	✓ n1 (2100) ✓ n38 (2600) ✓ n2 (1900) ✓ n40 (2300) ✓ n3 (1800) ✓ n41 (2600) ✓ n5 (850) ✓ n48 (3600) ✓ n7 (2600) ✓ n66 (2100) ✓ n8 (900) ✓ n71 (600) ✓ n12 (700) ✓ n77 (3700) ✓ n20 (800) ✓ n78 (3500) ✓ n25 (1900) ✓ n79 (4500)	
Hide enabled 5G bands 🔥	Hide enabled 5G bands ∧	Hide enabled 5G bands \land	Hide enabled 5G bands \land

- SIM settings, per modem
 - APN (Access Point Name) settings: Automatic or Manual.
 - In case of manual APN settings, enter APN, User and Password according to your SIM card provider. APN is required; User and Password are optional.
 - SIM unlock PIN. PIN should be 4 digits long.

SIM configuration	SIM configuration	SIM configuration	SIM configuration
SIM slot APN settings	SIM slot	SIM slot	SIM slot APN settings
Manual	Automatic	Automatic	Automatic
APN orange User	SIM unlock	SIM unlock PIN	SIM unlock
Password			
SIM unlock			

- Signal threshold, per modem
 - Use slider to select minimal signal strength level. If cellular signal is below selected level, modem will disconnect and stay offline, until signal rises back above the threshold.
 - Thresholds for 4G (RSRP): -140dBm, -130dBm, -120dBm, -110dBm, -100dBm, -90dBm
 - o Thresholds for 3G (RSCP): -120dBm, -110dBm, -100dBm, -90dBm, -80dBm, -70dBm

Signal threshold	Signal threshold	Signal threshold	Signal threshold
Set acceptable level	Set acceptable level	Set acceptable level	Set acceptable level

• Click "Apply" or "Apply and return" in order to save changes. A warning will be displayed when leaving the Router configuration page with unsaved changes.

100	reactor configuration	
add	This page is asking you to confirm that you want to leave - data you have entered may not be saved.	iboa 70-58
	Leave Page Stay on Page	dem rrier

3.2. Advanced Settings

MAIN MENU -> SETTINGS -> ADVANCED

[Optional, depends on specific hardware version] Advanced settings page allows to:

- Switch between different firmware versions, per modem
 - Required only when using US carriers: Verizon, AT&T or T-Mobile USA
 - o Use only when instructed by our support team

	Advand	ed settings	
Modem #1 Firmware selection	Modem #2 Firmware selection	Modem #3 Firmware selection	Modem #4 Firmware selection
Check current firmware 1. Generic / 32.00.115 / 1025 2. Verizon / 32.00.124 / 2020 3. ATT / 32.00.144 / 4021 4. TMUS / 32.00.153 / 5004 Activate selected	Check current firmware	Check current firmware	Check current firmware

3.3 User interface manual

MAIN MENU -> SETTINGS -> USER INTERFACE MANUAL

Access to this manual.

4. Reports

4.1. Daily Traffic Reports

MAIN MENU -> REPORTS -> DAILY TRAFFIC REPORTS

Daily traffic reports page provides information about daily traffic usage, in GBytes. Usually, you will see 4 reports per day (one report per SIM card). Daily reports are generated each night.

It is possible to filter records by SIM No. and by the time period of interest.

You can also create .csv file with filtered records ('Export as csv')

Filters: ALL	SIM No. • Apply Fro	m 1.05.2021 To 1.06.20	21 Reset Appl	y Export as csv
<u>Date</u>	SIM No.	GBytes sent GByte	es received	GBytes total
TOTAL		20.73	196.32	217.0
May 31, 2021	89441000304178836025	0.69	10.47	11.1
May 31, 2021	89441000304178835985	0.81	19.13	19.9
May 30, 2021	89441000304178836025	1.02	1.25	2.2
May 30, 2021	89441000304178835985	1.16	1.16	2.3
May 29, 2021	89441000304178836025	0.34	2.29	2.6
May 29, 2021	89441000304178835985	0.66	10.49	11.1
May 28, 2021	89441000304178836025	0.42	8.61	9.02
May 28, 2021	89441000304178835985	0.48	8.59	9.0
May 27, 2021	89441000304178836025	0.24	1.71	1.9
May 27, 2021	89441000304178835985	0.25	2.33	2.5
May 26, 2021	89441000304178836025	0.2	2.65	2.8
May 26, 2021	89441000304178835985	0.28	3.95	4.2

4.2. Detailed Traffic Reports

MAIN MENU -> REPORTS -> DETAILED TRAFFIC REPORTS

Daily traffic reports page provides detailed, per-minute information about traffic usage, in MBytes.

It is possible to filter records by SIM No. and by the time period of interest.

You can also create .csv file with filtered records ('Export as csv')

Filters:	89441000304178835985	• <u>Apply</u> From 1	.06.2021	То 2	.06.2021	<u>Reset</u> <u>Apply</u> <u>Ex</u>	<u>port as csv</u>
Created	▽	SIM No.	Modem	Carrier	MBytes sent	MBytes received	MBytes total
FOTAL since 2	2021-06-01 00:00:46				593.24	2,417.2	3,010.4
June 1, 2021,	11:59 p.m.	89441000304178835985	Modem #4	SFR	0.19	0.23	0.4
June 1, 2021,	11:58 p.m.	89441000304178835985	Modem #4	SFR	0.24	0.23	0.4
June 1, 2021, 1	11:57 p.m.	89441000304178835985	Modem #4	SFR	0.16	0.33	0.4
June 1, 2021, 1	11:56 p.m.	89441000304178835985	Modem #4	SFR	1.14	3.13	4.2
June 1, 2021,	11:55 p.m.	89441000304178835985	Modem #4	SFR	0.11	0.57	0.6
June 1, 2021,	11:54 p.m.	89441000304178835985	Modem #4	SFR	0.3	0.38	0.6
June 1, 2021,	11:53 p.m.	89441000304178835985	Modem #4	SFR	0.2	0.33	0.5
June 1, 2021,	11:52 p.m.	89441000304178835985	Modem #4	SFR	0.21	0.59	0.8
June 1, 2021,	11:51 p.m.	89441000304178835985	Modem #4	SFR	0.14	0.69	0.8
June 1, 2021,	11:50 p.m.	89441000304178835985	Modem #4	SFR	0.23	0.66	0.8
June 1, 2021,	11:49 p.m.	89441000304178835985	Modem #4	SFR	0.2	0.42	0.6
June 1, 2021,	11:48 p.m.	89441000304178835985	Modem #4	SFR	0.28	0.27	0.5
June 1, 2021,	11:47 p.m.	89441000304178835985	Modem #4	SFR	0.15	0.75	0.
June 1, 2021,	11:46 p.m.	89441000304178835985	Modem #4	SFR	0.23	0.68	0.9
June 1, 2021,	11:45 p.m.	89441000304178835985	Modem #4	SFR	0.14	0.45	0.5

4.3. Network Status

MAIN MENU -> REPORTS -> NETWORK STATUS

Presents detailed technical information about the cellular network configuration and conditions.

- **Connectivity and RF** contains data about channel radio conditions (signal strength and quality) and connectivity (ping, MTU, VPN). Different sets of data are available for 3G, 4G and 5G networks.
- 4G Carriers contains data about LTE CA configuration (up to 5CA). Available only on 4G.

			Networ	k status				
Modem #1		Modem #2		Modem #3		Modem #4		
Connectivity and	d RF	Connectivity and	Connectivity and RF		Connectivity and RF		Connectivity and RF	
Ping RTT	21.1 ms	Ping RTT	33.3 ms	Ping RTT	ms	Ping RTT	29.4 ms	
WDS MTU	1500	WDS MTU	1500	WDS MTU	1500	WDS MTU	1500	
VPN up	true	VPN up	true	VPN up	false	VPN up	true	
Distance to cell		Distance to cell		Distance to cell	10150	Distance to cell		
4G RSSI	-41 dBm	4G RSSI	-45 dBm	4G RSSI	-55 dBm	4G RSSI	-46 dBn	
4G RSRP	-79 dBm	4G RSRP	-83 dBm	4G RSRP	-86 dBm	4G RSRP	-40 dBn	
4G RSRQ	-19 dB	4G RSRQ	-20 dB	4G RSRQ	-12 dB	4G RSRQ	-14 dE	
4G RSRQ 4G SNR	-1.4 dB	4G SNR	-20 dB	4G SNR	5.2 dB	4G SNR	- 14 dt 6 dt	
5G RSRP	-1.4 dB -85 dBm	5G RSRP	-3.2 dB -84 dBm	Rx0 Rx power	-57.2 dBm	5G RSRP	-77 dBn	
5G RSRQ	-85 dBm -12 dB	5G RSRQ	-84 dBm -13 dB	Rx1 Rx power	-57.2 dBm -59.7 dBm	5G RSRQ	-77 dBn -11 dE	
5G SNR	-12 dB -11.5 dB	5G SNR	-13 dB -9.5 dB	Rx0 4G RSRP	-59.7 dBm -85.3 dBm	5G SNR	-11 dE -16 dE	
	-11.5 dB -54.1 dBm		-9.5 dB -47.9 dBm	Rx1 4G RSRP	-85.3 dBm -89.8 dBm		-16 db -49.3 dBn	
Rx0 Rx power	-54.1 dBm -52.2 dBm	Rx0 Rx power			-09.0 dBm QPSK	Rx0 Rx power		
Rx1 Rx power	-52.2 dBm -84.2 dBm	Rx1 Rx power Rx0 4G RSRP	-48.6 dBm	DL modulation UL modulation		Rx1 Rx power	-44.3 dBn	
Rx0 4G RSRP			-83.3 dBm		16QAM	Rx0 4G RSRP	-81.1 dBn	
Rx1 4G RSRP	-82 dBm	Rx1 4G RSRP	-81.3 dBm	Tx traffic on	1	Rx1 4G RSRP	-75.4 dBn	
DL modulation	QPSK	DL modulation	QPSK	Tx power	1 dBm	DL modulation	16QAN	
UL modulation	-	UL modulation	QPSK			UL modulation		
Tx traffic on	1	Tx traffic on	1			Tx traffic on	1	
Tx power	dBm	Tx power	4 dBm			Tx power	-5 dBn	
4G Carriers		4G Carriers		4G Carriers		4G Carriers		
PCC		PCC		PCC		PCC		
PCC band	B3 (1800MHz)	PCC band	B3 (1800MHz)	PCC band	B3 (1800MHz)	PCC band	 B3 (1800MHz	
PCC EARFCN	1676	PCC EARFCN	1676	PCC EARFCN	1300	PCC EARFCN	1676 1676	
PCC bandwidth	15 MHz	PCC bandwidth	15 MHz	PCC bandwidth	20 MHz	PCC bandwidth	15 MHz	
PCC PCI	15 MHZ	PCC PCI	15 MH2	PCC PCI	20 MH2	PCC ballowidth	15 MH2	
PCC PCI PCC RSRP	dBm	PCC PCI PCC RSRP	dBm	PCC PCI PCC RSRP	dBm	PCC PCI PCC RSRP	dBr	
PCC RSRP	dBm	PCC RSRP PCC RSSI	dBm	PCC RSRP	dBm	PCC RSRP PCC RSSI	dBm dBm	
PCC RSSI	dB	PCC RSSI PCC RSRQ	dB	PCC RSSI	dB	PCC RSSI PCC RSRQ	dBm dE	
PCC RSRQ PCC SINR	dB	PCC RSRQ PCC SINR	dB	PCC RSRU PCC SINR	dB	PCC RSRQ PCC SINR	dE dE	
SCC0	ab	PCC SINR	ap	SCC0	ab	PCC SINR	dE	
SCC0 band	B7 (2600MHz)	SCC0 band	B7 (2600MHz)	SCC0 band	B7 (2600MHz)	SCC0 band	B7 (2600MHz)	
SCC0 EARFCN	3350	SCC0 EARFCN	3350	SCC0 EARFCN	2825	SCC0 EARFCN	3350	
SCC0 EARPON SCC0 bandwidth	20 MHz	SCC0 bandwidth	20 MHz	SCC0 bandwidth	15 MHz	SCC0 bandwidth	20 MHz	
SCC0 PCI	20 MH2	SCC0 PCI	20 MH2	SCC0 PCI	167	SCC0 PCI	20 MH2	
SCC0 PCI SCC0 state	CONFIGURED	SCC0 state	CONFIGURED	SCC0 PCI SCC0 state	CONFIGURED	SCC0 PCI SCC0 state	CONFIGURED	
SCC0 State SCC0 RSRP	dBm	SCC0 RSRP	dBm	SCC0 RSRP	dBm	SCC0 RSRP	dBr	
SCC0 RSRP	dBm	SCC0 RSSI	dBm	SCC0 RSSI	dBm	SCC0 RSRP	dBr	
SCC0 RSSI	dB	SCC0 RSSI	dB	SCC0 RSSI	dB	SCC0 RSSI	dBn dE	
SCC0 RSRQ SCC0 SINR	dB	SCC0 RSRQ SCC0 SINR	dB dB	SCC0 RSRQ SCC0 SINR	dB	SCC0 RSRQ SCC0 SINR	dt dt	
SCCU SINK	uD	JULU SINK	ub	3000 SINK	uD	JULU SINK	00	
Hora on	rriers V	More car	riers V	More ca	rriers V	More car	riers V	

• Cell info shows information about network registration and cell tower in use.

Cell info		Cell info		Cell info		Cell info	
Radio	RADIO_IF_LTE	Radio	RADIO_IF_LTE	Radio	RADIO_IF_LTE	Radio	RADIO_IF_LTE
Registration	REGISTERED	Registration	REGISTERED	Registration	REGISTERED	Registration	REGISTERED
CS attach state	CS_ATTACHED						
PS attach state	PS_ATTACHED						
Roaming I	ROAMING_IND_OFF	Roaming	ROAMING_IND_OFF	Roaming	ROAMING_IND_OFF	Roaming	ROAMING_IND_OFF
MCC	212	MCC	212	MCC	212	MCC	212
MNC	10	MNC	10	MNC	10	MNC	10
Network	Monaco Telecom						
Cell ID	37D1	Cell ID	37D1	Cell ID	37E7	Cell ID	37D1
LAC/TAC	313B	LAC/TAC	313B	LAC/TAC	313B	LAC/TAC	313B
Operating mode	ONLINE						

4.4 Charts

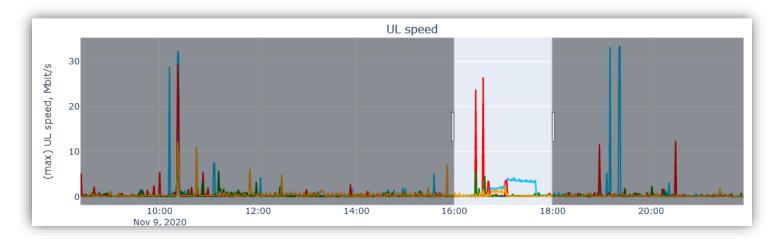
MAIN MENU -> REPORTS -> CHARTS

- Presents historical records on key performance metrics such as Download speed, Upload speed, Distance to cell and Latency.
- It is possible to filter and show only target dates range. Hover over charts to get detailed data point information; select time periods to zoom in for more fine-grained information; double-click to zoom back out.

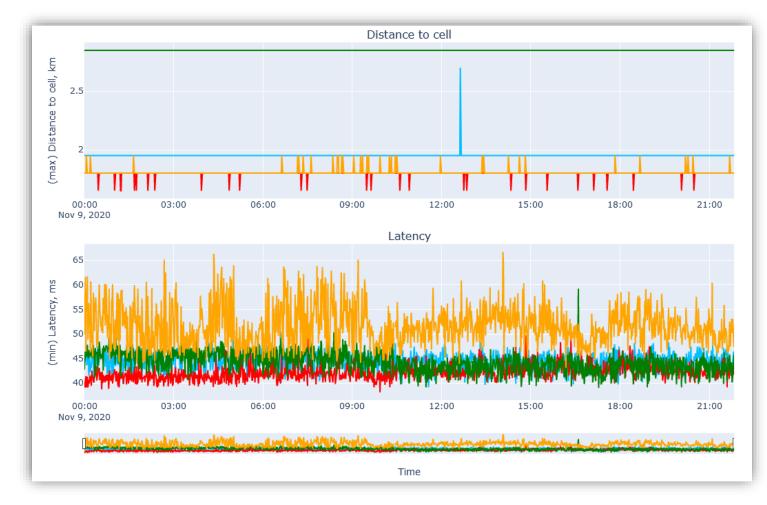
Download and Upload speed charts:



Zooming in to desired time period:



Distance to cell and Latency charts:



Charts of detailed network metrics – carrier name, LTE PCC band:



LTE PCC RSRP and RSRQ:



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LTE PCC SNR and modem Tx power:



5. SIM Cards

5.1. SIM Cards

MAIN MENU -> SIM CARDS -> SIM CARDS

Contains the list of SIM cards ever used together with the device, and highlights which ones are currently in use.

You can enable and disable SMS service on a per-SIM basis. By default, SMS service is ENABLED for all newly inserted SIM cards.

Each SIM can be assigned to a "Data plan" (see *5.2 Data plans*), which helps to monitor data traffic usage, warn user when reaching "warning level" and disable data traffic on SIM when exceeding "data limit".

ctior	n: V Apply 0 of	4 selected						
	SIM No.	IMSI	<u>SMS on</u>	<u>Data plan</u>	Data usage	Warning level	Data limit	Warnings
	89852350120000044255 (modem #4)	240075817286488	0	Carrier B	6.32 GB	20.0 GB		
	89852350120000044263 (modem #2)	240075817286489	0	Carrier A	25.43 GB (46.95 total)	40.0 GB	100.0 GB	Warning level exceede
	89852350120000044271 (modem #3)	240075817286490	0	Carrier B	9.36 GB	20.0 GB		
	<u>89852350120000044289 (modem #1</u>)	240075817286491	0	Carrier A	21.53 GB (46.95 total)	40.0 GB	100.0 GB	Warning level exceede
c								

5.2. Data plans

MAIN MENU -> SIM CARDS -> DATA PLANS

Data plans can be created by users to help them monitor and control data traffic consumption per SIM/device.

Each data plan has the following options:

- Plan is "shared" if its data allowance is split between all assigned SIM cards
 - Example: Data plan "Carrier A" has data usage limit of 100GB and 2 SIM cards assigned. When total data consumption for both assigned SIM cards over billing period exceeds this limit, data will be disabled for both SIM cards.
- Billing period start
 - Either every *n*-th day of each month
 - Or every *n* days, starting on specific date
- Data usage warning level: after reaching this threshold, warning is displayed in user interface
- Data usage limit (can be enabled/disabled): after reaching this threshold, data is disabled for SIM cards using this plan.

Data plans	Settings
Add new Delete selected	Name Carrier A
Carrier A ^ Carrier B	Shared plan odata allowance split between SIM cards Billing period start
	 Day 1 v of each month Every 30 v days starting 07.05.2020
~	Data usage warning level 40.0 🖨 GB Apply data usage limit 🥢
	Data usage limit 100.0 GB Assigned SIM cards Add new Delete selected
	89852350120000044263 (modem #2) 89852350120000044289 (modem #1)
Apply	Apply and return Cancel

5.3. APN Library

MAIN MENU -> SIM CARDS -> APN LIBRARY

APN library contains APN, Username and Password data for a number of mobile carriers.

If you use 'Automatic' APN setting in 'Router Configuration' menu, APN is taken from the APN library.

Make changes to APN records only if instructed by our support team.

Action	V A	Apply 0 of 31 selected				
	<u>Country</u> 1 △	Provider 2 🗠	MCC-MNC	APN	<u>Username</u>	Password
	Antigua and Barbuda	Digicel Antigua	344930	web.digicelantigua.com		
	Antigua and Barbuda	Flow Antigua	344920	ppinternet		
	Bahamas	Aliv	364490	pda.newcomobile.com		
	Bahamas	BTC	364390	internet.btcbahamas.com		
	France	Orange FR / M4G	20801	wbdata		
	France	SFR FR	20810	websfr		
	French West Indies	Digicel FWI	340200	web.digicelfr.com		
	Germany	Deutsche Telekom (T-Mobile)	26201	internet.telekom	tm	tm
	Germany	O2 (Alice)	26207	internet.partner1		
	Germany	Vodafone DE	26202	web.vodafone.de		
	Greece	Cosmote	20201	internet		
	Greece	Vodafone GR	20205	internet.vodafone.gr		
	Italy	<u>TIM IT</u>	22201	ibox.tim.it		
	Jamaica	Digicel Jamaica	338050	web.digiceljamaica.com		

5.4. Add New APN

MAIN MENU -> SIM CARDS -> ADD NEW APN

Allows to add new APN record to the APN library. Use only when instructed by our support team.

Add new APN	
MCC-MNC:	
Provider:	
Country:	
APN:	
Username:	
Password:	
	Save

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6. SMS

6.1. Received SMS

MAIN MENU -> SMS -> RECEIVED SMS

Shows incoming SMS messages: to which SIM No, when, from whom they came and message text.

ctior	n: /	Apply 0 of 8 selected			
	SIM No.	<u>Date</u>	From	Message	<u>Unread</u>
	89331015200727946453 (modem#2)	Oct. 12, 2020, 10:50 a.m.	FONCIA	LE MADRID LA CHAUDIERE VA ETRE MISE EN ROUTE. IL EST RAPPELE	•
	89331015200727946453 (modem#2)	Sept. 28, 2020, 6 p.m.	PEUGEOT	PEUGEOT DREUX - Utilitaire, hybride et électrique, notre gamme busines	0
	89331015200727946453 (modem#2)	Sept. 28, 2020, 4:36 p.m.	8860	MBOXUPDATE	0
	89331015200727946453 (modem#2)	Sept. 25, 2020, 1:33 p.m.	8860	MBOXUPDATE	0
	89331015200727946453 (modem#2)	Sept. 22, 2020, 10:51 a.m.	3300	confiance.	•
	89331015200727946453 (modem#2)	Sept. 22, 2020, 10:51 a.m.	3300	ine de cette demande, contactez rapidement le 1023. Merci de votre	•
	89331015200727946453 (modem#2)	Sept. 22, 2020, 10:51 a.m.	3300	dans l'espace SFR DISTRIBUTION Menton. Si vous n'êtes pas à l'orig	0
	89331015200727946453 (modem#2)	Sept. 22, 2020, 10:51 a.m.	3300	Info SFR : Une demande d'activation d'une nouvelle SIM est en cours	•

6.2. Sent SMS

MAIN MENU -> SMS -> SENT SMS

Shows outgoing SMS messages.

6.3. Send New SMS

MAIN MENU -> SMS -> SENT SMS

Allows to send new SMS message.

SIM No. From which SIM	89331015200727946453 (modem#2) v 🖋
Fo: nternational for	+1234567890 mat starting with country code, e.g. +12345678900
lessage:	Hello, world!
Status:	Not yet sent
Date:	

7. Reboot, Shutdown, Logout

MAIN MENU -> Ů

Reboots or shuts down the router.

