

# RUT956 SD Card

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This chapter provides a description on how to correctly **insert a SD card** into a RUT956 device.

The information in this page is updated in accordance with firmware version [RUT9\\_R\\_00.07.09](#).

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## Compatibility

Before installation, make sure your SD card is compatible with RUT956 devices:

1. Maximum supported (tested) SD card capacity is **64GB**.
2. Supported (tested) formats are: **FAT32, NTFS, ext2, ext3, ext4**.
3. SD cards with a fixed **1.8V** voltage are not supported. Make sure your memory card supports **3.3V** by referring to manufacturer's documentation.
4. The device is compatible only with **microSD** size memory cards.

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## RUT956 disclaimer

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**Note:** Devices with micro SD card support have been in production starting from batch **027**.

## Installation

***Make sure device is powered off before inserting SD card!***

### SD card insertion

- 1 Disconnect from power and remove back panel from the device, pull out PCB board to reach SD card socket
- 2 Slide SD card holder forward to open it
- 3 Carefully insert SD card into the socket (pay attention to SD card and socket cutouts)
- 4 Close SD card socket holder and slide it backwards until it locks
- 5 Slide back PCB into device housing and attach back panel. Now you can power your device and use it.



## Results

Once device is booted up with an SD card installed, you can confirm it is recognized by navigating to [USB Tools](#) WebUI page. Under **Mounted File Systems** the SD card should be visible:



You may now use various functionality found in [USB Tools](#) with the SD card instead of a USB device.

If you are having trouble with the device recognizing your SD card, please refer to the **Troubleshooting** section below.

## Troubleshooting

1. Double check the SD card is [compatible](#) with RUT956 devices.
2. Make sure the SD card is not corrupted. We recommend formatting it before first installation.

## Formatting SD card using device

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If you are unable to format the memory card using other means, it is possible to do it directly on RUT956 device.

### Pre-requisites

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1. Device must have WAN access.
2. SD card must be recognized by the filesystem.

### Procedure

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1. Connect to device's [CLI](#).
2. Use command `ls /dev/ | grep mmc` to display recognized memory cards:  
root@Teltonika-RUT956:~# `ls /dev/ | grep mmc`  
mmcblk0  
**mmcblk0p1** ← SD card
3. Once confirmed the SD is recognized, we may start the formatting procedure:
4. Run commands `opkg update` and `opkg install e2fsprogs` to download required tools.

5. Unmount the SD card with command `umount /dev/mmcblk0p1`
6. Start formatting with command `mkfs.extX /dev/mmcblk0p1` where X is either 2 (for ext2 format), 3 (for ext3 format) or 4 (for ext4 format).
7. A successful format procedure should look like this:

```
root@Teltonika-RUT955:~# mkfs.ext2 /dev/mmcblk0p1
mke2fs 1.45.6 (20-Mar-2020)
/dev/mmcblk0p1 contains a ntfs file system labelled '64gb'
Proceed anyway? (y,N) y
Creating filesystem with 15132670 4k blocks and 3784704 inodes
Filesystem UUID: 6053673b-d6b0-420d-84da-0669b71a5211
Superblock backups stored on blocks:
32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632, 2654208,
4096000, 7962624, 11239424

Allocating group tables: done
Writing inode tables: done
Writing superblocks and filesystem accounting information: done
```
8. Reboot the RUT956 device and refer to [Results](#) section

**Note:** The *Writing inode tables* section might take a long time depending on the size of your SD card (10+ minutes with 64GB SD).