

HMIST6400SL Firmware

This package contains files for upgrading and recovering HMIST6400SL Operator Display.

1. HMIST6400SL Upgrade Img File

To upgrade HMIST6400SL:

- Copy the included HMIST6400SL-x.x.x.img file to a USB stick
- Insert USB stick to HMIST6400SL USB1 port
- Login to HMIST6400SL with an administrator account
- Select settings/firmware upgrade, then choose the file and select "Update"

For more detailed information, refer to HMIST6400SL Operating Guide.

2. HMIST6400SL Device Recovery Files

These included HMIST6400SL-x.x.x.tar.gz file is required to recover an HMIST6400SL Operator Display.

This will erase all users, configuration data and logs from the device.

This process is only necessary if:

- Device firmware was corrupted due to power loss during firmware update, or
- All administrator passwords have been lost for the device.

For decommissioning, consider using the "Erase all data" feature available to administrator users via the Settings/About menu.

2.1. Verifying authenticity of tar.gz file

The authenticity of the included tar.gz file should be verified using the included signature (.sig) file via the process below.

Schneider-Electric recommends verifying this file before each use, to ensure the contents are authentic and un-modified.

Requires:

- OpenSSL
 - Tested with: OpenSSL 1.1.1g 21 Apr 2020

Download Schneider-Electric certificates:

- Linux:

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

- Windows:

```
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:

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

Verify tar.gz against chained Schneider Electric certificates using signature file:

Note: Replace X.Y.Z with appropriate version number

```
openssl cms -verify -in HMIST6400SL-X.Y.Z.tar.sig -inform DER -content HMIST6400SL-X.Y.Z.tar.gz -binary -CAfile certificate.pem
> /dev/null
```

Expected result:

```
>> Verification successful
```

2.2. Device Recovery Procedure

To recover HMIST6400SL:

- Verify the authenticity of the included tar.gz file using the process above
- Extract the tar.gz file, resulting in a folder named "aurora"
 - Note: For windows users, 7-zip is recommended.
- Copy the "aurora" folder to a USB stick
- Power off HMIST6400SL
- Insert USB stick to HMIST6400SL USB1 port
- Attach USB-OTG cable to HMIST6400SL USB2 port
- Power on HMIST6400SL

For more detailed information, refer to HMIST6400SL Operating Guide.

3. Trouble Shooting

3.1 Upgrade Fails

Is upgrading the HMIST6400SL fails, please check:

- Time is set correctly
 - Time is required by the device to check the upgrade file is valid. If time has not been set, the upgrade will fail.

3.2 USB Drive Not Recognized

The USB drive should be FAT formatted. If the HMIST6400SL does not recognize the drive, windows DISKPART utility is recommended for formatting the drive. DISKPART is included in standard windows installations.

Procedure on Windows PC:

1. Insert USB stick to PC
2. Open a windows command prompt.
3. Run DISKPART

```
C:\>DISKPART
Microsoft DiskPart version 10.0.18362.1
Copyright (C) Microsoft Corporation.
```

4. List disk

```
DISKPART> list disk

Disk ##  Status      Size      Free      Dyn  Gpt
-----  -
Disk 0    Online         476 GB      0 B          *
Disk 1    Online      1920 MB    1920 KB          *
```

WARNING: Be extremely careful when selecting the disk from the list above for the next step, to be sure you have correctly selected the USB stick. If you are not sure, do not continue. Usually it is obvious by inspecting the size of the disk. To check, remove USB disk from system, run "list disk" again and confirm that the expected disk disappears and re-appears.

5. Select disk: Replace X below with the appropriate disk number on your system

```
DISKPART> select disk X
Disk 1 is now the selected disk.
```

6. Clean disk

```
DISKPART> clean
DiskPart succeeded in cleaning the disk.
```

7. Create partition

```
DISKPART> create partition primary
DiskPart succeeded in creating the specified partition.
```

8. Format as FAT32

```
DISKPART> format fs=FAT32  
100 percent completed  
DiskPart successfully formatted the volume.
```

9. Exit

```
DISKPART> exit
```

Your USB stick should now be recognized by HMIST6400SL.