Getting Started with the Slot CPU

Introduction

Your order includes an Ethernet interface based on a slot CPU that connects the host PC to the dSPACE system integrated in an expansion box. Software running on the slot CPU manages the communication between the host PC and the dSPACE system.

License terms for software on the slot CPU

The software includes a Linux operation system with a range of auxiliary software components. These software components are third-party products that are licensed and subject to additional terms and conditions.

The complete license terms of these software components are provided as files on the data storage of the slot CPU. The data storage is a CompactFlash card that is inserted in the card reader at the rear side of the slot CPU. The root directory of the CompactFlash card contains a folder called Licensing, which contains the files with the license terms and the bill of materials (BOM).

Starting-up the Slot CPU

Preparing steps

Required components

The following components from your order are used to connect the host PC and the dSPACE system in the expansion box via Ethernet:

- Slot CPU
- Network cable

The delivery also includes all the standard accessories provided by the slot CPU manufacturer. These are not required for the dSPACE use case.
**Installing the slot CPU**  The slot CPU is to be installed in the expansion box, it does not require an extra power supply unit.

---

**WARNING**

**Risk of electric shock and/or hardware damage due to hazardous voltages inside the expansion box**

Before starting the installation:

- Switch off the power supply of host PC and expansion box.
- Disconnect the expansion box from the mains.
- Disconnect all the external devices from the expansion box.

---

**NOTICE**

**Risk of hardware damage due to specific board combinations**

Installing slot CPUs and DS814 Link Boards commonly in one expansion box might damage components on the boards.

- Remove any DS814 Link Board from the expansion box before you install the slot CPU.
- Do not install more than one slot CPU in one expansion box.

---

To install the slot CPU, refer to *Installing the Hardware (DS1006 Hardware Installation and Configuration Guide)*.

---

**Handling the CompactFlash card**

For proper communication, the CompactFlash card must be inserted into the card reader of the slot CPU. Any modification of data on the card might disrupt Ethernet communication.

---

**NOTICE**

**Risk of hardware damage or data loss**

Inserting or removing the CompactFlash card while the expansion box is operating might corrupt data on the card or damage the card physically.

- Switch off the expansion box and disconnect it from the mains before inserting or removing the CompactFlash card.
You can establish an Ethernet connection between host PC and slot CPU directly or via a network. For the required working steps and settings of the network adapters, refer to the following tables and illustrations.

### Setup for Peer-to-Peer Connection

<table>
<thead>
<tr>
<th>Host PC</th>
<th>AutoBox/Expansion Box</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethernet</td>
<td>Slot CPU</td>
</tr>
<tr>
<td>USB to Ethernet</td>
<td>DS814</td>
</tr>
</tbody>
</table>

#### Workflow

To connect host PC and slot CPU directly via Ethernet, proceed as follows:

1. Set the network adapter of the host PC to the following values:
   - IP address: 192.100.100.1
   - Subnet mask: 255.255.255.0
2. Leave the settings of the network adapter of the slot CPU at their default values:
   - IP address: 192.100.100.98
   - Subnet mask: 255.255.255.0
3. Connect slot CPU and host PC as shown in the illustration and power them up sequentially: First the expansion box, then the host PC.
4. To test the connection, use the ping command on the host PC.

For detailed information on how to set up the Ethernet connection, refer to Setting Up an Ethernet Connection Between PC and Expansion Box ([DS1006 Hardware Installation and Configuration Guide](#)). As a registered customer, you can obtain this information also from [www.dspace.com/go/DS1006EthernetConnection](http://www.dspace.com/go/DS1006EthernetConnection).

---

### Setup for Connection via Network

<table>
<thead>
<tr>
<th>Host PC</th>
<th>AutoBox/Expansion Box</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethernet</td>
<td>Slot CPU</td>
</tr>
<tr>
<td>USB to Ethernet</td>
<td>DS814</td>
</tr>
</tbody>
</table>

#### Workflow

To connect host PC and slot CPU via an existing network, proceed as follows:

1. Establish a peer-to-peer connection between host PC and slot CPU as described in the previous table.
2. Set network address and subnet mask of the slot CPU according to the network requirements.
3. Set network address and subnet mask of the host PC according to the network requirements.
4. Disconnect host PC and slot CPU and connect both to the existing network as shown in the illustration.
5. To test the connection, use the ping command on the host PC.

For detailed information on how to set up the Ethernet connection, refer to Setting Up an Ethernet Connection Between PC and Expansion Box ([DS1006 Hardware Installation and Configuration Guide](#)). As a registered customer, you can obtain this information also from [www.dspace.com/go/DS1006EthernetConnection](http://www.dspace.com/go/DS1006EthernetConnection).
Platform registration

After the Ethernet connection between host and slot CPU is established, you have to register the platform for use. During the registration, for example in ControlDesk, set the Connection type and Network client properties as follows:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection type</td>
<td>NET</td>
</tr>
<tr>
<td>Network client</td>
<td>&lt;IP address of slot CPU&gt;</td>
</tr>
</tbody>
</table>

![Platform registration screenshot](image)

How to Contact dSPACE

Mail: dSPACE GmbH
      Rathenastraße 26
      33102 Paderborn
      Germany

Tel.: +49 5251 1638-0

Fax: +49 5251 16198-0

E-mail: info@dspace.de

Web: http://www.dspace.com

© 2019, dSPACE GmbH. All rights reserved. Brand names or product names are trademarks or registered trademarks of their respective companies or organizations.