

Touchscreen Room Controller Firmware

This package contains files for upgrading the Touchscreen Room Controller.

1. FM8 File

The FM8 file can be used to upgrade the Room Controller via USB.

Compatible with Room Controller Uploader version 4 or later.

2. TRCFW File

The TRCFW file can be used to upgrade the Room Controller via the EcoStruxure™ Building Operation software.

Compatible with EcoStruxure™ Building Operation version 6.0.1 or later.

2.1. Verifying authenticity of files

Each binary file has an associated signature file (.sig) that can be used to verify each file is authentic and unmodified via the Schneider Electric Public Key Infrastructure.

Schneider-Electric recommends verifying files before each use, to ensure the contents are authentic and unmodified.

Requires:

- OpenSSL
 - Tested with: OpenSSL 3.1.1 30 May 2023

2.2 Linux

Download Schneider-Electric certificates:

```
wget https://pki.schneider-electric.com/SchneiderElectricRootCA.cer
wget https://pki.schneider-electric.com/FirmwareSigningCA.cer
```

Chain downloaded certificates into one file:

```
openssl x509 -inform der -in SchneiderElectricRootCA.cer > certificate.pem
openssl x509 -inform der -in FirmwareSigningCA.cer >> certificate.pem
```

Verify files against chained Schneider Electric certificates using signature file:

```
openssl cms -verify -in TRC35_APP_Release_1.0.0-216-8b7b6fce.signed.bin.sig -inform DER -
content TRC35_APP_Release_1.0.0-216-8b7b6fce.signed.bin -binary -CAfile certificate.pem >
/dev/null

>> Verification successful
```

Example:

```
$ openssl version
```

```
OpenSSL 1.1.1g  21 Apr 2020
```

```
$ openssl cms -verify -in TRC_Release_1.0.0-216-8b7b6fce.fm8.sig -inform DER -content  
TRC_Release_1.0.0-216-8b7b6fce.fm8 -binary -CAfile certificate.pem > /dev/null
```

```
Verification successful
```

2.3 Windows PowerShell

Download Schneider-Electric certificates:

```
curl https://pki.schneider-electric.com/SchneiderElectricRootCA.cer -o  
SchneiderElectricRootCA.cer  
curl https://pki.schneider-electric.com/FirmwareSigningCA.cer -o FirmwareSigningCA.cer
```

Chain downloaded certificates into one file (and convert to UTF8):

```
openssl x509 -inform der -in SchneiderElectricRootCA.cer > certificate.pem  
openssl x509 -inform der -in FirmwareSigningCA.cer >> certificate.pem  
Get-Content .\certificate.pem | Set-Content -Encoding utf8 certificate.utf8.pem
```

Verify files against chained Schneider Electric certificates using signature file:

```
openssl cms -verify -in FILENAME.sig -inform DER -content FILENAME -binary -CAfile  
certificate.utf8.pem > $null  
  
CMS Verification successful
```

Example:

```
openssl version  
  
OpenSSL 3.1.1 30 May 2023 (Library: OpenSSL 3.1.1 30 May 2023)  
  
openssl cms -verify -in TRC_Release_1.0.0-216-8b7b6fce.fm8.sig -inform DER -content  
TRC_Release_1.0.0-216-8b7b6fce.fm8 -binary -CAfile certificate.utf8.pem > $null  
  
CMS Verification successful
```