

vers. 2.4
Apr 2022

MERIDIAN ROUTER user interface manual

MERIDIAN5G

PRODUCTS: CLASSIC ROUTER, DOME ROUTER

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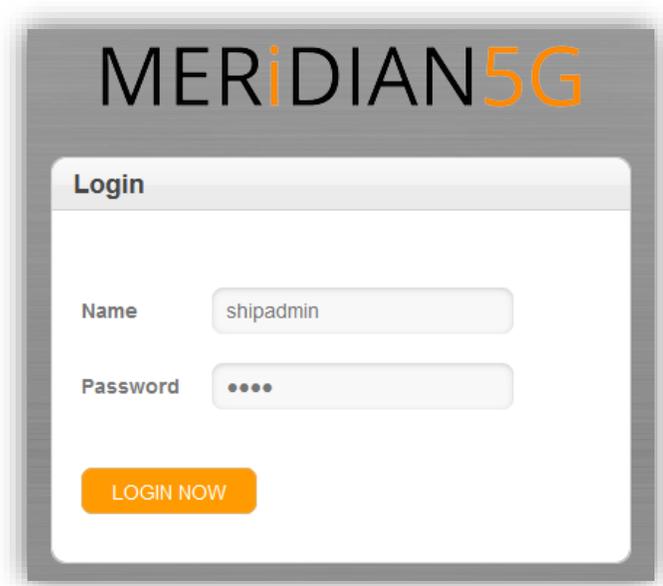
1. Introduction

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

Default username and password can be changed in the router settings (see [3.3 Login Credentials](#)).



MERIDIAN5G

Login

Name

Password

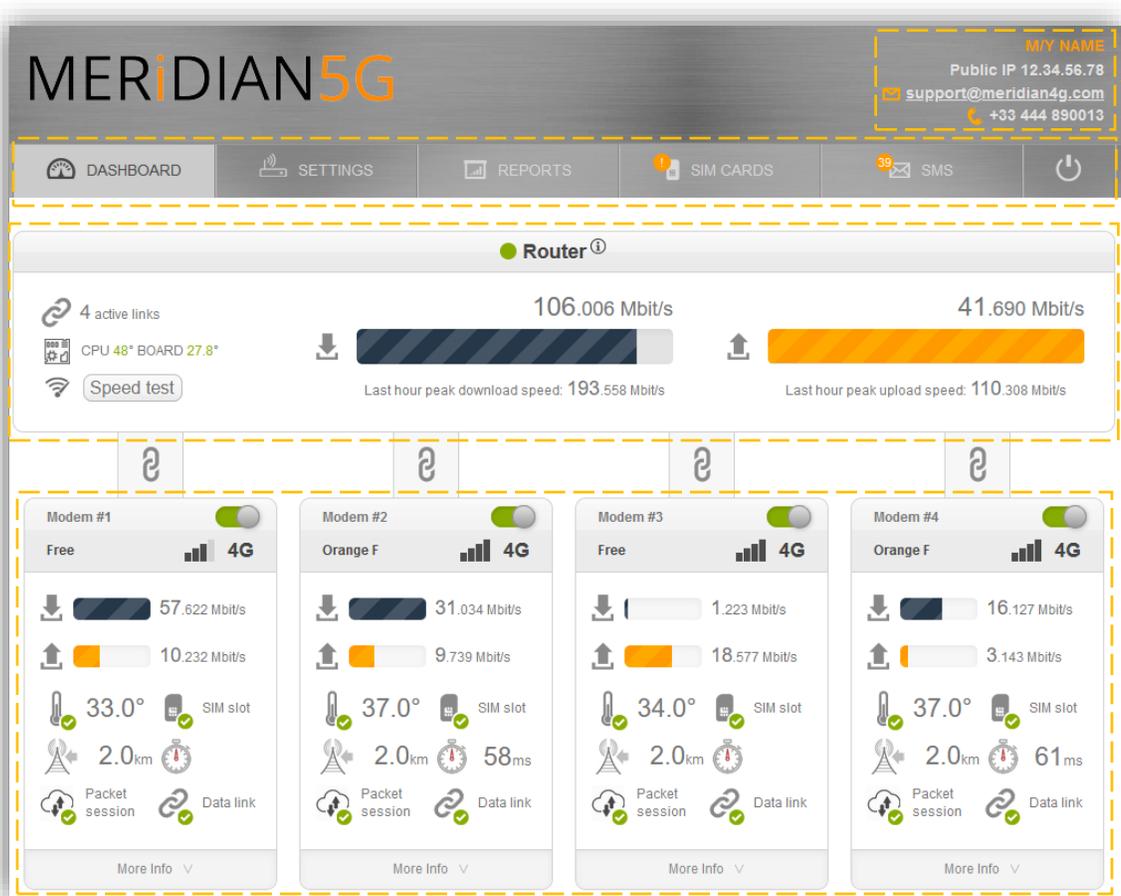
LOGIN NOW

2. Dashboard

MAIN MENU -> DASHBOARD

2.1. Overview

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



General information

Navigation menu

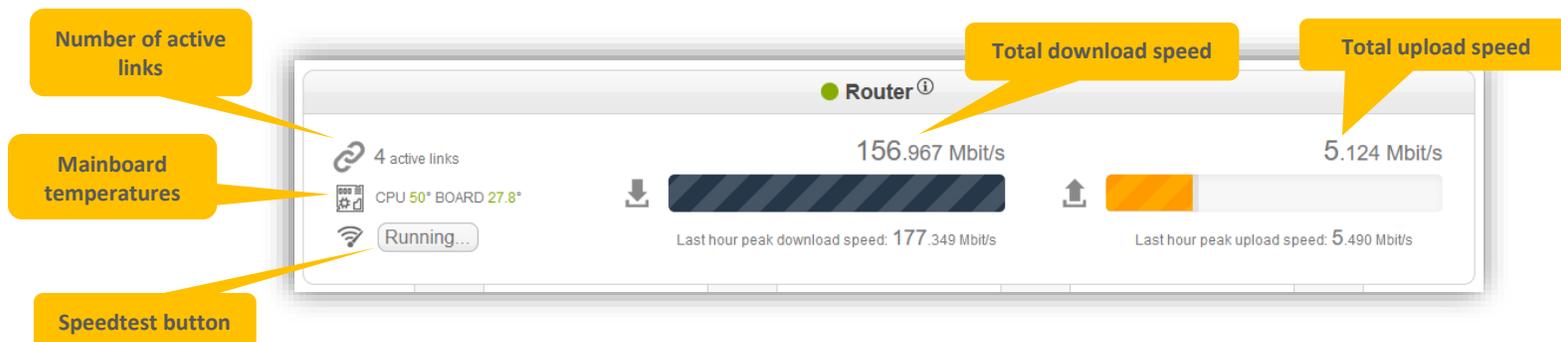
Router status: number of active links, mainboard temperature, total download and upload speeds

Each modem's status: mobile carrier and network type, download and upload speeds and other control information.

2.2. General Information

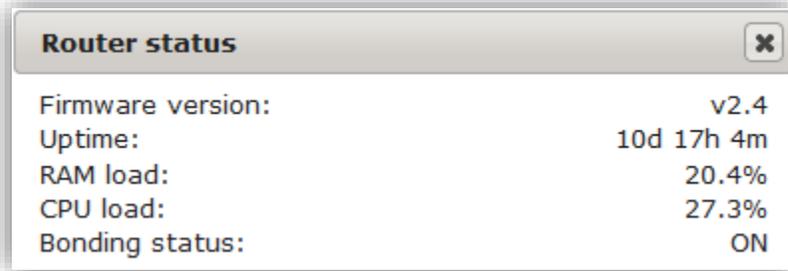


2.3. Router Status



- **Number of active links** shows how many independent data links are used by the router to send your traffic
- **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 (depending on bonding mode) its data center counterpart or one of Meridian's speed test servers – first, 20 seconds of download test, then 20 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 total speeds reached by the system in the last hour. They depend, among other factors, on network load, radio conditions, and yacht's data demand.
- Click on the ⓘ icon to show **system firmware version, uptime, current RAM and CPU load and bonding status**.



2.4. Modem Information

Instantaneous download and upload speeds

Modem status info

Access detailed information about the modem under 'More info'

Modem ON/OFF switch

- **39.0°** is a modem's temperature indicator
- **SIM slot** is a name of SIM slot in case of multiple slots
- **0.5km** indicates distance travelled by the signal from the mobile carrier's cell tower to the modem's antenna
- **19ms** shows ping latency (round trip time)
- **Packet session** flag indicates if packet data session with mobile carrier is established
- **Data link** flag indicates if data traffic is going through this modem
- **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

User interface

Vessel name

Local area network

Eth0 IP addr/mask

Eth1 IP addr/mask

Border router IP
Used only for port forwarding in link aggregation mode

Data center

Aggregation DC IP Link aggregation mode (bonding ON)

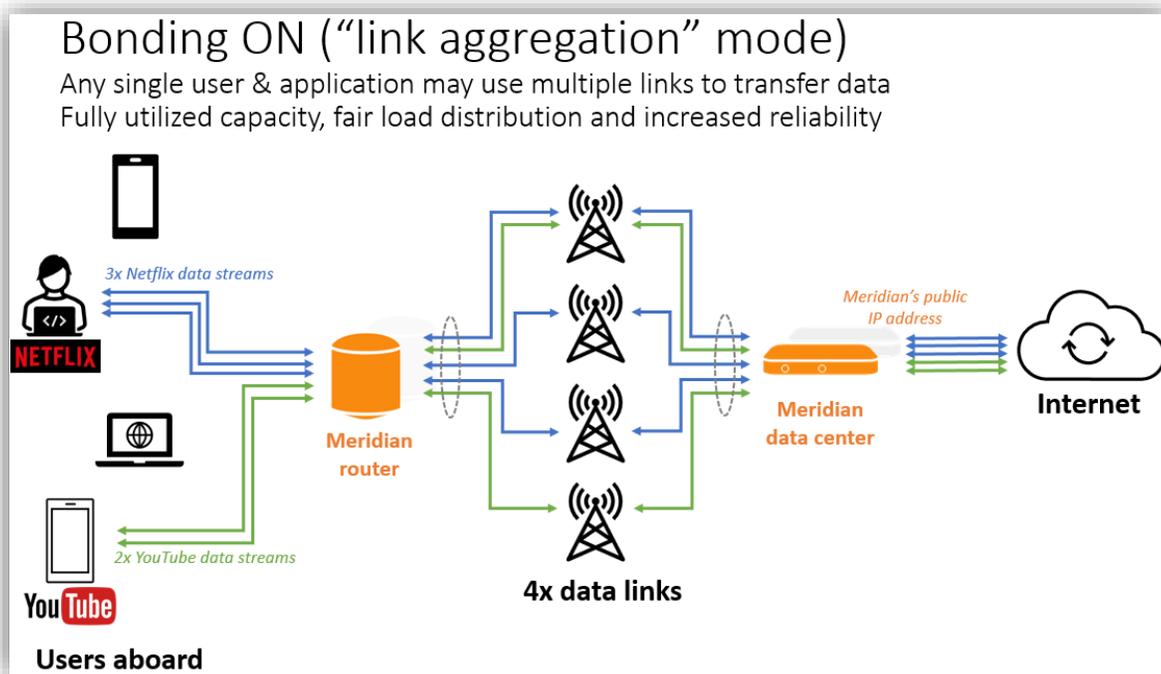
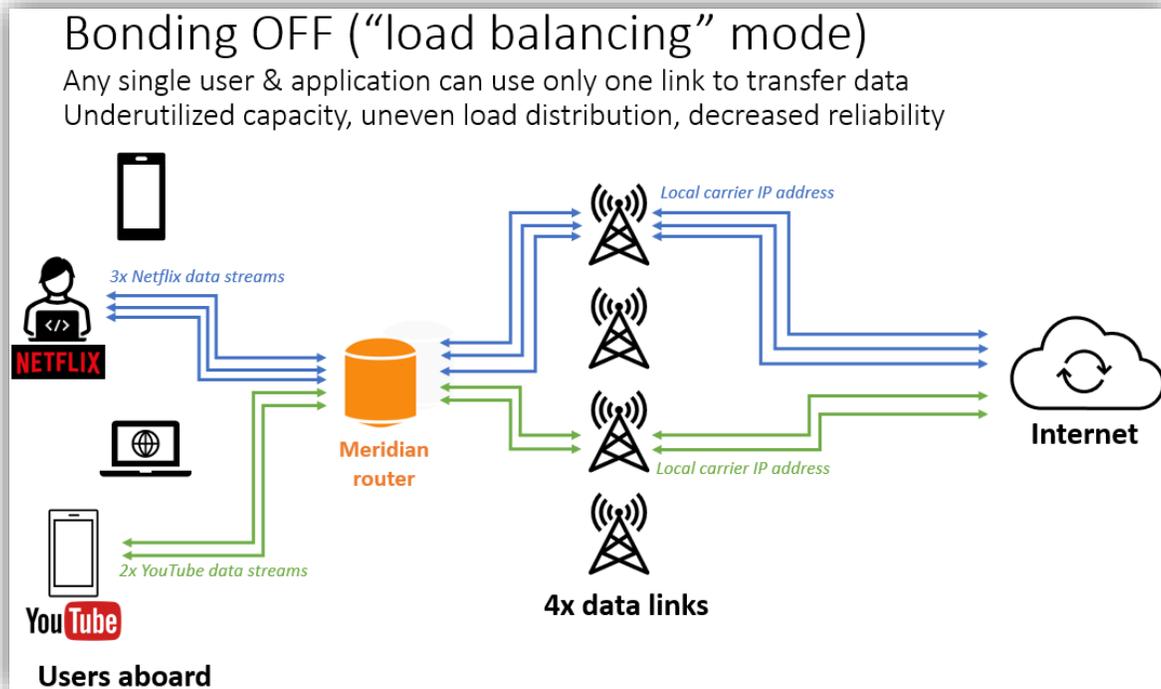
Apply
Apply and return
Cancel

Router configuration page allows to configure:

- User interface settings
 - Vessel name to be displayed in router's web interface.
- Local area network settings
 - 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 / maintenance and direct access to the router.
 - Border router IP, which is used only for port forwarding in link aggregation mode.
- Data center settings
 - Aggregation DC IP (not configurable), which is your IP address in case of link aggregation.
 - [Optional switch] "Link aggregation" and "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, but locations tailored to client demands are possible).
 2. Load balancing: traffic is split between the modems, but no Data Center counterpart is involved. You are assigned different dynamic IP addresses by the carrier.

- [Optional switch] “Support link” toggle, available in Load balancing mode. Enables or disables remote connection for Meridian support engineers.

“Load balancing” and “link aggregation” modes are explained in more detail below:



3.2 Modem Configuration

MAIN MENU -> SETTINGS -> MODEM CONFIGURATION

The screenshot displays the 'Modem Configuration' screen with four panels, each for a different modem. Each panel includes a 'Carrier configuration' header, a 'Data mode' section with a dropdown menu, and a 'Carrier selection' section with toggle switches and a dropdown menu. Modem #1 has '4G only' data mode and 'Automatic' carrier selection. Modem #2 has '4G only' data mode and 'Manual' carrier selection with 'From preset carriers' selected. Modem #3 has '4G+5G' data mode and 'Automatic' carrier selection. Modem #4 has '4G+5G' data mode and 'Automatic' carrier selection. A 'New network scan' button is located at the bottom of the Modem #1 panel.

- Carrier configuration, per modem
 - Data mode: 3G only, 3G+4G, 4G only, 4G+5G, 3G+4G+5G
 - Carrier selection: Automatic or Manual
 - For manual carrier 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.
 - In case of manual carrier selection from network scan,

This close-up shows the 'Select carrier:' dropdown menu. The 'Select network scan:' dropdown above it is set to 'Modem #4 scan (14d ago)'. The carrier list includes: 3G| Orange (20801, allowed) (highlighted), 3G| SFR (20810, allowed), 3G| Free (20815, allowed), 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), 4G| ILIAD (22250, allowed), 4G| I WIND (22288, allowed), and 4G| 3 ITA (22299, allowed).

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)

- 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.

The image shows four identical panels of the 4G bands configuration interface. Each panel has a title '4G bands configuration' and contains the following elements:

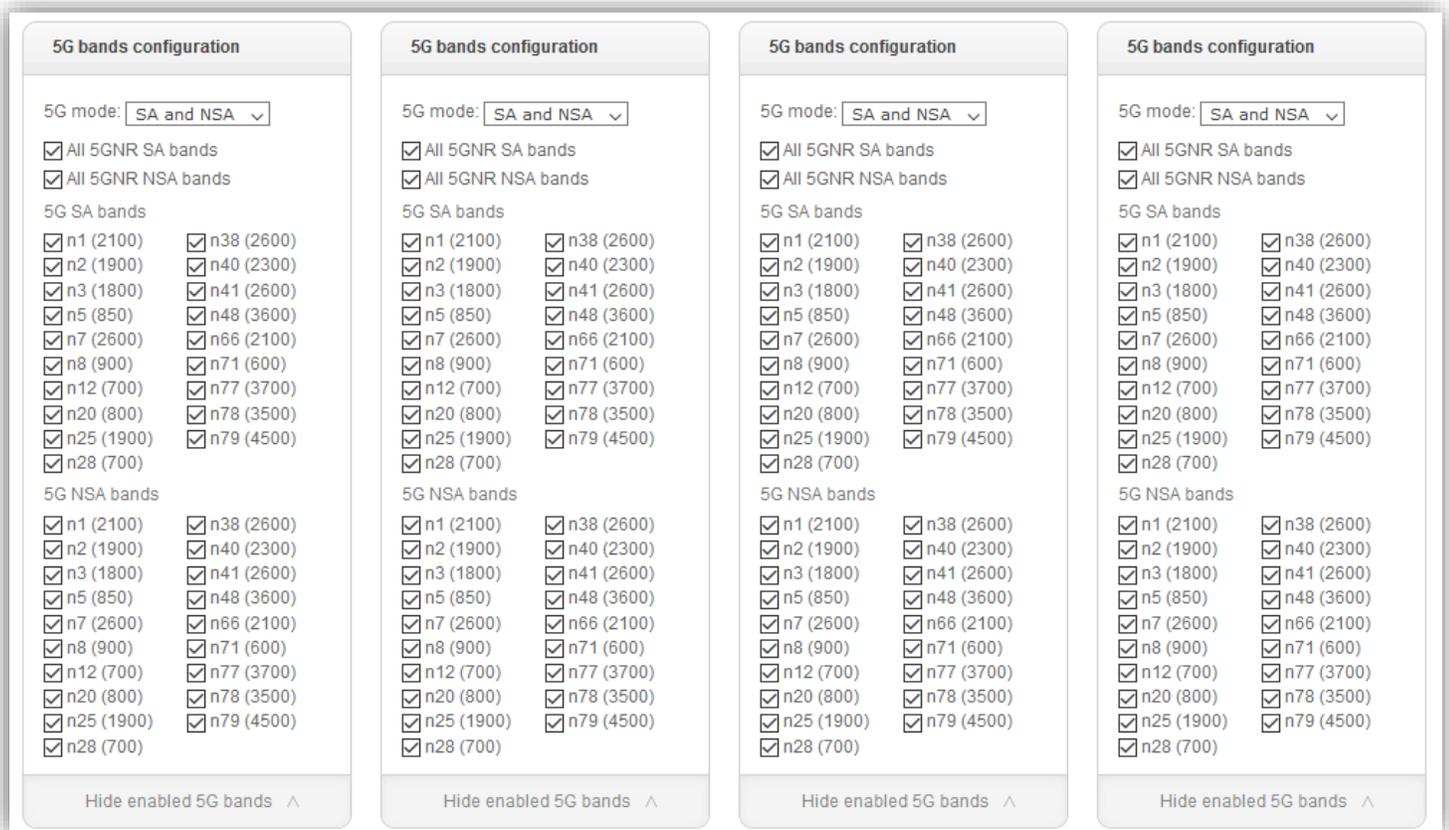
- All LTE bands
- High bands (Europe)
- Low bands (Europe)
- High bands (North America)
- Low bands (North America)
- At the bottom: Show enabled 4G bands ▾

The image shows four identical panels of the 4G bands configuration interface, similar to the first set but with a detailed list of individual bands. Each panel has a title '4G bands configuration' and contains the following elements:

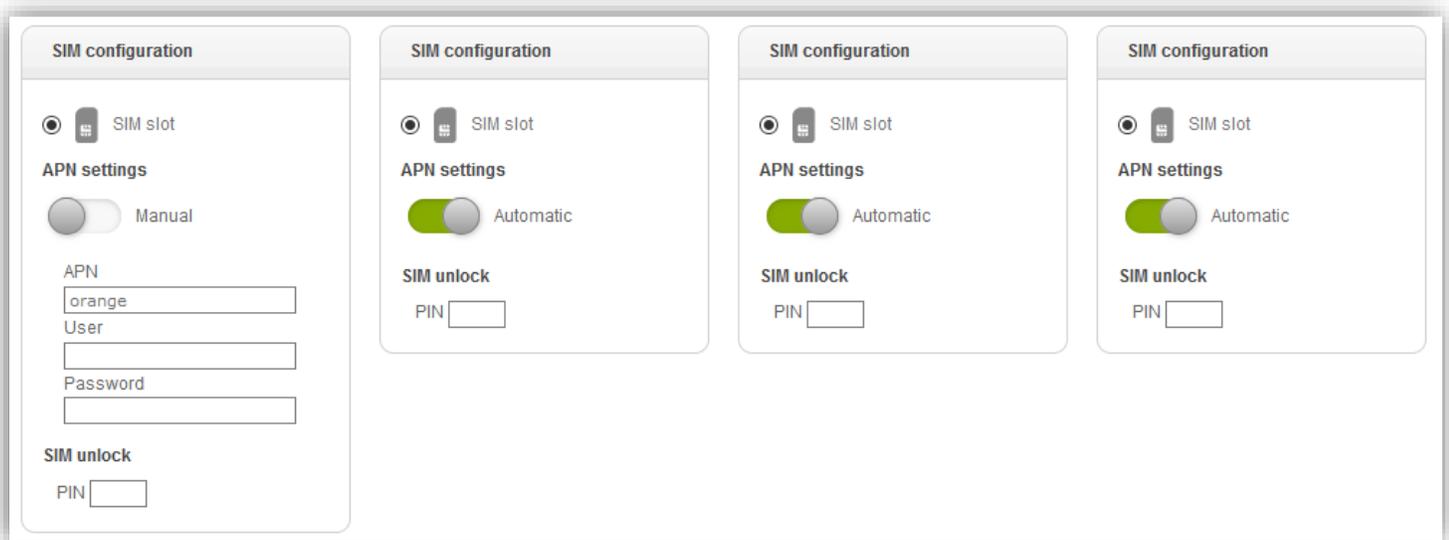
- All LTE bands
- High bands (Europe)
- Low bands (Europe)
- High bands (North America)
- Low bands (North America)
- A grid of individual band checkboxes:

<input checked="" type="checkbox"/> B1 (2100)	<input type="checkbox"/> B25 (1900)
<input type="checkbox"/> B2 (1900)	<input type="checkbox"/> B26 (850)
<input checked="" type="checkbox"/> B3 (1800)	<input checked="" type="checkbox"/> B28 (700)
<input type="checkbox"/> B4 (1700)	<input type="checkbox"/> B29 (700)
<input type="checkbox"/> B5 (850)	<input type="checkbox"/> B30 (2300)
<input checked="" type="checkbox"/> B7 (2600)	<input checked="" type="checkbox"/> B32 (1500)
<input checked="" type="checkbox"/> B8 (900)	<input type="checkbox"/> B34 (2000)
<input type="checkbox"/> B12 (700)	<input checked="" type="checkbox"/> B38 (2600)
<input type="checkbox"/> B13 (700)	<input type="checkbox"/> B39 (1900)
<input type="checkbox"/> B14 (700)	<input checked="" type="checkbox"/> B40 (2300)
<input type="checkbox"/> B17 (700)	<input type="checkbox"/> B41 (2600)
<input type="checkbox"/> B18 (800)	<input type="checkbox"/> B42 (3500)
<input type="checkbox"/> B19 (800)	<input type="checkbox"/> B66 (2100)
<input checked="" type="checkbox"/> B20 (800)	<input type="checkbox"/> B71 (600)
- At the bottom: Hide enabled 4G bands ▲

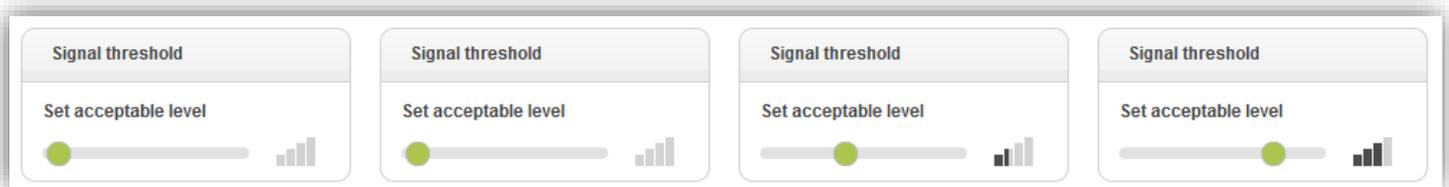
- 5G bands configuration
 - 5G mode: “SA and NSA” enables operation in both 5G standalone and 5G non-standalone networks. “Disable SA” and “Disable NSA” turn off support for corresponding 5G network types.
 - Use “All 5G NR SA bands” checkbox to enable all supported 5G NR standalone bands.
 - Use “All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



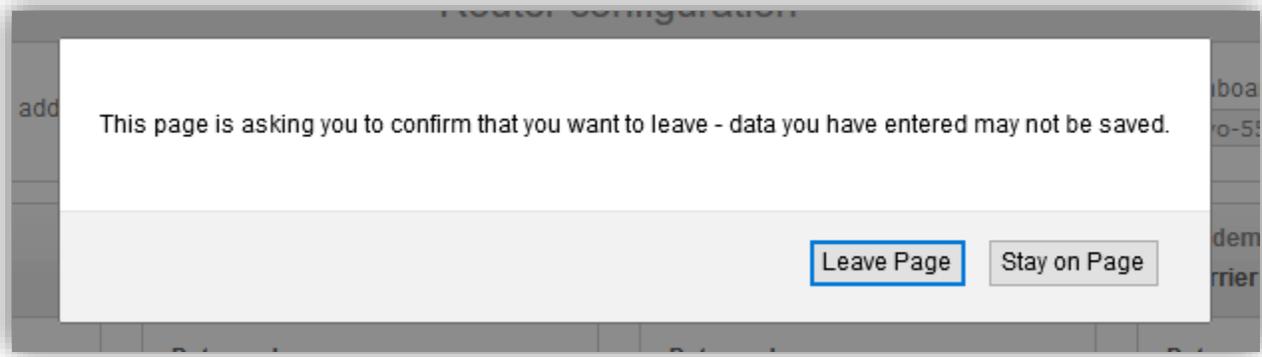
- SIM settings, per modem
 - APN (Access Point Name) settings: Automatic or Manual.
 - In case of Automatic APN settings, information from the APN library is used.
 - In case of Manual APN settings, enter APN, User and Password according to your SIM card provider. APN is required; User and Password are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



- 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
 - Thresholds for 3G (RSCP): -120dBm, -110dBm, -100dBm, -90dBm, -80dBm, -70dBm



- 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.



3.3 Login Credentials

MAIN MENU -> SETTINGS -> LOGIN CREDENTIALS

On this page you can change username and password of the Meridian router’s web interface.

A screenshot of a web form for updating login credentials. The form has a white background and a grey border. At the top, it says "Please enter your old password and then your new password twice." Below that, it says "You can also update username if required." There are four input fields: "Username:" with the value "shipadmin", "Old password:" with four dots, "New password:" with eight dots, and "New password confirmation:" with eight dots. At the bottom left, there is a "Submit" button.

3.4 Port Forwarding

MAIN MENU -> SETTINGS -> PORT FORWARDING

Configure port forwarding for incoming connections.

All forwarded traffic is routed towards the vessel's border router (configured in Router Configuration).

Available protocols: TCP and UDP (port defined), ICMP, ESP and AH (no port defined).

Port forwarding is generally possible only in link aggregation mode (with bonding enabled).

Port forwarding

Name	Port	Protocol	Action
<input type="text" value="Sophos"/>	<input type="text" value="4444"/>	TCP	Delete
<input type="text" value="Outlook"/>	<input type="text" value="443"/>	TCP	Delete
<input type="text" value="ICMP"/>	<input type="text"/>	ICMP	Delete
<input type="text" value="IPsec ESP"/>	<input type="text"/>	ESP	Delete
<input type="text"/>	<input type="text"/>	TCP	Delete

+

Apply

Apply and return

Cancel

3.5 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.

You will find one daily report per SIM card (hence, 4 reports per day if 4 SIM cards are in use).

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')

Daily traffic reports

Filters: From To

Date	SIM No.	GBytes sent	GBytes received	GBytes total
TOTAL		20.73	196.32	217.04
May 31, 2021	89441000304178836025	0.69	10.47	11.16
May 31, 2021	89441000304178835985	0.81	19.13	19.94
May 30, 2021	89441000304178836025	1.02	1.25	2.27
May 30, 2021	89441000304178835985	1.16	1.16	2.31
May 29, 2021	89441000304178836025	0.34	2.29	2.63
May 29, 2021	89441000304178835985	0.66	10.49	11.15
May 28, 2021	89441000304178836025	0.42	8.61	9.02
May 28, 2021	89441000304178835985	0.48	8.59	9.07
May 27, 2021	89441000304178836025	0.24	1.71	1.96
May 27, 2021	89441000304178835985	0.25	2.33	2.59
May 26, 2021	89441000304178836025	0.2	2.65	2.85
May 26, 2021	89441000304178835985	0.28	3.95	4.23
May 25, 2021	89441000304178836025	0.14	1.07	1.21
May 25, 2021	89441000304178835985	0.26	6.85	7.11

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')

Detailed traffic reports

Filters: Apply From To [Reset](#) [Apply](#) [Export as csv](#)

Created	SIM No.	Modem	Carrier	MBytes sent	MBytes received	MBytes total
TOTAL since 2021-06-01 00:00:46				593.24	2,417.2	3,010.44
June 1, 2021, 11:59 p.m.	89441000304178835985	Modem #4	SFR	0.19	0.23	0.42
June 1, 2021, 11:58 p.m.	89441000304178835985	Modem #4	SFR	0.24	0.23	0.47
June 1, 2021, 11:57 p.m.	89441000304178835985	Modem #4	SFR	0.16	0.33	0.49
June 1, 2021, 11:56 p.m.	89441000304178835985	Modem #4	SFR	1.14	3.13	4.26
June 1, 2021, 11:55 p.m.	89441000304178835985	Modem #4	SFR	0.11	0.57	0.69
June 1, 2021, 11:54 p.m.	89441000304178835985	Modem #4	SFR	0.3	0.38	0.68
June 1, 2021, 11:53 p.m.	89441000304178835985	Modem #4	SFR	0.2	0.33	0.54
June 1, 2021, 11:52 p.m.	89441000304178835985	Modem #4	SFR	0.21	0.59	0.81
June 1, 2021, 11:51 p.m.	89441000304178835985	Modem #4	SFR	0.14	0.69	0.83
June 1, 2021, 11:50 p.m.	89441000304178835985	Modem #4	SFR	0.23	0.66	0.89
June 1, 2021, 11:49 p.m.	89441000304178835985	Modem #4	SFR	0.2	0.42	0.62
June 1, 2021, 11:48 p.m.	89441000304178835985	Modem #4	SFR	0.28	0.27	0.55
June 1, 2021, 11:47 p.m.	89441000304178835985	Modem #4	SFR	0.15	0.75	0.9
June 1, 2021, 11:46 p.m.	89441000304178835985	Modem #4	SFR	0.23	0.68	0.91
June 1, 2021, 11:45 p.m.	89441000304178835985	Modem #4	SFR	0.14	0.45	0.59

4.3 Network Metrics

MAIN MENU -> REPORTS -> NETWORK METRICS

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

- **Connection status** shows link’s ICMP ping round trip time and MTU, mobile carrier’s DNS servers and VPN status.
- **RF metrics** contains data about channel radio conditions, signal strength and quality. Different set of data is available for 3G, 4G and 5G networks.

Network metrics			
Modem #1 Connection status		Modem #2 Connection status	
Ping RTT	71.5 ms	Ping RTT	65 ms
MTU	1500	MTU	1440
Primary DNS	10.203.128.1	Primary DNS	212.166.210.1
Secondary DNS	10.203.128.1	Secondary DNS	212.166.167.73
VPN up	true	VPN up	true
Modem #3 Connection status		Modem #4 Connection status	
Ping RTT	54.6 ms	Ping RTT	51.1 ms
MTU	1500	MTU	1500
Primary DNS	10.203.128.1	Primary DNS	10.206.128.1
Secondary DNS	10.203.128.1	Secondary DNS	10.206.128.1
VPN up	true	VPN up	true
Modem #1 RF metrics		Modem #2 RF metrics	
Distance to cell	1.8 km	Distance to cell	1.9 km
4G RSSI	-61 dBm	4G RSSI	-63 dBm
4G RSRP	-87 dBm	4G RSRP	-85 dBm
4G RSRQ	-9 dB	4G RSRQ	-8 dB
4G SNR	14.2 dB	4G SNR	21.8 dB
Rx0 Rx power	-64.2 dBm	Rx0 Rx power	-66.2 dBm
Rx1 Rx power	-64.1 dBm	Rx1 Rx power	-65.5 dBm
Rx0 4G RSRP	-86.8 dBm	Rx0 4G RSRP	-86.4 dBm
Rx1 4G RSRP	-86.8 dBm	Rx1 4G RSRP	-86 dBm
DL modulation	16QAM	DL modulation	QPSK
UL modulation	UNKNOWN	UL modulation	64QAM
Tx traffic on	0	Tx traffic on	0
Tx power	-- dBm	Tx power	-- dBm
Modem #3 RF metrics		Modem #4 RF metrics	
Distance to cell	1.8 km	Distance to cell	1.9 km
4G RSSI	-54 dBm	4G RSSI	-58 dBm
4G RSRP	-80 dBm	4G RSRP	-87 dBm
4G RSRQ	-8 dB	4G RSRQ	-11 dB
4G SNR	20 dB	4G SNR	16 dB
Rx0 Rx power	-53.6 dBm	Rx0 Rx power	-58.9 dBm
Rx1 Rx power	-54.8 dBm	Rx1 Rx power	-- dBm
Rx0 4G RSRP	-79.2 dBm	Rx0 4G RSRP	-86.4 dBm
Rx1 4G RSRP	-80.5 dBm	Rx1 4G RSRP	-- dBm
DL modulation	QPSK	DL modulation	256QAM
UL modulation	16QAM	UL modulation	64QAM
Tx traffic on	1	Tx traffic on	1
Tx power	6 dBm	Tx power	7 dBm

- **4G Carriers** section contains data about LTE CA configuration (up to 5CA). Available only on 4G.

4G Carriers		4G Carriers		4G Carriers		4G Carriers	
-----PCC-----		-----PCC-----		-----PCC-----		-----PCC-----	
PCC band	B3 (1800MHz)	PCC band	B1 (2100MHz)	PCC band	B3 (1800MHz)	PCC band	B3 (1800MHz)
PCC EARFCN	1675	PCC EARFCN	547	PCC EARFCN	1675	PCC EARFCN	1300
PCC bandwidth	15 MHz	PCC bandwidth	10 MHz	PCC bandwidth	15 MHz	PCC bandwidth	20 MHz
PCC PCI	475	PCC PCI	262	PCC PCI	475	PCC PCI	256
PCC RSRP	-86 dBm	PCC RSRP	-86 dBm	PCC RSRP	-79 dBm	PCC RSRP	-86 dBm
PCC RSSI	-60 dBm	PCC RSSI	-62 dBm	PCC RSSI	-54 dBm	PCC RSSI	-55 dBm
PCC RSRQ	-8 dB	PCC RSRQ	-8 dB	PCC RSRQ	-8 dB	PCC RSRQ	-10 dB
PCC SINR	12.8 dB	PCC SINR	22.2 dB	PCC SINR	19.8 dB	PCC SINR	13.4 dB
-----SCC0-----		-----SCC0-----		-----SCC0-----		-----SCC0-----	
SCC0 band	--	SCC0 band	B3 (1800MHz)	SCC0 band	B28 (700MHz)	SCC0 band	B1 (2100MHz)
SCC0 EARFCN	--	SCC0 EARFCN	1300	SCC0 EARFCN	9460	SCC0 EARFCN	547
SCC0 bandwidth	--	SCC0 bandwidth	20 MHz	SCC0 bandwidth	10 MHz	SCC0 bandwidth	10 MHz
SCC0 PCI	--	SCC0 PCI	256	SCC0 PCI	491	SCC0 PCI	262
SCC0 state	--	SCC0 state	ACTIVE	SCC0 state	ACTIVE	SCC0 state	ACTIVE
SCC0 RSRP	--	SCC0 RSRP	-86 dBm	SCC0 RSRP	-78 dBm	SCC0 RSRP	-82 dBm
SCC0 RSSI	--	SCC0 RSSI	-52 dBm	SCC0 RSSI	-50 dBm	SCC0 RSSI	-59 dBm
SCC0 RSRQ	--	SCC0 RSRQ	-14 dB	SCC0 RSRQ	-11 dB	SCC0 RSRQ	-6 dB
SCC0 SINR	--	SCC0 SINR	14.6 dB	SCC0 SINR	6.8 dB	SCC0 SINR	22.2 dB
More carriers ▾		More carriers ▾		More carriers ▾		More carriers ▾	

- **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	ROAMING_IND_ON	Roaming	ROAMING_IND_ON	Roaming	ROAMING_IND_ON	Roaming	ROAMING_IND_ON
MCC	208	MCC	208	MCC	208	MCC	208
MNC	15	MNC	01	MNC	15	MNC	01
Network	Free	Network	Orange F	Network	Free	Network	Orange F
Cell ID	6483552	Cell ID	A4BF06	Cell ID	6483552	Cell ID	A4BF04
LAC/TAC	26B	LAC/TAC	9A4	LAC/TAC	26B	LAC/TAC	9A4
Operating mode	ONLINE						
EMM and RRC states		EMM and RRC states		EMM and RRC states		EMM and RRC states	
	EMM_REG		EMM_REG		EMM_REG		EMM_REG
	EMM_REG_NORMAL_SERVICE		EMM_REG_NORMAL_SERVICE		EMM_REG_NORMAL_SERVICE		EMM_REG_NORMAL_SERVICE
	RRC_CONNECTED_STATE		RRC_CONNECTED_STATE		RRC_CONNECTED_STATE		RRC_CONNECTED_STATE

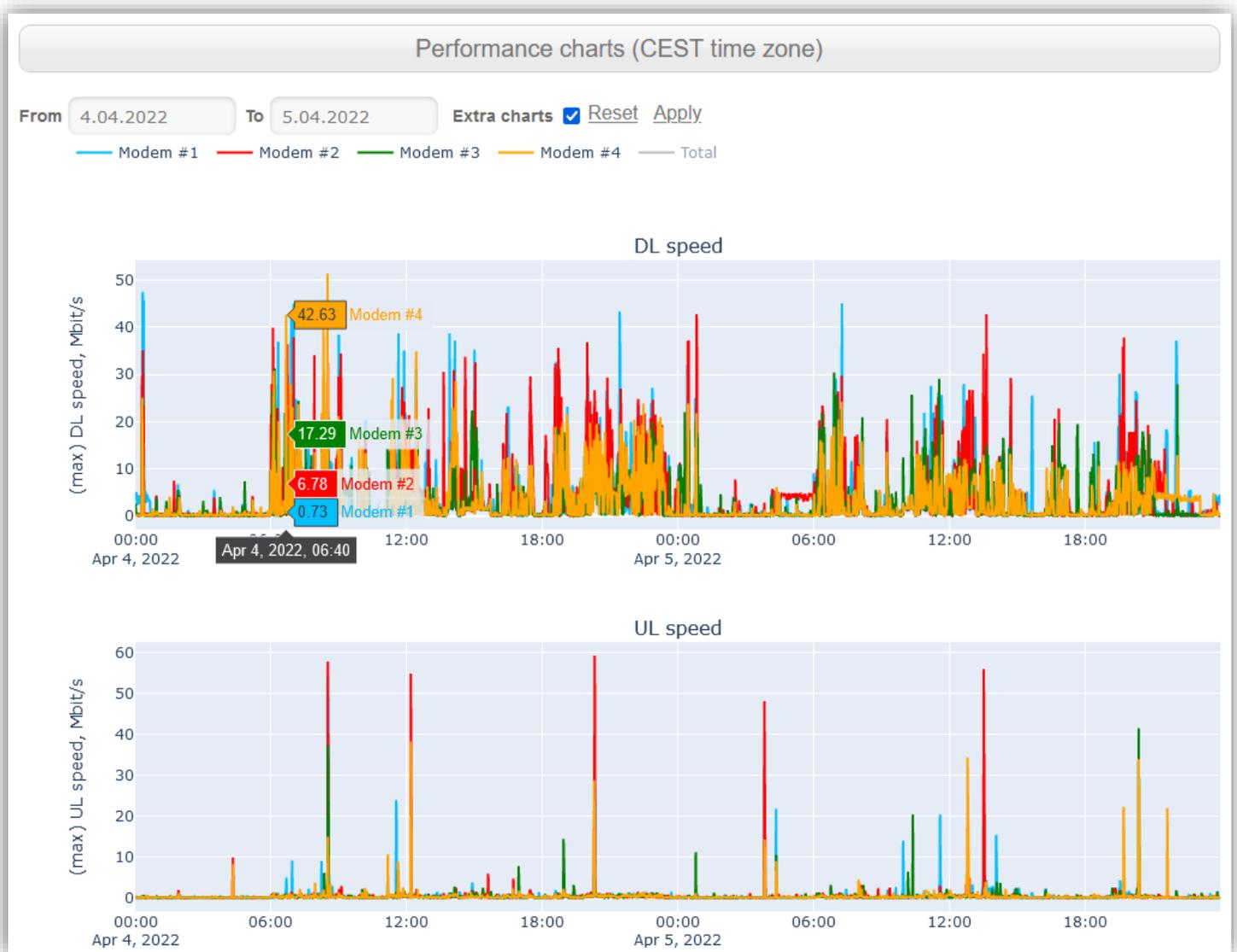
4.4 Performance Charts

MAIN MENU -> REPORTS -> PERFORMANCE CHARTS

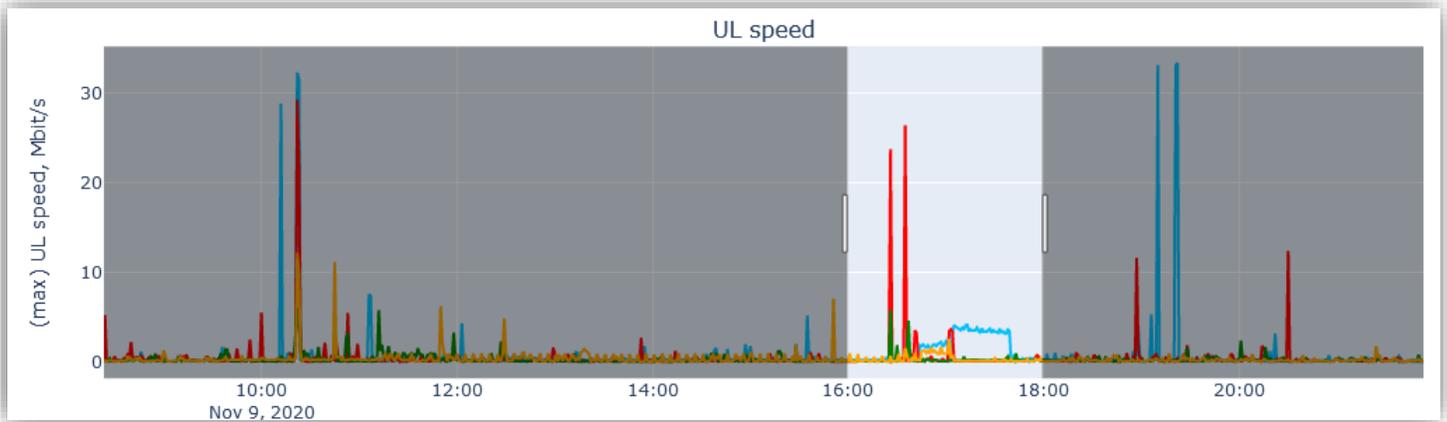
Performance charts present historical records on key performance metrics such as Download speed, Upload speed, Distance to cell and Latency.

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.

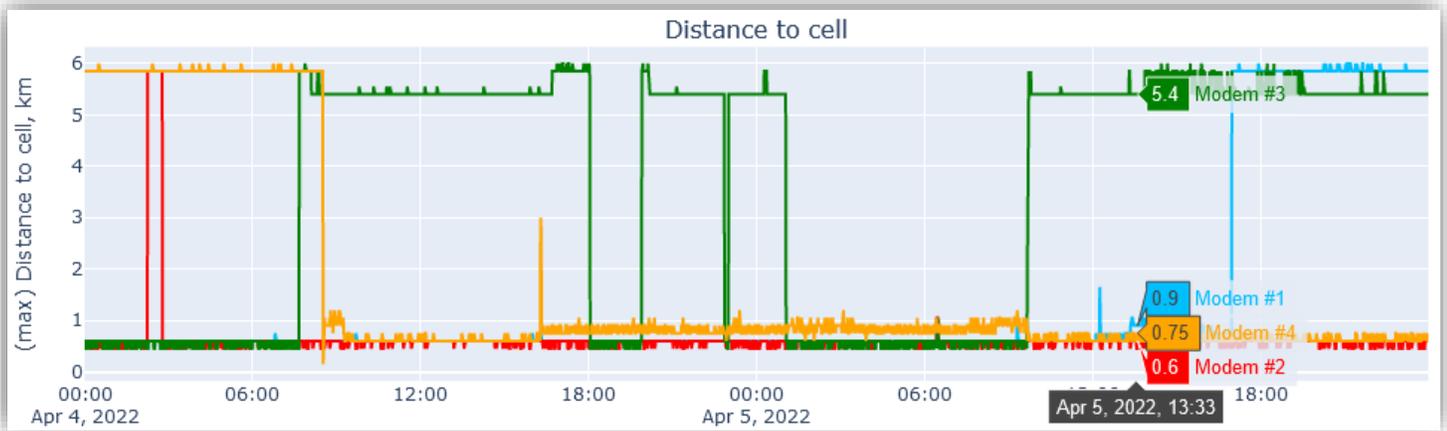
- Download and Upload speed charts
 - Aggregated as maximum DL/UL speed measurement per minute



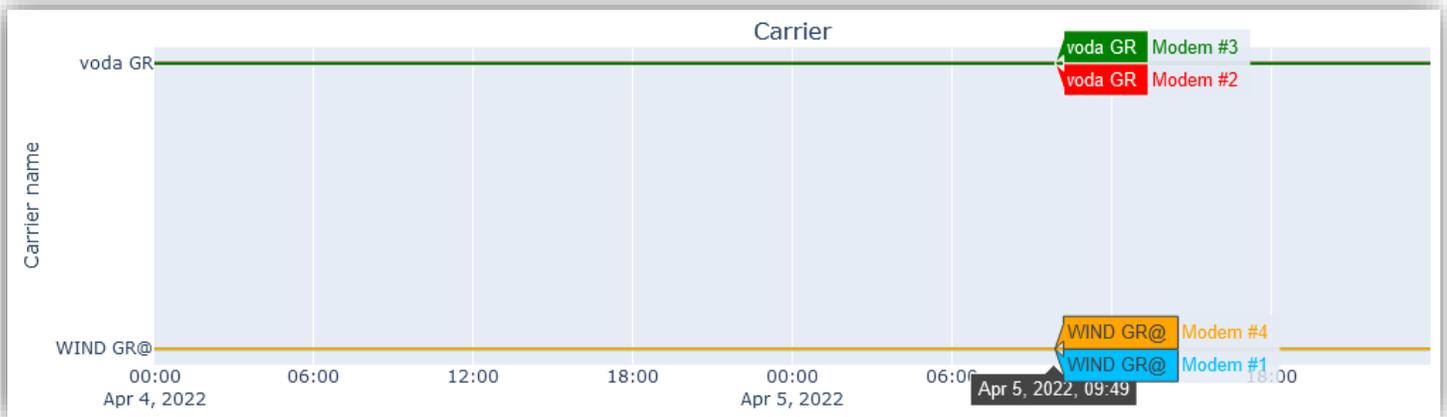
- Zooming in to desired time period:



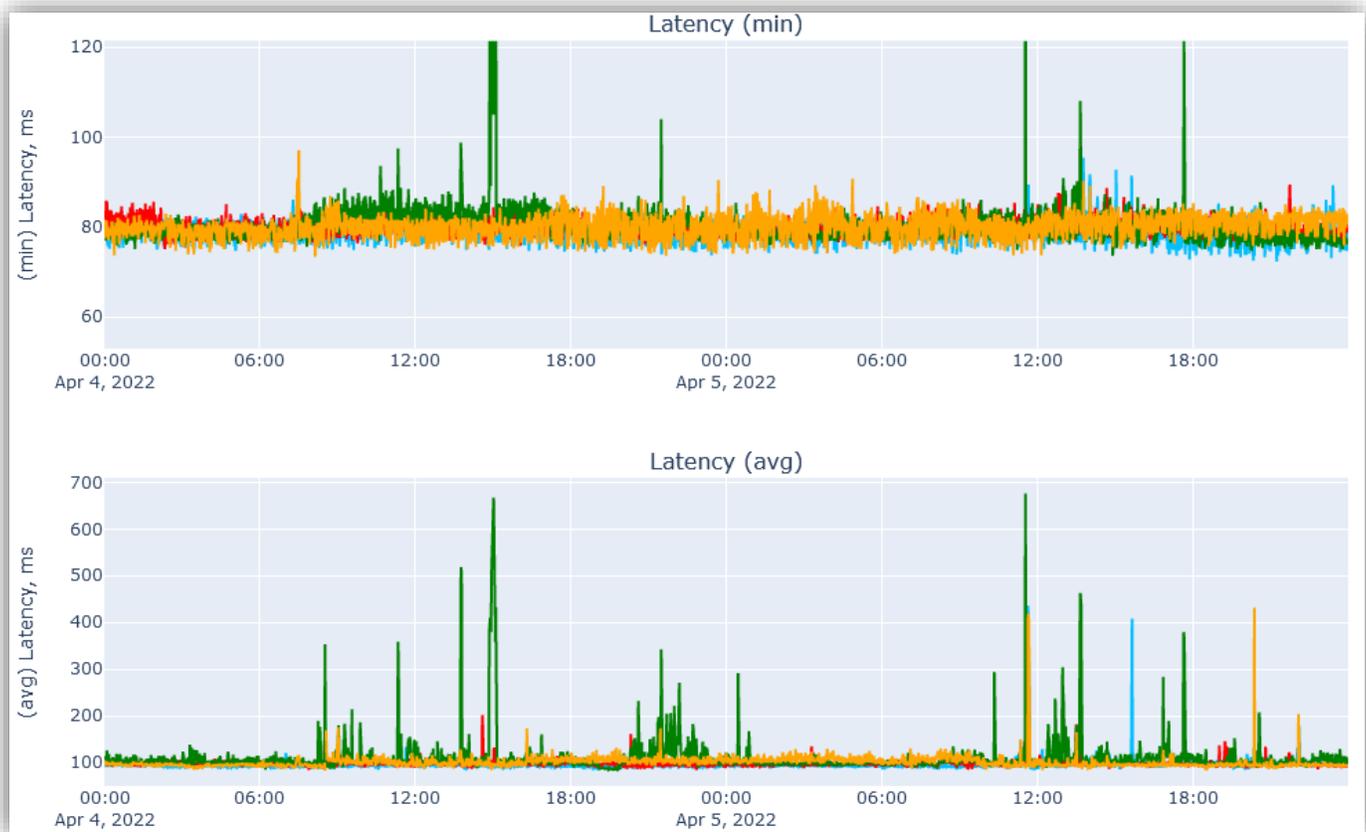
- Distance to cell chart



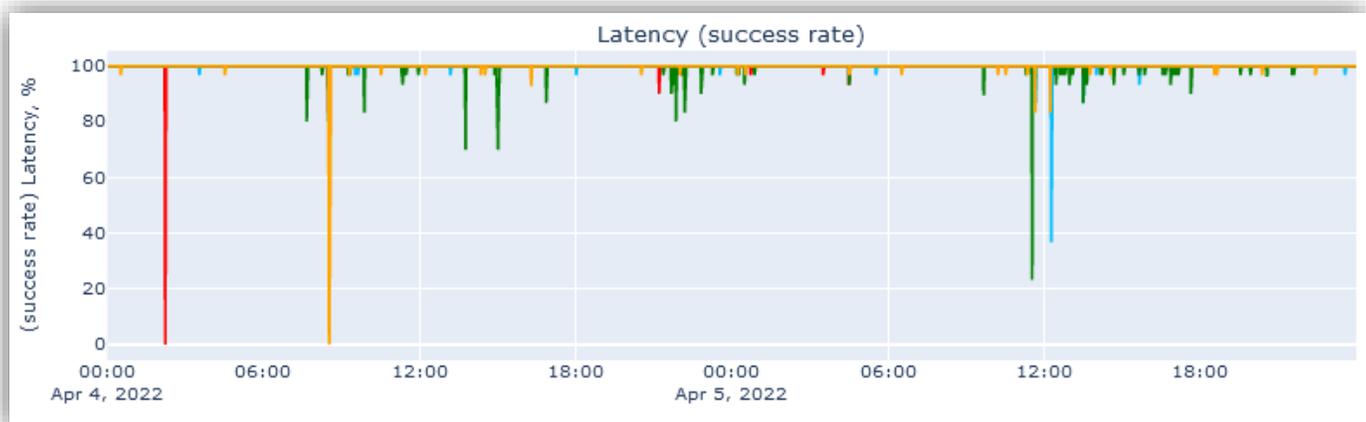
- Carrier name: which carrier was in use by each modem



- Latency charts, minimum and average per-minute aggregates
 - Latency is measured as ICMP ping round trip time of the mobile carrier's link
 - Minimum shows minimum latency measured during each minute
 - Average shows average latency during each minute



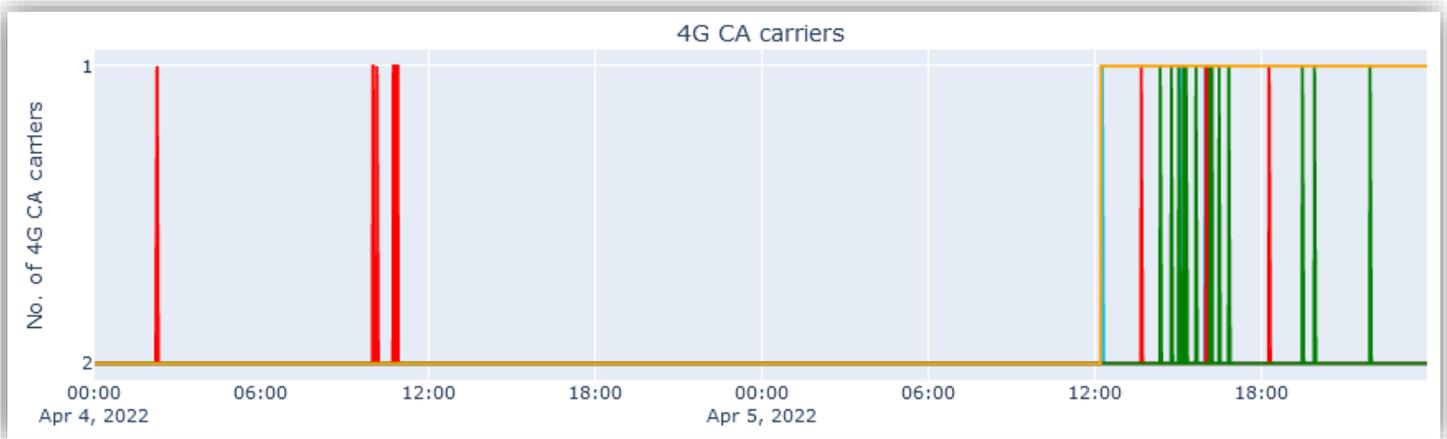
- Latency success rate shows % of successful ICMP pings, with RTT time < 1 second, per minute
 - When system load increases, success rate may decrease, since user traffic is prioritized



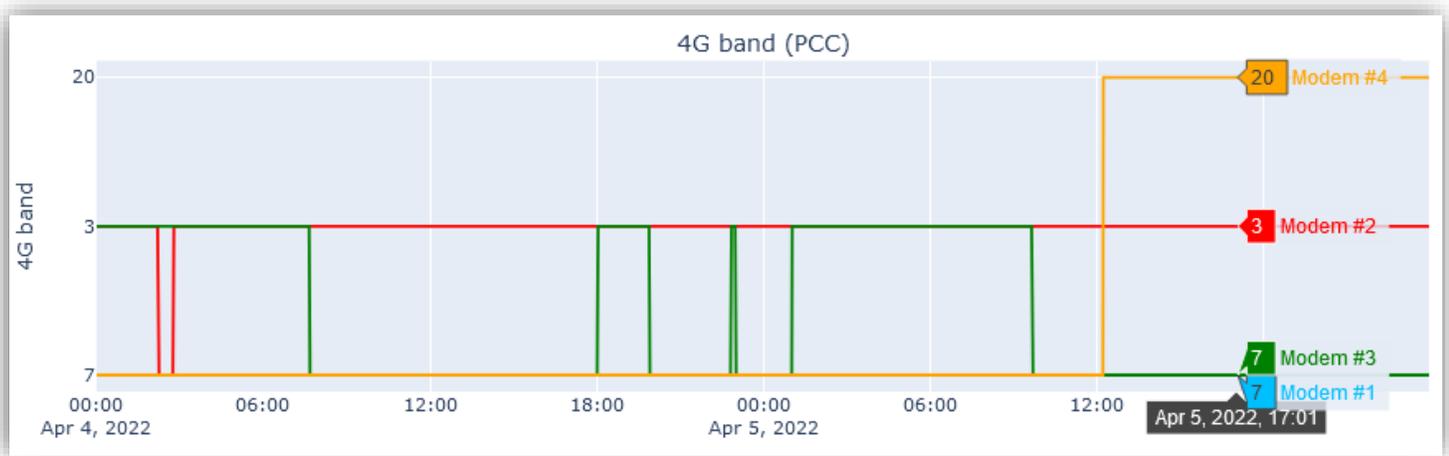
- Connectivity charts indicate
 - % of time VPN tunnels are up and running (in aggregation mode only)
 - % of time data links are connected and passing data



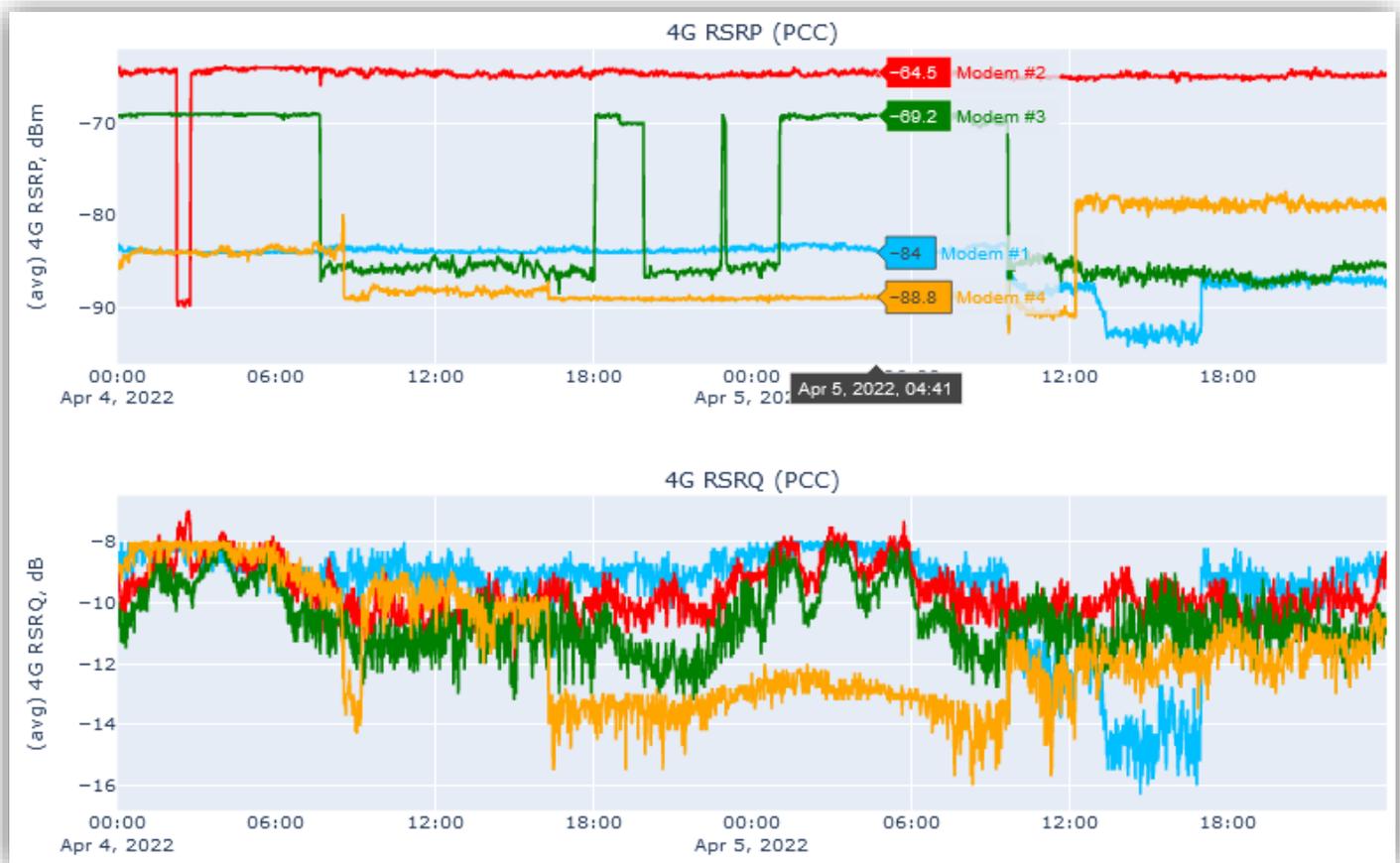
- 4G CA carriers indicate number of simultaneously used carrier bands in 4G

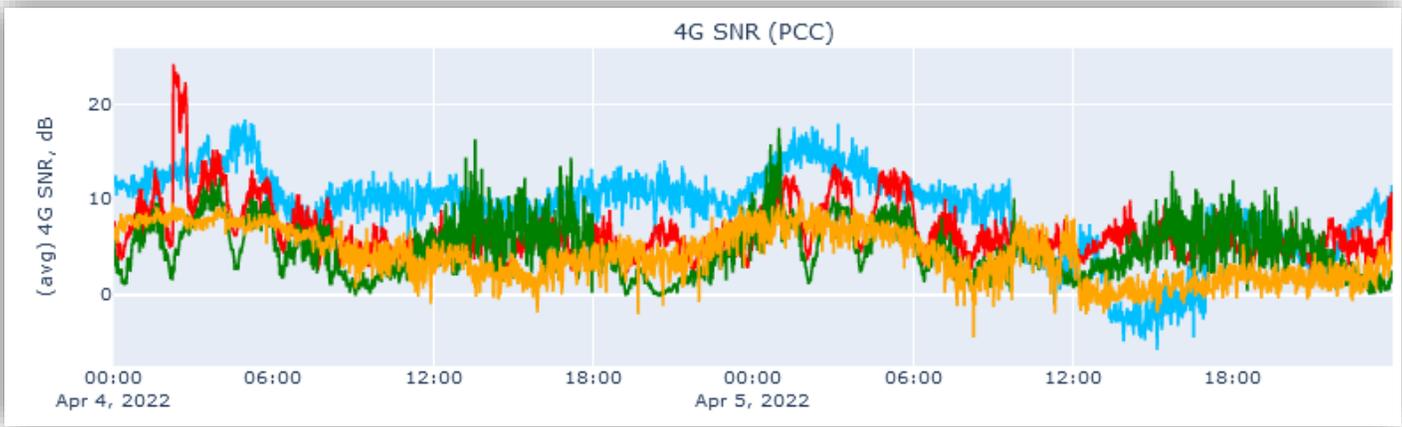


- 4G PCC band indicated 4G band used as primary component carrier

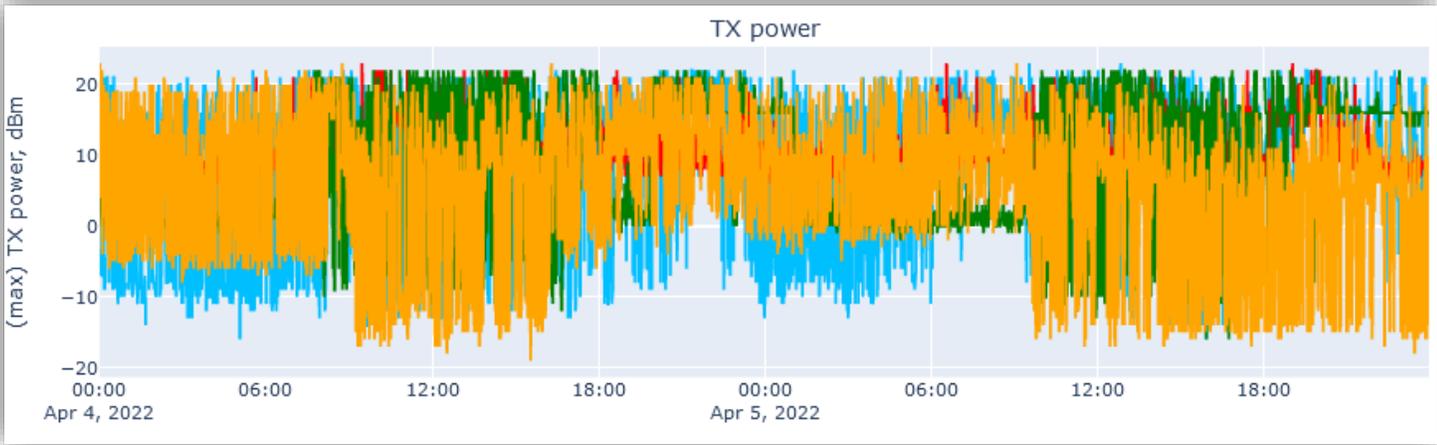


- 4G RSRP, RSRQ and SNR (only for the PCC) are main 4G metrics of signal strength and quality

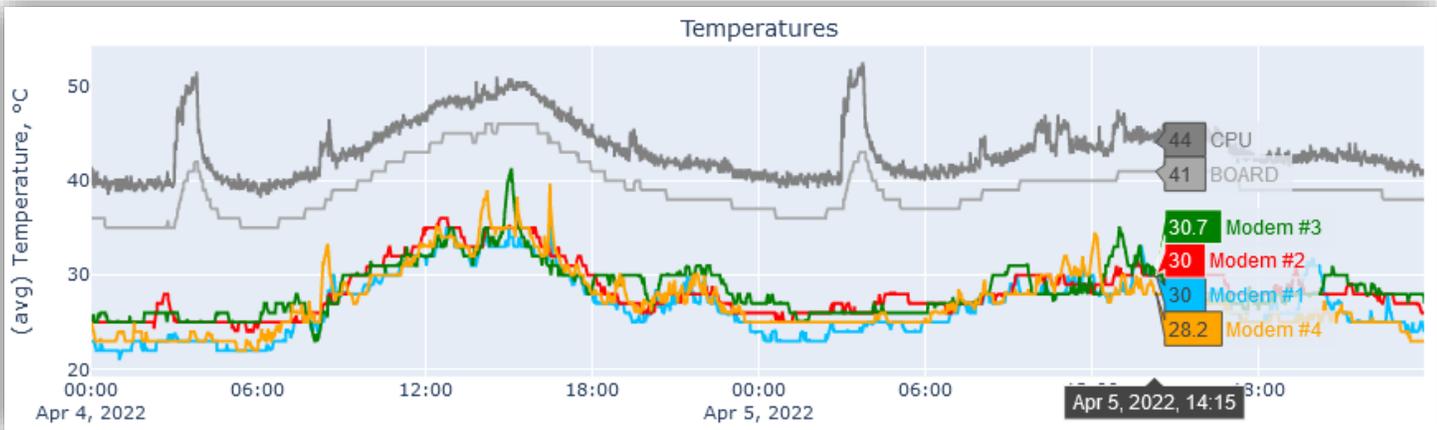




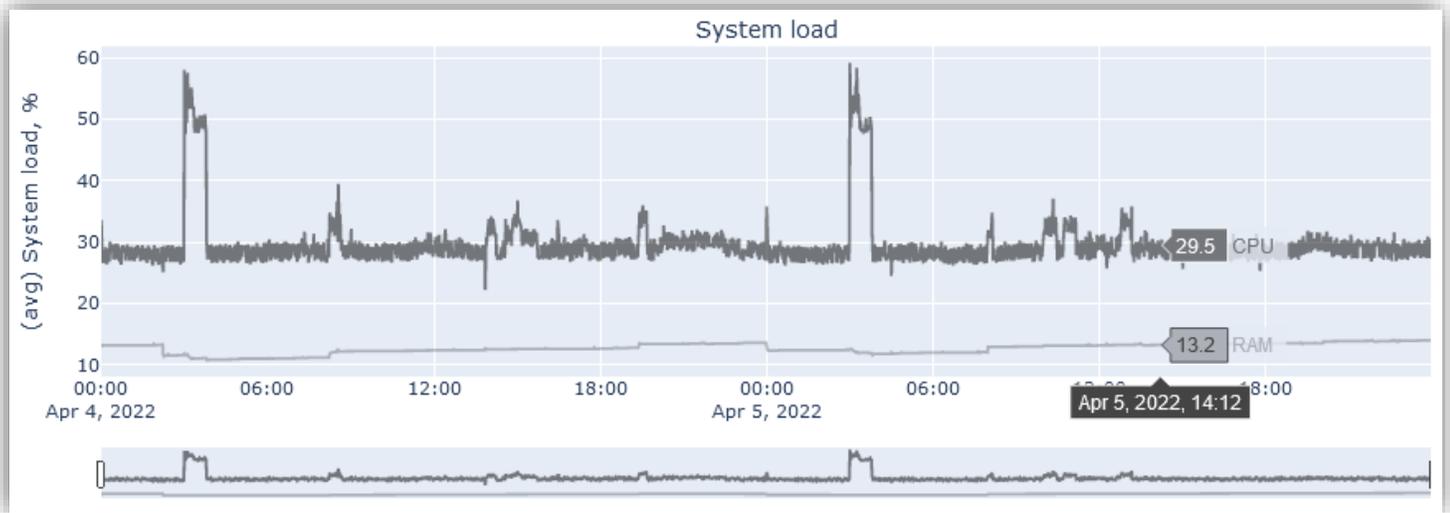
- TX power chart shows maximum transmission power by each modem, per minute



- Temperatures chart shows (averaged per minute) temperatures of each modem, as well as CPU and motherboard temperatures.



- System load chart shows system CPU load (in %) and RAM memory usage (in %)



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”.

SIM cards								
Action: <input type="text" value="-----"/> <input type="button" value="Apply"/> 0 of 4 selected								
<input type="checkbox"/>	SIM No.	IMSI	SMS on	Data plan	Data usage	Warning level	Data limit	Warnings
<input type="checkbox"/>	89852350120000044255 (modem #4)	240075817286488	✖	Carrier B	6.32 GB	20.0 GB		
<input type="checkbox"/>	89852350120000044263 (modem #2)	240075817286489	✖	Carrier A	25.43 GB (46.95 total)	40.0 GB	100.0 GB	Warning level exceeded!
<input type="checkbox"/>	89852350120000044271 (modem #3)	240075817286490	✖	Carrier B	9.36 GB	20.0 GB		
<input type="checkbox"/>	89852350120000044289 (modem #1)	240075817286491	✖	Carrier A	21.53 GB (46.95 total)	40.0 GB	100.0 GB	Warning level exceeded!
< <input type="text" value=""/> >								
4 SIMs								

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 500GB and 2 SIM cards assigned. When *total* data consumption for *both* assigned SIM cards over billing period exceeds this limit, data service 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

Add new Delete selected

- Carrier A
- Carrier B

Settings

Name

Shared plan data allowance split between SIM cards

Billing period start

Day of each month

Every days starting

Data usage warning level GB

Apply data usage limit

Data usage limit GB

Assigned SIM cards Add new Delete selected

- 89441000304178836025 (modem #1)
- 8934568622100219218F (modem #2)

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.

APN library

Action: 0 of 31 selected

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

5.4 Add New APN

MAIN MENU -> SIM CARDS -> ADD NEW APN

Allows to add new APN to the APN library. Please consult with our support team in case of any questions.

Add new APN

MCC-MNC:
MCC code (3 digits) + MNC code (2 or 3 digits) together, e.g. 310260

Carrier:
Mobile carrier name

Country:

APN:
APN URL address

Username:

Password:

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.

Received SMS					
Action: <input type="text" value="-----"/> <input type="button" value="Apply"/> 0 of 8 selected					
<input type="checkbox"/>	SIM No.	Date	From	Message	Unread
<input type="checkbox"/>	89331015200727946453 (modem#2)	Oct. 12, 2020, 10:50 a.m.	FONCIA	LE MADRID LA CHAUDIERE VA ETRE MISE EN ROUTE. IL EST RAPPELE ...	✓
<input type="checkbox"/>	89331015200727946453 (modem#2)	Sept. 28, 2020, 6 p.m.	PEUGEOT	PEUGEOT DREUX - Utilitaire, hybride et électrique, notre gamme busines...	✗
<input type="checkbox"/>	89331015200727946453 (modem#2)	Sept. 28, 2020, 4:36 p.m.	8860	MBOXUPDATE	✗
<input type="checkbox"/>	89331015200727946453 (modem#2)	Sept. 25, 2020, 1:33 p.m.	8860	MBOXUPDATE	✗
<input type="checkbox"/>	89331015200727946453 (modem#2)	Sept. 22, 2020, 10:51 a.m.	3300	confiance.	✓
<input type="checkbox"/>	89331015200727946453 (modem#2)	Sept. 22, 2020, 10:51 a.m.	3300	ine de cette demande, contactez rapidement le 1023. Merci de votre	✓
<input type="checkbox"/>	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	✓
<input type="checkbox"/>	89331015200727946453 (modem#2)	Sept. 22, 2020, 10:51 a.m.	3300	Info SFR : Une demande d'activation d'une nouvelle SIM est en cours	✓
8 Received SMS					

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.

Send new SMS	
SIM No.	89331015200727946453 (modem#2)
From which SIM to send SMS	
To:	+1234567890
International format starting with country code, e.g. +12345678900	
Message:	Hello, world!
Status:	Not yet sent
Date:	-
<input type="button" value="Send"/>	

7 Reboot, Shutdown, Logout

MAIN MENU -> 

Reboots or shuts down the router.

