

ETAS HSP V13

Hardware Service Pack



Getting Started

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1 Introduction

The Hardware Service Pack (HSP) is an ETAS product for firmware management of ETAS hardware. It is a tool for adding new functionality to the hardware.

With HSP and connected ETAS hardware, users can

- Check the current firmware state,
- Check the current firmware compatibility state,
- Update/downdate the firmware and
- Get the update activities logged

1.1 Release Notes

For new features of this HSP version, support of new products, and for information about firmware support use in the HSP program the menu options **Help > Release Notes Service Package...** and **Help > Release Notes HSP-UT...**

1.2 Product Overview

1.2.1 Product Structure

The Hardware Service Pack is a tool for the firmware management of ETAS hardware. HSP consists of two main parts:

- HSP Update Tool (HSP-UT) and
- HSP Service Packages (HSP-SP and LABCAR-FWP).

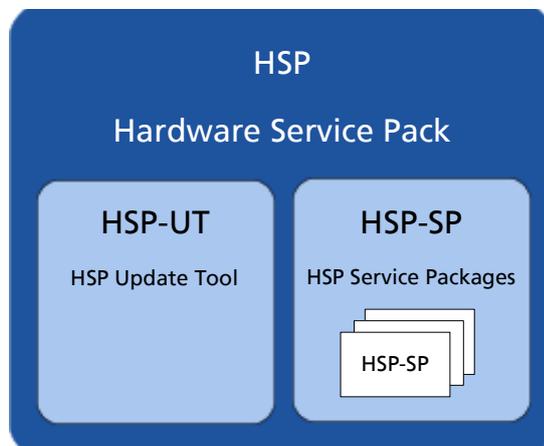


Fig. 1-1 Hardware Service Pack product structure

The HSP Update Tool (HSP-UT) is used for the firmware update process. This tool allows users to view the state of firmware in an ETAS hardware component. Based on this information, users can update the firmware. Please refer to the Release Notes for the current HSP-UT version for information about supported ETAS hardware modules.

The HSP Service Packages (HSP-SP) contains the actual firmware, i. e., the files that will be downloaded to the hardware.

The version of the Hardware Service Pack (HSP) is changed if either the HSP Update Tool (HSP-UT) or if any of the HSP Service Packages (HSP-SP) was changed.

1.2.2 Product Feature

The main features of the HSP Update Tool are:

- Detailed information about firmware status for several systems available
- Detailed information about software application and firmware compatibility
- After selection of product group firmware update in three steps only
- Free selection of the systems for firmware update among the displayed hardware
- User information by icons for easy readability of firmware status
 - for the complete system
 - for each updatable component in the system
- Icons change their status during the update process
- Up to 64 systems can be updated within the same update process
- Log files document the updates
- Program window layout is configurable
- Integrated online help

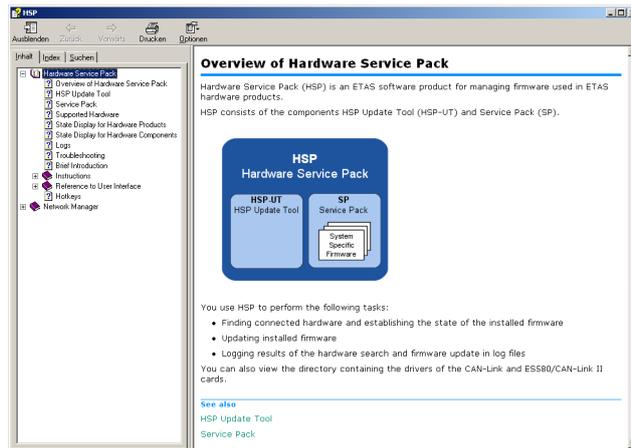
1.3 User Information

1.3.1 User Profile

This manual is intended for qualified personnel working in the fields of automotive control unit development and calibration.

1.3.2 HSP Online Help - Quick Guide

Use the **Help > Help** menu option to invoke the general help function. Or press the **<F1>** function key to open context-sensitive help.



Other entries:

Help > HSP Getting Started Manual...

Help > Quick Start...

Help > Symbols...

Help > Technical Support...

Help > Supported Hardware...

Help > Open Source Software Attributions...

Help > Release Notes Service Package...

Help > Release Notes HSP-UT...

Help > About...

2 Program Installation

2.1 Overview

2.1.1 Program Files and Windows User Rights

Main Installation File (HSP)

The HSP main installation file installs the Hardware Service Pack including the HSP-UT and HSP-SP.



NOTE

You need Windows administrator rights for installing the Hardware Service Pack HSP.

Service Package Files (HSP-SP)

If a compatible HSP version is installed on your PC, there is the possibility to install additional HSP Service Packages (HSP-SP) with Windows standard user rights.



NOTE

For installing the HSP Service Packages you need only Windows standard user rights.

2.1.2 System Requirements

Check the HSP Update Tool Release Notes for detailed information.

2.1.3 Restrictions

Using multiple masters

When updating the ETAS hardware with HSP, no other ETAS applications may access this hardware.

Windows User Rights

For restrictions because of Windows user rights, refer to chapter 2.1.1 on page 7.



NOTE

For complete description of restrictions by using some hardware components, refer to the HSP Update Tool Release Notes.

2.1.4 Supported ETAS Products

Read the list of supported hardware at the HSP Online Help with **Help > Supported Hardware...**

2.2 Installation Procedure

2.2.1 Installing HSP Update Tool (HSP-UT)



NOTE

You need Windows administrator rights to install the Hardware Service Pack HSP.

To start the HSP installation:

- Double click on the setup.exe file in the HSP installation package.
- Follow the instructions displayed by the installation wizard.



NOTE

The language selection made in the HSP installation is a global setting for all ETAS applications

2.2.2 Installing HSP Service Packages (HSP-SP)

If a compatible HSP version is installed on your PC, it is possible to install additional Service Packages (HSP-SP) with Windows standard user rights.

The HSP Service Packages are available for all users of a PC, meaning all installed packages are available for selection in the HSP-UT regardless of user type.

The file format of all HSP Service Package files is ***.spi**.

There are three ways to select, import and install the HSP Service Packages:

- double click an HSP-SP file ***.spi** in Windows Explorer
- or
- select in HSP program **File > Import Service Package**
- or
- select in HSP program **Tools > Service Package Manager > Import**.



NOTE

The complete procedure to install HSP Service Packages is described in the Online Help of HSP.

2.3 LAN handling Support

The Hardware Service Pack supports the improved LAN handling of INCA with different configurations for hardware access by Ethernet:

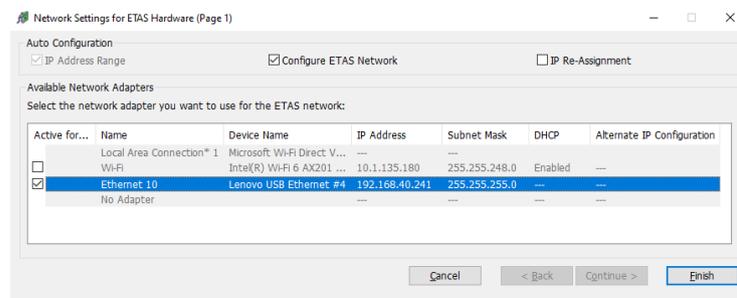
- Usage of different network adapters:
 - one network adapter for the company LAN and
 - one network adapter for the ETAS-hardware or
- Usage of one network adapter:
 - automatic switch between company LAN and usage in automotive.

To work with HSP it is necessary to configure the network environment of your PC for the ETAS hardware. The ETAS Network Manager supports your configuration.

To start ETAS Network Manager:

- In the HSP Main Window start menu select **Tools > ETAS Network settings**.
The ETAS Network Manager is started.

To select the network adapter used for the hardware:



- Select the network adapter used for the hardware from the **Available Network Adapters** field.
- Make the necessary settings in the **Network Settings for ETAS hardware** window.
- Click Finish.

2.4 Uninstall Procedure

2.4.1 Uninstalling HSP Service Packages (HSP-SP)



NOTE

For uninstalling of selected HSP Service Packages you only need Windows standard user rights.

Using the HSP Service Package Manager as a part of HSP, all users can uninstall a selected HSP Service Package version (e.g. previous/older released service package) without uninstalling the HSP-UT.

To uninstall one or all HSP Service Packages:

- select in HSP program **Tools > Service Package Manager**
- select one or all packages
- select **Uninstall Selected**.

2.4.2 Uninstalling HSP Update Tool (HSP-UT)



NOTE

Windows administrator rights are required to uninstall the HSP (HSP-UT with all HSP-SP files).

This procedure describes how to uninstall the HSP Update Tool and all installed Service Packages.

To uninstall HSP:

- Select in the Windows start menu Start **Settings > Apps**
- Select **HSP Update Tool**.
- Click **Uninstall**.

The Windows Installer window is displayed:

- Click Yes to start the HSP uninstallation.

The uninstall process is started.

3 Using the HSP Update Tool

This section describes how to update the firmware on ETAS hardware.

In this manual, the word 'update' is used to describe the process of downloading a binary file, the actual firmware, from the PC to dedicated memory in ETAS hardware. The downloaded firmware does not necessarily have to be a newer version than the firmware originally located on the hardware.

3.1 Starting the HSP Update Tool (HSP-UT)

The HSP-UT can be started either by double-clicking the HSP-UT icon on the desktop or from the **Start** menu under **Programs > ETAS > HSP > HSP Update Tool**.

The **HSP Update Tool** window of the HSP-UT opens. In the following description, this window is named **Main** window.

When you select a particular version of the Hardware Service Pack, you are automatically selecting the matching version of the Service Package, i. e., the actual firmware used by the HSP-UT.

Please refer to the HSP online help for details on menu options and button functionality.

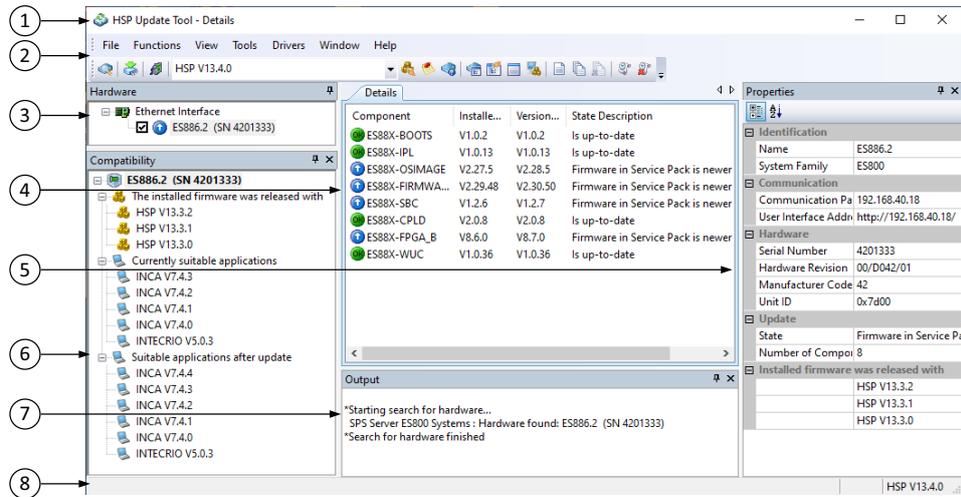


NOTE

Before starting the HSP-UT, please make sure that no ETAS Tool has access to the hardware. However, there will be an error message.

3.2 HSP Update Tool Window

The **HSP Update Tool** window is also referred to **Main** window.



- 1: Menu Bar
- 2: Toolbar
- 3: Hardware Window
- 4: Details Window
- 5: Properties Window
- 6: Compatibility Window
- 7: Output Window
- 8: Status Bar

3.3 Update Procedure

The sequence for updating the firmware is dependent on number of ETAS systems connected on the PC:

1. Connect the hardware to the PC and to power supply

i **NOTE**

Neither the power supply nor the Ethernet connection may be interrupted during a firmware update!

2. Select the HSP version or the LABCAR-FWP version
3. Click **Search for hardware**
4. Check the firmware state and select hardware systems whose firmware you want to update
5. Click **Perform firmware update**

6. Additionally, you can check the current firmware state of one of the connected hardware systems after a hardware search operation is finished.



NOTE

Leaving HSP running may interfere with other ETAS applications.

3.4 Document the Firmware State

The HSP Update Tool automatically creates two types of log files, the **Firmware State Log File** and the **Firmware History Log File**, which offer the possibility to document the firmware state and the firmware update activities.

Contents of the log files can be viewed within HSP-UT window. As the files are in plain text format, they can simply be printed using text editors like Notepad.

3.4.1 Firmware State Log File

This feature makes it possible to document the current firmware state or a specific update sequence, i. e., the firmware state before and after the firmware update.

The Firmware State Log File will automatically be created the first time a search for hardware is performed after installing HSP. Afterwards this file will be overwritten with each hardware search. If a successful update follows a hardware search, the information will be appended to the file.

The content of the latest successfully executed update will remain when restarting HSP.

3.4.2 Firmware State History Log File

This feature makes it possible to browse the history on successfully executed firmware updates.

The Firmware State History Log File will also be automatically created the first time an update has been done after installation of HSP. It contains all previous versions of the firmware state log file. If a new firmware state log file is created, the content of this file is appended to the beginning of the history file.

If needed, the content of this file can be deleted. There is a maximum allowed size for this file. When the size reaches 500 kB the oldest update information will be truncated.

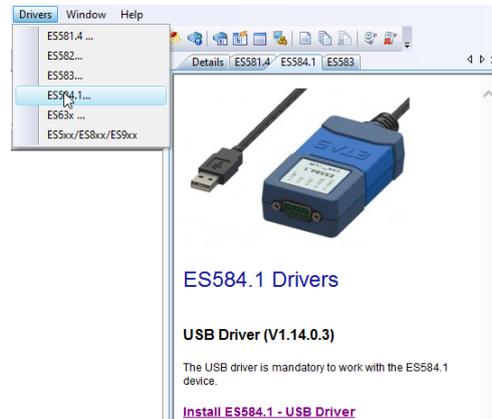
3.5 Driver Installation

HSP provides USB drivers for all devices that require their own USB drivers.

It is recommended first to install the USB-drivers before connecting the hardware.

The menu can be found at the main menu, **Drivers**.

See example:



4 Troubleshooting General Problems

This chapter provides information on solving problems that may arise, which are not specific to an individual software or hardware product.

The screenshots were taken from the English version of Windows 10, but the instructions should be similar for other windows systems.

4.1 Identifying the network adapter for the hardware

In the Windows search option, type in **network** and select following items:

Check network status > Ethernet > Change adapter options



There might be several displayed adapters, and it might be difficult to decide, which one is used for the ETAS hardware.

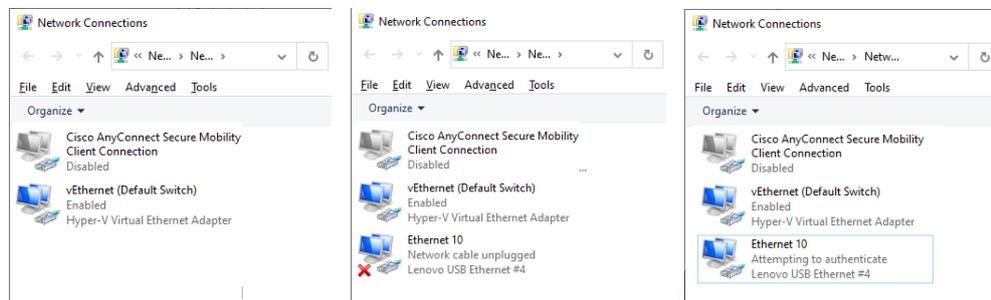
The next pictures from left to right display the Lenovo USB to Ethernet adapter named Ethernet 10 in following states.

1. Removed from the USB-port
2. Inserted into the USB-port but no connection to the hardware
3. Inserted into the USB-port with connection to the hardware

Remove and reconnect the cable between ETAS hardware and the dedicated Ethernet connector. The changing symbol indicates the used network adapter.

If no symbol changes: Check if the network card is recognized at all:

If the network adapter can be unplugged like an USB to Ethernet-adapter, then unplug it from the USB-port and insert it again. The added icon will point to the adapter. It displays the network cable as unplugged.



4.2 Ethernet adapter must be recognized and working

Check with the device manager and with the network connection, if the network card is recognized by the operation system and working.

- 1) In the Windows search option, type **device manager** and open it.

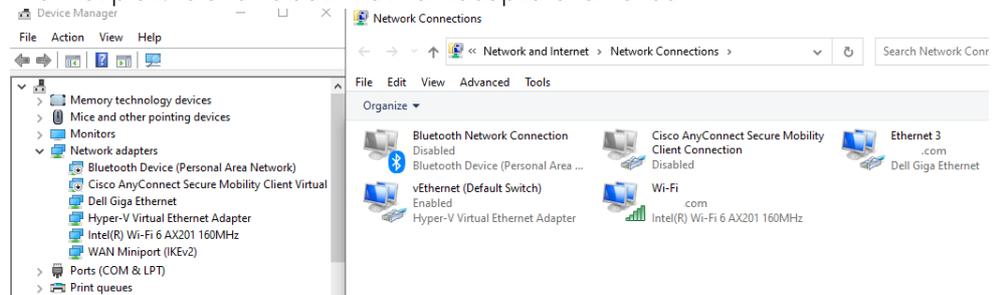
2) In the Windows search option, type **network and** select following items:

Check network status > Ethernet > Change adapter options

In the following example, two USB to Ethernet adapters are used.

- Lenovo with installed and working driver
- D-Link without driver installed and therefore not selectable

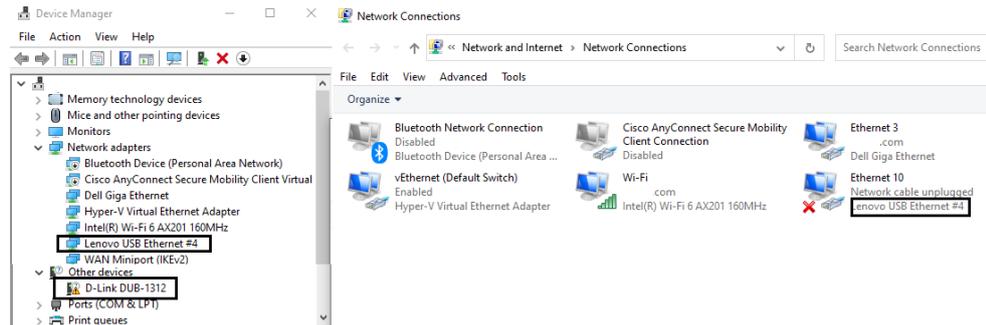
The first picture shows both network adapters removed.



The next picture shows the Lenovo adapter under Network adapters.

The D-Link adapter however is displayed under **Other devices** with a yellow sign.

In the network connections, the Lenovo adapter is available, but the D-Link adapter is missing. Therefore, this D-Link adapter is not usable and requires an additional driver installation.



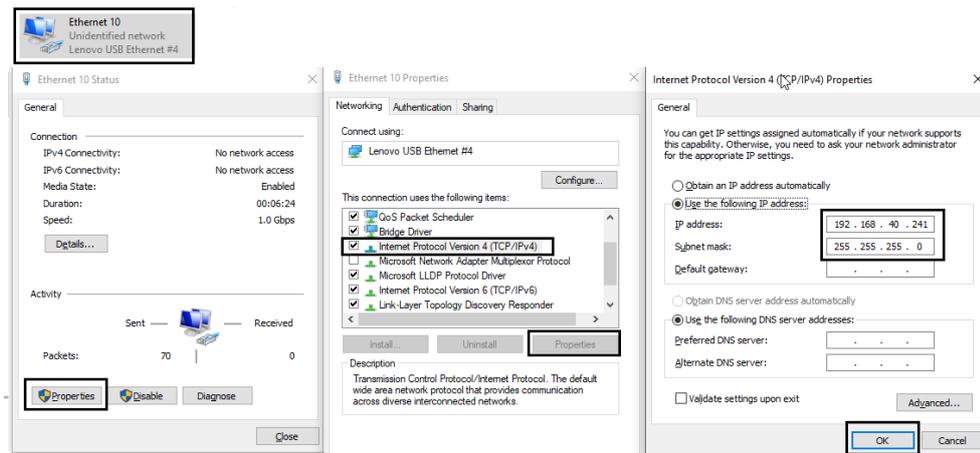
4.3 Verifying the settings of the network adapter

Verify, that the identified adapter has the correct IP-address range settings at TCP/IP4.

example:

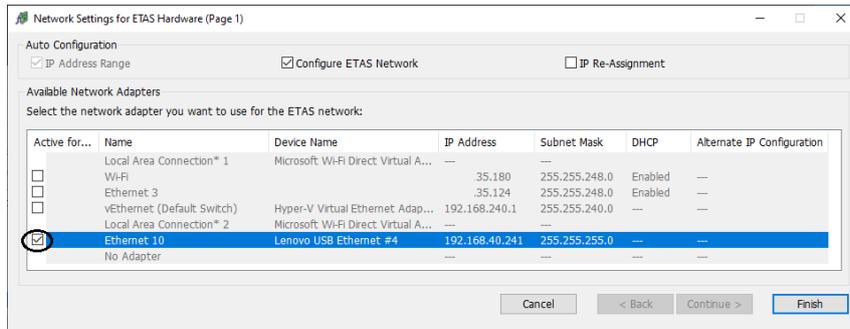
192.168.40.240 or 241 for the IP-Address and

255.255.255.0 for the Subnet mask.



4.4 Verifying the ETAS Network settings

Verify, that the identified Ethernet adapter is selected in the first row and that the IP-Address matches the properties of the network adapter.



4.5 Ping the network card

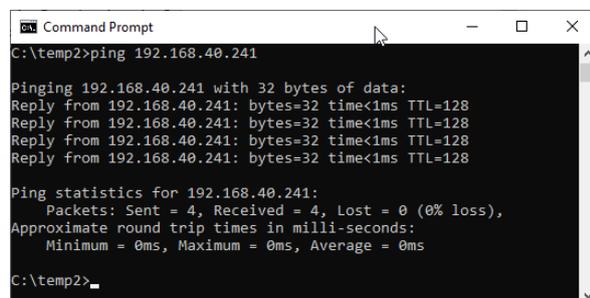
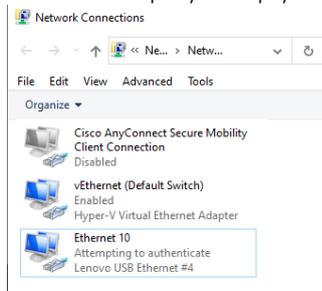
Make sure the network card is connected to the hardware. There should be no error message indicating disconnected hardware.

In the Windows search option, type **cmd** and select the **Command Prompt**.

type:

ping 192.168.40.241

It should display a Reply.



4.6 Ping the hardware device

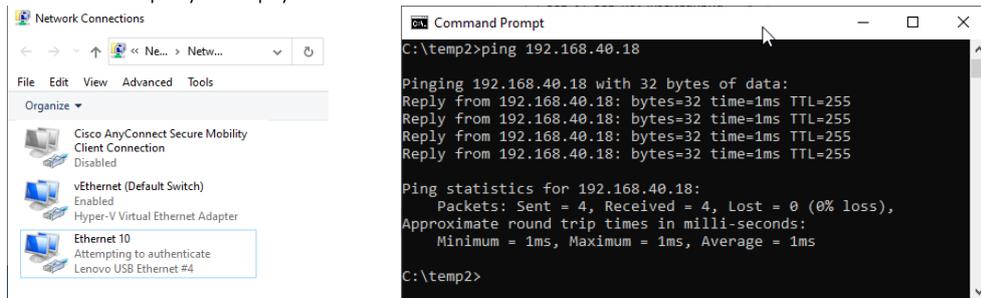
Make sure the network card is connected to the hardware. There should be no error message indicating disconnected hardware.

In the Windows search option, type **cmd** and select the **Command Prompt**.

Type ping and the IP-Address of the hardware e.g.:192.168.40.18, example:

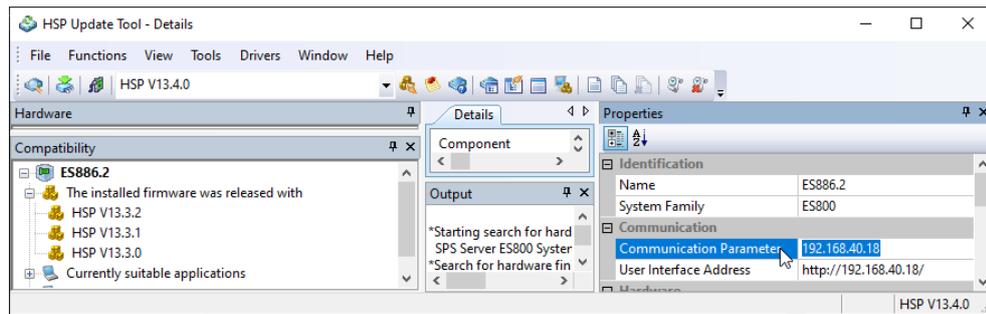
ping 192.168.40.18

It should display a Reply.



If yes, the connection to the hardware is established.

The HSP should be able to detect the ETAS-hardware:



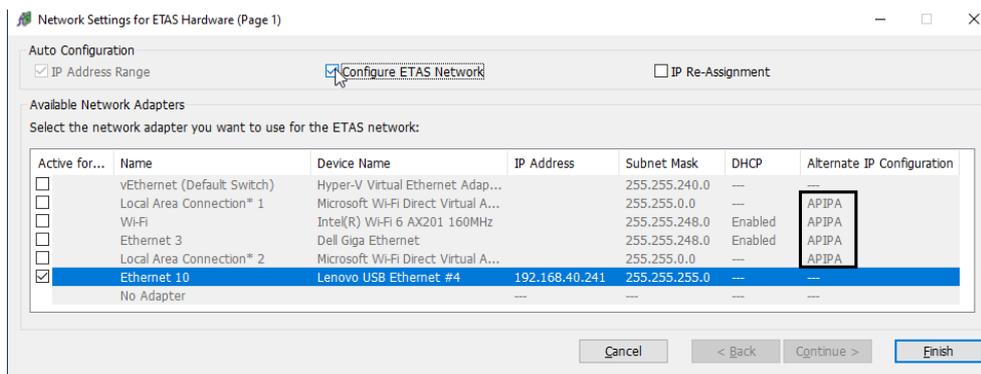
If HSP cannot detect the hardware, it is possible that

- The network manager is incorrectly configured or
- The firmware is corrupted and answers only with the basic function
- The hardware has a different IP-Address

4.7 APIPA is not displayed

APIPA is only displayed, after the correct Regedit settings.

See: "Network Adapter cannot be selected via Network Manager" on page 19.



4.7.1 Network Adapter cannot be selected via Network Manager

Cause: APIPA is disabled

The alternative mechanism for IP addressing (APIPA) is usually enabled. However, network security policies may request the APIPA mechanism to be disabled. In this case, you cannot use a network adapter which is configured for DHCP to access ETAS hardware. The ETAS Network Manager displays a warning message.

The APIPA mechanism can be enabled by editing the Windows registry. This is permitted only to users who have administrator privileges. It should be done only in coordination with your network administrator.

To enable the APIPA mechanism:

- Open the Registry Editor:
 - Click **Search** and type `regedit` and click **OK**.
The Registry Editor is displayed.
- Open the folder `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\`
- Click **Edit > Find** to search for the key `IPAutoconfigurationEnabled`.

If you cannot find any instances of the registry key, the APIPA mechanism has not been disabled on your system, i. e., there is no need to enable it. Otherwise proceed with the following steps.

- Set the value of the key `IPAutoconfigurationEnabled` to 1 to enable the APIPA mechanism.
You may find several instances of this key in the Windows registry which either apply to the TCP/IP service in general or to a specific network adapter. You only need to change the value for the corresponding network adapter.
- Close the Registry Editor.
- Restart your PC to apply the changes.

4.7.2 Search for Ethernet Hardware fails

Cause: ETAS Hardware not responding

Occasionally the ETAS hardware might not respond. In this case switch off the hardware, then switch it on again to re-initialize it.

Cause: ETAS Hardware went into Sleep Mode

In order to save power, some ETAS devices will go into sleep mode if they do not see that they are connected to another device/computer.

To solve that, connect your Ethernet cable from your computer to the **HOST/Sync In** port on the device. After the device turns on, access the device using the web interface and adjust the settings to ensure it stays always on. Consult the device's manual for specific instructions.

Cause: ETAS Hardware is connected to another Logical Network

If you use multiple PCs or notebooks to access the same ETAS hardware, ensure that the network adapters are configured to use the same logical network. If this is not possible, power off and on the ETAS hardware between different sessions (repowering).

Cause: Device driver for network card not in operation

It is possible that the device driver of a network card is not running. In this case you will have to deactivate and then reactivate the network card.

Cause: Laptop power management deactivates the network card

The power management of a laptop computer can deactivate the network card. Therefore, you should turn off power monitoring on the laptop.

To switch off power monitoring on the laptop:

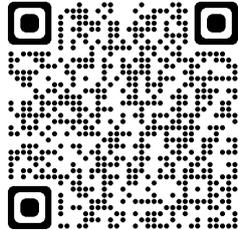
- From the Windows Start Menu, select
 - Click **Search** and type **Device Manager** and click **OK**.
- In the Device Manager open the tree structure of the entry **Network Adapters**.
- Right click on the used network adapter and select **Properties** from the context menu.
- Select the **Power Management** tab and deactivate the **Allow the computer to turn off this device to save power** option.
- Select the **Advanced** tab. If the property **Autosense** is included, deactivate it also.
- Click **OK** to apply the settings.

5 Contact Information

Technical Support

For details of your local sales office as well as your local technical support team and product hotlines, take a look at the ETAS website:

www.etas.com/en/hotlines.php



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