Extreme Update Procedure

SensX Extreme

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FCC Compliance

This equipment has been tested and found to comply with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any change or modification to this product voids the user's authority to operate per FCC Part 15 Subpart A. Section 15.21 regulations.

Industry Canada Compliance

This device complies with Industry Canada License-exempt RSS standards. Operation is subject to the following two conditions: (1) this device may not cause interference and (2) this device must accept any interference, including interference that may cause undesired operation of the device. This device has been designed to operate with a variety of different gain (dBi). The reader maximum output power is set by the gain of the antenna. Using an antenna having a higher gain is strictly prohibited per regulations of Industry Canada. In addition, using the reader at a power exceeding the maximum output power for a given antenna is also strictly prohibited. The required antenna impedance is 50 ohms. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (EIRP) is not more than that required for successful communication.

Conformité d'Industrie Canada

Cet appareil est conforme aux normes RSS exemptées de licence d'Industrie Canada. L'opération est soumise aux deux conditions suivantes: (1) cet appareil ne doit pas provoquer d'interférence et (2) cet appareil doit accepter toute interférence, y compris les interférences susceptibles de provoquer un fonctionnement indésirable de l'appareil. Cet appareil a été conçu pour fonctionner avec une variété de gains différents (dBi). La puissance de sortie maximale du lecteur est définie par le gain de l'antenne. L'utilisation d'une antenne ayant un gain plus élevé est strictement interdite par règlement d'Industrie Canada. En outre, l'utilisation du lecteur à une puissance supérieure à la puissance de sortie maximale pour une antenne donnée est également strictement interdite. L'impédance d'antenne requise est de 50 ohms. Afin de réduire les interférences radio potentielles avec d'autres utilisateurs, le type d'antenne et son gain devraient être choisis de manière à ce que la puissance éloignée isotropiquement (EIRP) équivalente soit supérieure à celle requise pour une communication réussie.

Caution

Reader antennas should be positioned so that personnel in the area for prolonged periods may safely remain at least 31 cm (12.2 in) in an uncontrolled environment from the antenna's surface. See FCC OET Bulletin 56 "Hazards of radio frequency and electromagnetic fields" and Bulletin 65 "Human exposure to radio frequency electromagnetic fields."

Vorsicht

Reader Antennen sollten so positioniert werden, dass das Personal im Bereich über einen längeren Zeitraum kann sicher bleiben mindestens 31 cm (12.2 Zoll) entfernt von der Antenne Oberfläche, in einer unkontrollierten Umgebung. Siehe FCC OET Bulletin 56 "Gefahren der Radiofrequenz und elektromagnetische Felder" und Bulletin 65 "Human Exposition gegenüber hochfrequenten elektromagnetischen Feldern."

Revision History

Version	Author	Date	Changes
1.0	J. Major	Feb 2021	Initial Document

Table of Contents

Specifications Subject to Change
DCN-ST-0009-C

CHAPTER 1   Introduction

The document describes the upgrade procedure for the SensThys Extreme reader.

While the main upgrade commands are easy, we have also documented places where we has seen error messages and how to navigate those errors.
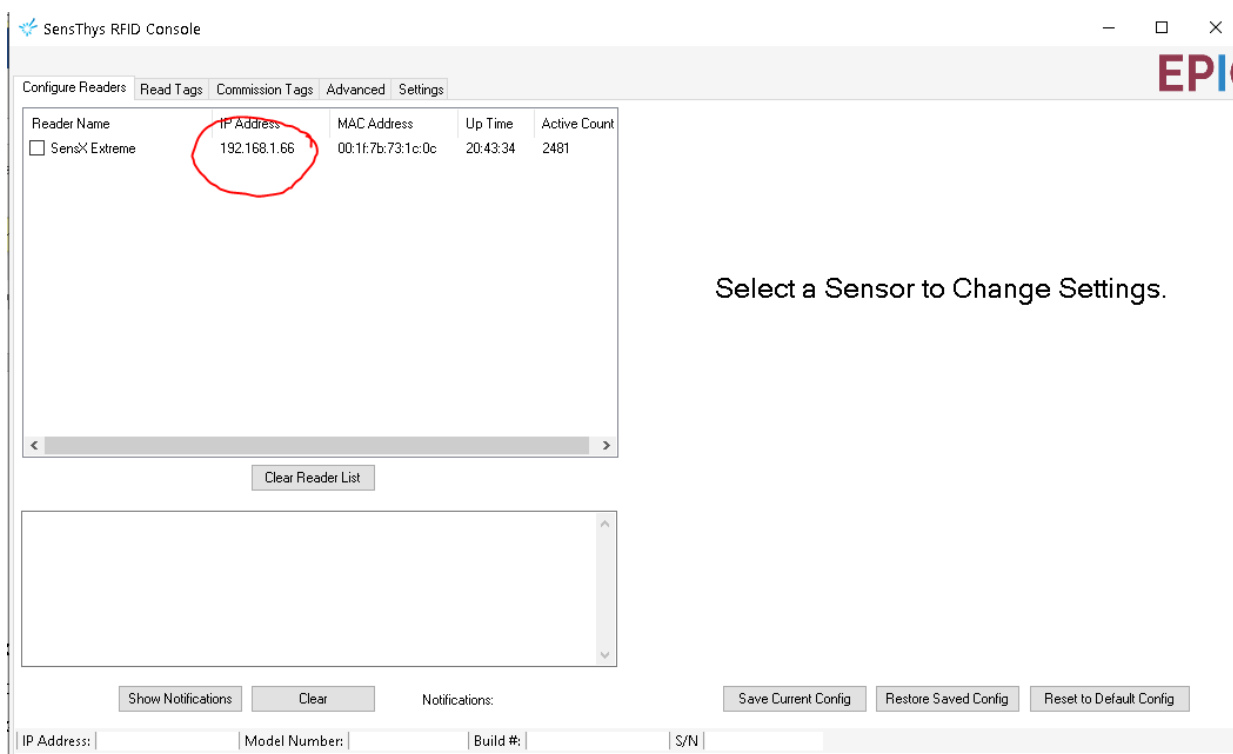
The output of this process is that your reader will be brought fully up to date with the latest Extreme software offered by SensThys.

Chapter 2   Install

Step 1   Find the reader IP address

First find the IP address of the Extreme. This can be done by using a program that listens to UDP broadcast message. If you have one, listen to port 3988. You will be able to see the "heartbeat" of your Extreme. From that heartbeat, find the IP address.

Otherwise launch the SensThys RFID Console, which can be found at SensThys.com. You can then easily find the IP Address.

Step 2   Getting into your Extreme

Open the Command Prompt

Type ssh root@IP Address. The IP Address is the address found in the RFID Console or your listener.

When you see "Are you sure...." type in yes.

Enter the password. The password is sensthys1701

NOTE: the password will not show, in any way, as you are entering it. This is what you'll see when successful.

Step 3   Update Preparation

Next type in apt-get update and enter.

This will launch a series of actions working through the various files of the Extreme. If all goes well, you should see the following screen.

```
OpenSSH SSH client

C:\Users\Jo Major>ssh root@192.168.1.68
The authenticity of host '192.168.1.68 (192.168.1.68)' can't be established.
RSA key fingerprint is SHA256:POPHWeXk1QoHkEvhP/8uEzzvEKfgCr0D4n87UjjqS8o.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '192.168.1.68' (RSA) to the list of known hosts.
root@192.168.1.68's password:
root@pico-imx6:~# apt-get update
Ign:1 https://www.sensthys.com extremepackage/ InRelease
Ign:2 https://www.sensthys.com fwpackage/ InRelease
Ign:3 https://www.sensthys.com bleserver/ InRelease
Ign:4 https://www.sensthys.com python3/ InRelease
Ign:5 https://www.sensthys.com extremepackage/ Release
Ign:6 https://www.sensthys.com fwpackage/ Release
Ign:7 https://www.sensthys.com bleserver/ Release
Ign:8 https://www.sensthys.com python3/ Release
Ign:9 https://www.sensthys.com extremepackage/ Packages.diff/Index
Ign:10 https://www.sensthys.com extremepackage/ Translation-en
Ign:11 https://www.sensthys.com fwpackage/ Packages.diff/Index
Ign:12 https://www.sensthys.com fwpackage/ Translation-en
Ign:13 https://www.sensthys.com bleserver/ Packages.diff/Index
Ign:14 https://www.sensthys.com bleserver/ Translation-en
Ign:15 https://www.sensthys.com python3/ Packages.diff/Index
Ign:16 https://www.sensthys.com python3/ Translation-en
Ign:17 https://www.sensthys.com extremepackage/ Packages
Ign:10 https://www.sensthys.com extremepackage/ Translation-en
Ign:18 https://www.sensthys.com fwpackage/ Packages
Ign:12 https://www.sensthys.com fwpackage/ Translation-en
Ign:19 https://www.sensthys.com bleserver/ Packages
Ign:14 https://www.sensthys.com bleserver/ Translation-en
Ign:20 https://www.sensthys.com python3/ Packages
Ign:16 https://www.sensthys.com python3/ Translation-en
Ign:17 https://www.sensthys.com extremepackage/ Packages
Ign:10 https://www.sensthys.com extremepackage/ Translation-en
Ign:18 https://www.sensthys.com fwpackage/ Packages
Ign:12 https://www.sensthys.com fwpackage/ Translation-en
Ign:19 https://www.sensthys.com bleserver/ Packages
Ign:14 https://www.sensthys.com bleserver/ Translation-en
Ign:20 https://www.sensthys.com python3/ Packages
Ign:16 https://www.sensthys.com python3/ Translation-en
Get:17 https://www.sensthys.com extremepackage/ Packages [366 B]
Ign:10 https://www.sensthys.com extremepackage/ Translation-en
Hit:18 https://www.sensthys.com fwpackage/ Packages
Ign:12 https://www.sensthys.com fwpackage/ Translation-en
Hit:19 https://www.sensthys.com bleserver/ Packages
Ign:14 https://www.sensthys.com bleserver/ Translation-en
Hit:20 https://www.sensthys.com python3/ Packages
Ign:16 https://www.sensthys.com python3/ Translation-en
Fetched 366 B in 1min 24s (4 B/s)
Reading package lists... Done
```

The successful response to the apt-get update command. If seen, please go to Step 4.

Occasionally, you'll see that the reader has duplicate names in the file system. In that case, you'll see the following messages.

Here we see the "configured multiple times" message.

Step 3.1 Fixing the "Configured Multiple Times"

To start, please type

cd /etc/apt

This changes the targeted directory and should return this screen.

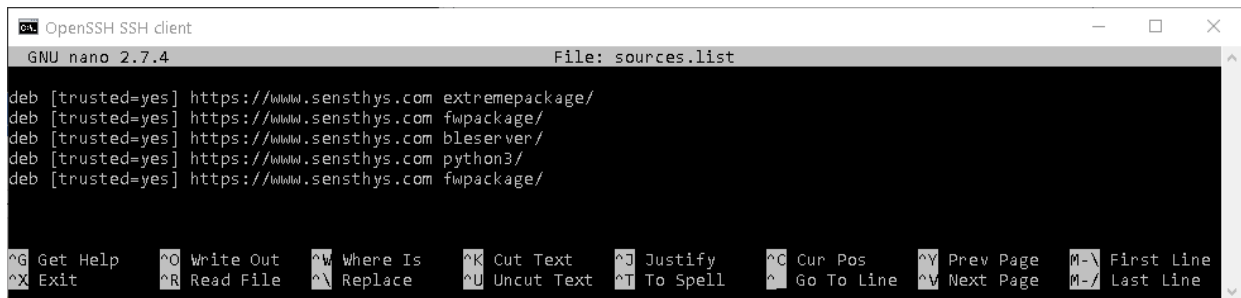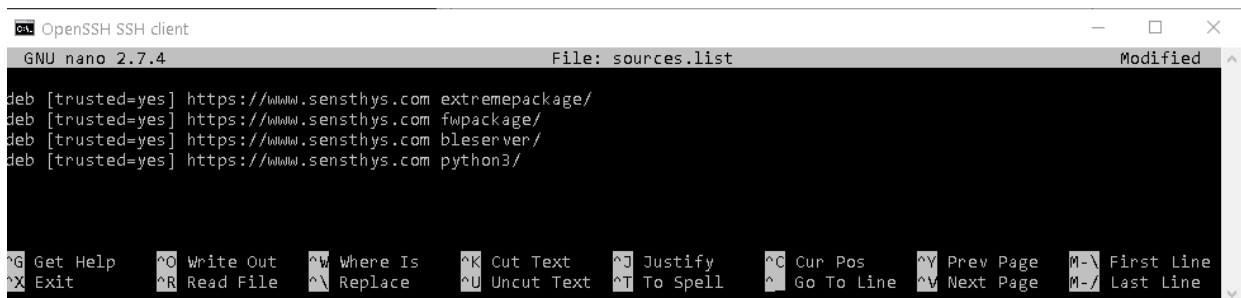Next type in nano sources.list

This will show you a list. Examining the following list, you'll see that the second and fifth lines are identical.

Using your arrow keys to erase the bottom line. That should give you this screen. On this screen please Exit using ^X as shown in the bottom left.
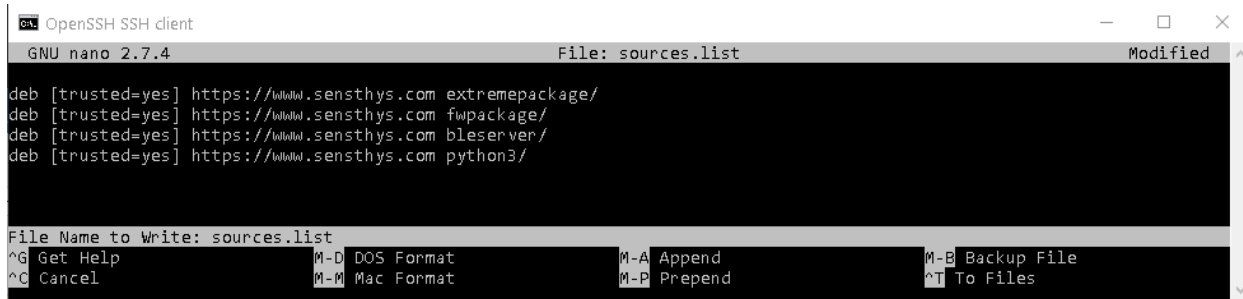
That will bring you to this screen. Note the line that says "File Name to Write: sources.list"

Hit Enter.

Now let's verify that the issue has been resolved.

Please enter apt-get update, and you should now see your problem resolved.

```
root@pico-imx6:/etc/apt# apt-get update
Ign:1 https://www.sensthys.com extremepackage/ InRelease
Ign:2 https://www.sensthys.com fwpackage/ InRelease
Ign:3 https://www.sensthys.com bleserver/ InRelease
Ign:4 https://www.sensthys.com python3/ InRelease
Ign:5 https://www.sensthys.com extremepackage/ Release
Ign:6 https://www.sensthys.com fwpackage/ Release
Ign:7 https://www.sensthys.com bleserver/ Release
Ign:8 https://www.sensthys.com python3/ Release
Ign:9 https://www.sensthys.com extremepackage/ Packages.diff/Index
Ign:10 https://www.sensthys.com extremepackage/ Translation-en
Ign:11 https://www.sensthys.com fwpackage/ Packages.diff/Index
Ign:12 https://www.sensthys.com fwpackage/ Translation-en
Ign:13 https://www.sensthys.com bleserver/ Packages.diff/Index
Ign:14 https://www.sensthys.com bleserver/ Translation-en
Ign:15 https://www.sensthys.com python3/ Packages.diff/Index
Ign:16 https://www.sensthys.com python3/ Translation-en
Ign:17 https://www.sensthys.com extremepackage/ Packages
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Ign:12 https://www.sensthys.com fwpackage/ Translation-en
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Ign:16 https://www.sensthys.com python3/ Translation-en
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Hit:19 https://www.sensthys.com bleserver/ Packages
Ign:14 https://www.sensthys.com bleserver/ Translation-en
Hit:20 https://www.sensthys.com python3/ Packages
Ign:16 https://www.sensthys.com python3/ Translation-en
Reading package lists... Done
root@pico-imx6:/etc/apt#
```

Step 4Update the Reader

Now enter apt-get install extremepackage

Step 4.1   *Fixing the dpkg error*

If the install process provides responds with "dpkg was interrupted, you must manually run "dpkg – configure -a"" the reader has picked up a dpkg bug.

IF you didn't see this message, please proceed to 4.2

IF you did see this message, please enter dpkg – configure -a

Step 4.2 Installing extremepackage

Please type in apt-get install extremepackage.

When you see "Do you want to continue", please enter Y.

```
Description: Extreme software core services, web interface updates, LLRP
root@pico-imx6:/etc/apt# dpkg --configure -a
root@pico-imx6:/etc/apt# apt-get install extremepackage
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  bleserver
The following packages will be upgraded:
  bleserver extremepackage
2 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
1 not fully installed or removed.
Need to get 4222 kB/5494 kB of archives.
After this operation, 2048 kB of additional disk space will be used.
Do you want to continue? [Y/n]
```

Following the upgrade process, the reader will go down to reboot.

```
After this operation, 2048 kB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 https://www.sensthys.com extremepackage/ extremepackage 1.1.40 [4222 kB]
Fetched 4222 kB in 3s (1266 kB/s)
(Reading database ... 230 files and directories currently installed.)
Preparing to unpack .../bleserver_1.0.1_all.deb ...
Unpacking bleserver (1.0.1) over (1.0.1) ...
Preparing to unpack .../extremepackage_1.1.40_all.deb ...
Unpacking extremepackage (1.1.40) over (1.1.37) ...
Setting up bleserver (1.0.1) ...
Setting up extremepackage (1.1.40) ...

Broadcast message from root@pico-imx6 (pts/1) (Wed Feb 10 21:56:29 2021):

The system is going down for reboot NOW!
root@pico-imx6:/etc/apt#
```
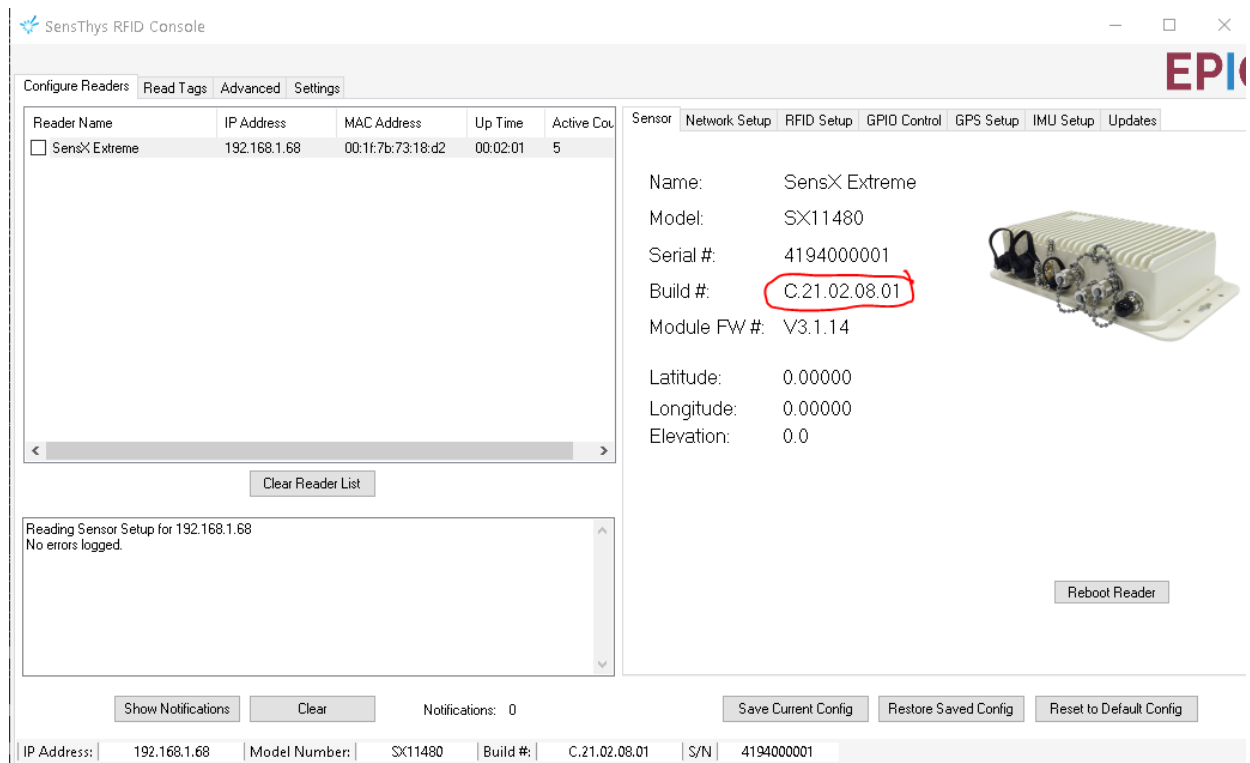
Chapter 5 Verify the Update

Please close the RFID Console.

Relaunch the console and wait for the Extreme to appear. Click on the reader. It may be that the reader isn't fully UP and in the messages it asked you to click on the reader again. Once the reader is up and running, the lower message should say "No errors logged".

If you select the Sensor tab, the build # will reflect that the software package has been updated.