# **RUT9 Firmware checksum list**

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## Summary

A **checksum** is a sequence of hexadecimal symbols generated after running an algorithm called a cryptographic hash function on a file. Calculating a checksum and comparing it with the one provided by the file source can be used as a file authenticity check method.

For example, if you download a file like a firmware image, you should be able to calculate that file's checksum and, if the file is authentic, the checksum should match the one provided by the file's source. If the checksums don't match, it means the file's contents were tampered with, for example, by a malicious third party attacker. This file is probably dangerous and shouldn't be trusted.

To help authenticate Teltonika's RUT9xx router firmware files, we are providing a list of checksums for firmware files that can be download from the <u>RUT900 Firmware Downloads</u>, <u>RUT950</u> <u>Firmware Downloads</u>, <u>RUT955 Firmware Downloads</u> pages.

Checksums for RUT9XX firmware files can be calculated with the help of the **md5sum** application or by checking the checksum displayed in the router's WebUI after uploading a firmware image. The values using both methods are different, so we are providing list of values for both different methods.

### CLI

You can calculate the checksum of a firmware image file using *md5sum*. This command should work on most Linux distros or you can upload the firmware into the router and calculate the checksum via a <u>command line interface</u>.

When you select a firmware image file for upload via the System -> Firmware page, the file gets uploaded into /*tmp*/ directory with the name *firmware.img*. So the command to calculate the checksum should look like this:

```
md5sum /tmp/firmware.img
3839a3ef2b7f483ce0c44304fab7791a /tmp/firmware.img
```

Bellow the command is the expected response (for RUT9XX\_R\_00.05.00.5 FW in this example), which contains the checksum and the path to the file. If the checksum of the firmware file you downloaded doesn't match with the one provided here, your file must have been tampered with and

#### you shouldn't proceed with the firmware update.

#### MD5 checksums for RUT9XX firmware files

```
• FW ver.: checksum
     • RUT9 R 00.07.6.11: 947c00e6141e0deae8f65a7f2c715534

    RUT9 R 00.07.6.10: 53972667fbd9ad55230fc69b47084e5c

    RUT9 R 00.07.6.8: 6d70adcdf0c281286e5a57df2c226192

    RUT9 R 00.07.6.6: f4ce65bf63cd729f0651859db3ef2587

    RUT9 R 00.07.6.5: 95fac5946a22ef0d21c78d925b696453

    RUT9 R 00.07.6.1: ff32d78ee3f8ca7a0cea1917a20a2d27

    RUT9 R 00.07.6: e478f902103f91b0239786888a033b2a

    RUT9 R 00.07.5.4: 9e0d489ab0b752da6b38c9a19573744c

    RUT9 R 00.07.5: 845bcebbb62c5d7a977201a6867eb68a

    RUT9 R 00.07.4.5: 042eea610522480c7f6d216836d645b5

    RUT9 R 00.07.4.4: ab224e7c5e796448cc6f48adf67931b3

    RUT9 R 00.07.4.3: 9b3732cd678554aa7b7f2f14b85fc02d

    RUT9 R 00.07.4.2: 158dcebc1ed0d0e021736892bc7cfd0d

    RUT9 R 00.07.4.1: 4bd8248c41dd8bb629e55ae347b3698b

    RUT9 R 00.07.4: cc9048c5a0f38af1ca882e697b7e607b

    RUT9 R 00.07.03.4: 546a25f430a19343da346f649ea390d4

    RUT9 R 00.07.03.3: c390ec10c1e89d0f07a028e58bee7cc2

     • RUT9 R 00.07.03.2: b00a0d525f7c099c97c6a252029afb9c

    RUT9 R 00.07.03.1: 0d26ea21be54bd7b237de6e12a047dd6

    RUT9 R 00.07.03: 94051571fc557fc22ec918643a931b47

    RUT9 R 00.07.02.7: f95750f2d95cda5fe7457a07b70faa95

    RUT9 R 00.07.02.6: 65429313cf604f8b97a9d6e5c6f5932e

    RUT9 R 00.07.02.5: 6b79041fad3605c52548e4dfc294f4c5

    RUT9 R 00.07.02.4: 970d0d318e32c19de85213fef6ec3fd2

    RUT9 R 00.07.02.3: d957b7f67e62cee60825159ff6750529

    RUT9 R 00.07.02.1: 85287f4233b2a9fee21ec594772da638

    RUT9 R 00.07.02: 9f1cb3f12aaecee9353829f8dff316a9

    RUT9 R 00.07.01.4: 585ea7b2525a0f0e6030bf3edb6f7ee6

    RUT9 R 00.07.01.2: 7ee1ad8b753895ca3b5c356d0fc71153

    RUT9 R 00.07.01.1: db22263ef28cbd976d201964124c78a6

    RUT9 R 00.07.00.2: 335da667707ca0da72bbf42c1e6d41f0

    RUT9 R 00.07.00: 665ba2f9286e9859729437dcbe221f57

     • RUT9XX R 00.06.09.5: 466ebf15d87b57f8f0a2f4291906b193

    RUT9XX R 00.06.09.4: bfc64a06a3558f8be9c1c987c039d957

    RUT9XX R 00.06.09.2: 51f6c6de0238ea47ff7cd56460b1bbc6

    RUT9XX R 00.06.09.1: f426141365a8d98bf6512da6d38b7336

    RUT9XX R 00.06.09: fe56b3d5eb2657bd9437f901300dbc44

    RUT9XX R 00.06.08.6: c80f622fe630fa4e97714e81dcb29cdb

    RUT9XX R 00.06.08.5: b482e18934599c2589c62f76c9ce003a

    RUT9XX R 00.06.08.3: 4da903768abade53e859cffc15944af4

     • RUT9XX R 00.06.08.2: 18fc2930e522636b2cdb583131073a7d

    RUT9XX R 00.06.08.1: 741a55171d41e0342b3a6a7527d682d3

    RUT9XX R 00.06.07.7: 8a9d4db4c649a5999dbf2de910e34089

    RUT9XX R 00.06.07.5: 9b616e9f963ffe36888b67f209663672

    RUT9XX R 00.06.07.4: e2fa7cdee005a85741c0acd924a6ebfb

    RUT9XX R 00.06.07.3: f8c3037dbb9c81190d5bd964c45e5e7d
```

 RUT9XX R 00.06.07.2: 97de7649c8715dfecff65f8f5616830a RUT9XX R 00.06.07.1: a8f28512c9b9d192435b6632e087948a RUT9XX R 00.06.07: c6110153b29627a32f3e289ed58a28f0 RUT9XX R 00.06.06.1: bc72f694b6b4e9e471067c2db437b36c RUT9XX R 00.06.06: 974b251313ecbc78a334f748b549106f RUT9XX R 00.06.05.3: 82c2152945b5b4e4c683f0a84a5e5b8e RUT9XX R 00.06.05.1: ef731e08f5a1bb6959d82a389d62b0c1 RUT9XX R 00.06.04.5: fca891c6a3e5bfb0c2c08dddb4d12759 RUT9XX R 00.06.04.3: 8c94907f345d36261593fd021881f3d9 RUT9XX R 00.06.04.1: c60e69377d49b3cd8e650ba7e95c5b86 • RUT9XX R 00.06.04: e88dfa3d5bb3775f736b7895c38a5f0f RUT9XX R 00.06.03.2: 279f56b290bdca824d982a9496bad459 RUT9XX R 00.06.02.2: 4f753cc65b0ef27439d33b8251c6ce3c RUT9XX R 00.06.02: 963b767c65a301c3933fc135034a746c RUT9XX R 00.06.00.4: a18c63589296bea4e4b38318b890a75f RUT9XX R 00.06.00.3: 01c95fc003e742a176e0d41ed42350a3 RUT9XX R 00.06.00.2: c9b2cf22bf8c0f73d6e1f01d3bca8067 RUT9XX R 00.05.04: 2059dd9f03795243b698dfd9e8208a44 RUT9XX R 00.05.03.4: 3304fc087ca8e0b596667c1becae77cb RUT9XX R 00.05.03.3: 7ae7c73fbafa1f640fca21eeb65e1235 RUT9XX R 00.05.02.8: 7a87c27e0fe93c09a8c97cea96577e94 RUT9XX R 00.05.02.6: eb5b322cca53e29347efc4acf486f464 RUT9XX R 00.05.02.5: 3ae98979f29b4adb5480123dda4704d3 RUT9XX R 00.05.02.3: 6ee045f667bbf5924262b12a13d377d8 RUT9XX R 00.05.02.2: ba4733f9e85d07c88690e44049d60c8e RUT9XX R 00.05.02: ec2153149073befbed7871a5cae8231a RUT9XX R 00.05.01.8: 48908119b6db8453bb4edfe45b5d7235 RUT9XX R 00.05.01.5: 538366552913ba6133424d979b386a11 RUT9XX R 00.05.00.5: 3839a3ef2b7f483ce0c44304fab7791a RUT9XX R 00.04.233: 737dd9843ae751dcdee3ca846c941ba7 RUT9XX R 00.04.199: 24eb74beab4976b0e7a3d911c23c8a87 RUT9XX R 00.04.172: d24179b646d5e625d356cbc1aa2fc542 RUT9XX R 00.04.161: 04da434cd31bc5694db261f0ab044360 RUT9XX R 00.04.153: 3a76d88201c2c27588505e8a251e1086 RUT9XX R 00.04.147: fca05d664e6668a6387cfe5b97c821bf RUT9XX R 00.04.125: 155c00e1234438bcf5d2e1b0d6cbf378 RUT9XX R 00.04.112: 38d23853fc5b98e19a356385cfd640c2 RUT9XX R 00.04.103: e6fb88dc225c48bca57f9aa23fa4ba4a RUT9XX R 00.04.94: 8b489d9506c0cbcb0a886bb9bc77c85b RUT9XX R 00.04.75: c053bc2afbd95716f4e1bcfc34b2bbc1 RUT9XX R 00.04.64: 8d053dcf099a566763bee14e61c3e165 RUT9XX R 00.04.57: f0bb56bd0eeafa02483f704e97b6f193 RUT9XX R 00.04.48: c0ba804730e22f15032fd2414279ba36 RUT9XX R 00.04.38: a6d3559fb9921d72b4e8a7fcc5f829dd RUT9XX R 00.04.32: b53de942a0d8e8c4c3d9d0f9282aeb53 RUT9XX R 00.04.12: 4a56fcb499e83ef06ddbd9341e9783d5 RUT9XX R 00.03.985: bb99d1e076ee0fb5a1b11f17b4ea07ac RUT9XX R 00.03.965: 25f5e4a5e6b07a79f614f47a43fedef5 RUT9XX R 00.03.946: 59811fe9ec52ac28616a1aec494e7fb0 RUT9XX R 00.03.923: 54ca7374126757c18ad32f178e00594e RUT9XX R 00.03.906: 57b6e89458dc779a92433423a45353fc

 $\circ \ RUT9XX\_R\_00.03.832: cb8e717707a383dfb6b61124f162c8cf$ 

#### WebUI

You can also check the checksum of a firmware file via the router's WebUI. When you upload a firmware image file and click upgrade, the firmware is uploaded and you are redirected to another window, where you have to confirm the upgrade. In this window, the checksum is displayed as well, but it is different than the one you get from CLI.

Checksums for RUT9xx firmware files (WebUI) are as follows:

• FW ver.: checksum • RUT9 R 00.07.03: 94051571fc557fc22ec918643a931b47 RUT9 R 00.07.02.7: f95750f2d95cda5fe7457a07b70faa95 RUT9 R 00.07.02.6: 65429313cf604f8b97a9d6e5c6f5932e RUT9 R 00.07.02.5: 6b79041fad3605c52548e4dfc294f4c5 RUT9 R 00.07.02.4: 970d0d318e32c19de85213fef6ec3fd2 RUT9 R 00.07.02.3: d957b7f67e62cee60825159ff6750529 RUT9 R 00.07.02.1: 85287f4233b2a9fee21ec594772da638 RUT9 R 00.07.02: 9f1cb3f12aaecee9353829f8dff316a9 RUT9 R 00.07.01.4: 585ea7b2525a0f0e6030bf3edb6f7ee6 RUT9 R 00.07.01.2: 7ee1ad8b753895ca3b5c356d0fc71153 RUT9 R 00.07.01.1: db22263ef28cbd976d201964124c78a6 RUT9 R 00.07.00.2: 335da667707ca0da72bbf42c1e6d41f0 RUT9 R 00.07.00: 665ba2f9286e9859729437dcbe221f57 RUT9XX R 00.06.08.3: 121650f096140f58c64c7214aabdb541 RUT9XX R 00.06.08.2: bf7ac711dc9aa050552e7f504e77ea9c RUT9XX R 00.06.08.1: 7e51cb54f3ca2a2a2aa63decfe997c13 RUT9XX R 00.06.07.7: bc33eee27a36ce33f5065d94a8fc1814 RUT9XX R 00.06.07.5: 095b793e6fdd7b89b8a00be8a99d8063 RUT9XX R 00.06.07.4: 6795ddc5019ec69af82a0a095ca97f8b RUT9XX R 00.06.07.3: 254eab387afa02360f88b75756d7e463 RUT9XX R 00.06.07.2: 5e6d780964bc694e4e1bc60ea4d77725 RUT9XX R 00.06.07.1: 0ac09323f14f065a48236f10327e0d2e RUT9XX R 00.06.07: 821966d24e8d397c48c26955e3e5165d RUT9XX R 00.06.06.1: bf15eae2dc8454ebc024f6bb1af69b46 RUT9XX R 00.06.06: 3e813dd518e7909376677987d3967ac1 RUT9XX R 00.06.05.3: c2a6baa6e7da543f70ab7eacc8bd453a RUT9XX R 00.06.05.1: 301067cd6f600f9b26c21d91f794a915 RUT9XX R 00.06.04.5: f4a40f41e3a95d5a20bda0b4e1b554c1 RUT9XX R 00.06.04.3: acd815dd5517aab230c9af3145928523 RUT9XX R 00.06.04.1: 96a6b096e5b59c2cee913587d99e4ef5 RUT9XX R 00.06.04: 1a11482a1153fa694fc2779d69d05827 RUT9XX R 00.06.03.2: 7319404e70e36dba63e62a1c5e19bace RUT9XX R 00.06.02.2: fd58e92ecaaa5ce7b5797e2cc03f83cb RUT9XX R 00.06.02: a19ccdd4479e63fc7c4bee6b78b53619 RUT9XX R 00.06.00.4: db7bcab08210322d5a52ac3db9389c68 RUT9XX R 00.06.00.3: 98e95a6eefe411253c6a27038336f650 RUT9XX R 00.06.00.2: d5cc5e0f8b389070699d58bc7c880853 RUT9XX R 00.05.04: c7a8e0c78311d38b33511e5b6c8f5450

• RUT9XX R 00.05.03.4: 9c9d32582f8cd3d3d6a5d39bff29033f RUT9XX R 00.05.03.3: 8d91895709d73a5d5fbf9da788039422 RUT9XX R 00.05.02.8: 73fb03f55b52e124b06b897c8c319318 RUT9XX R 00.05.02.6: d08943b92dff5d67f4a7a96b179aee90 RUT9XX R 00.05.02.5: 1a5500f4e1dfce726a4002cbe41f41a8 RUT9XX R 00.05.02.3: bac778e78616a86b6bbb9aab6e7c06fa RUT9XX R 00.05.02.2: a5344dcbc6914c52d779a665925dca56 RUT9XX R 00.05.02: 577461e4ca0fce4f9112e6a9972692bf RUT9XX R 00.05.01.8: dc5f040f8649325a19dd5ebfc9ccec52 RUT9XX R 00.05.01.5: 3c460e566be3bf70048a00fe5a847187 RUT9XX R 00.05.00.5: a5fc4c93f8eec213729f45b279dd1f9a RUT9XX R 00.04.233: ffd30cdd1b7eede384eaaad7a50dc909 RUT9XX R 00.04.199: 2a67dfb0482356f7f9de52b7b82fee2c RUT9XX R 00.04.172: 791e5eff448348e15a8ac953dd8afe71 RUT9XX R 00.04.161: 167ba9b39a650f6e2ea765e5f0bd8514 RUT9XX R 00.04.153: 728bb528239c33bb3a66cbca018f11aa RUT9XX R 00.04.147: 0305e0953bf2260e2ea7454c24b65197 RUT9XX R 00.04.125: 7c87631d27a672690c5e0d4e9ac7685a RUT9XX R 00.04.112: d674084693dea3bdb63ca6c5fb871e8f RUT9XX R 00.04.103: d8135a5ca19c2c07c024e80d936e7f47 RUT9XX R 00.04.94: d60d006e30206da025c8a822721f1134 • RUT9XX R 00.04.75: e5e8049208896c131a66a623301aaeca RUT9XX R 00.04.64: b8be480d8fd79abe86343c1733aca5ba RUT9XX R 00.04.57: 40e10bf3a6ed0d0a9dcc8d1da5ff32ed RUT9XX R 00.04.48: d606f4ed4609995b0acb3b2f3c516fd9 RUT9XX R 00.04.38: af3b8b21aebb1916026da77a71e0cfad RUT9XX R 00.04.32: e8f06dbc01b337fe3202e22da1bdf35e RUT9XX R 00.04.12: ca7ef105a83452e6b02f95c110a74333 RUT9XX R 00.03.985: 39e38a925b86c6bfcc6e8a17fd692dd7 RUT9XX R 00.03.965: f433dec03af54cb69167b5c711b1d54a RUT9XX R 00.03.946: b3650cd1fccb58f6c20d8b38931193a0 RUT9XX R 00.03.923: 5f67eb078ebda98ac597da02ace2e31e RUT9XX R 00.03.906: fee184527afd0e2823755d0085d27196 • RUT9XX R 00.03.850: e44b11bf3a68c6fd35633027d62b806c RUT9XX R 00.03.832: 006cee476568de886e514586d205a7bd

#### Bootloader

The Bootloader's checksum is not displayed in the WebUI before upgrade. So you can only calculate the checksum yourself using *md5sum*. As mentioned previously, this can be done with most Linux distros or by uploading the file into router and calculating the checksum from there. However, since the process for the Bootloader upgrade is different than for a firmware upgrade, you'll have to upload the file using a different method. Instructions on how to upload files into a router can be seen **here**.

- Bootloader file name: checksum
  - $\circ \ uboot\_for\_tlt\_rut9xx\_3.0.1.bin\ checksum:\ 1540dc490af507c452eae0836defcb6f$
  - $\circ\ uboot\_for\_tlt\_rut9xx\_3.0.1\_webui.bin:\ 1fd 930ff 79a8c5b90b601b14d5ce297a$