Kollmorgen Visualization Builder
HMI Panel Image User's Guide

Kollmorgen Visualization Builder Software is part of the high-performance Motion Control and Automation Systems Development Suite of tools from Kollmorgen. Using this software suite, you can quickly and easily create Operator Interface panels that are easy to develop and intuitive to use.

Edition A, April 2017

Keep all manuals as a product component during the life span of the product.
Pass all manuals to future users / owners of the product.
IMPORTANT NOTICE

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Technical changes which improve the performance of the device may be made without prior notice!

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5 Creating a custom Welcome Screen
1 INTRODUCTION

1.1 Safety Precautions

Both the installer and the owner and/or operator of the HMI panel must read and understand the manual.

1.2 Trademarks

Microsoft, Windows, Windows embedded CE6, Windows Embedded Compact 2013, Windows 7, Windows Embedded Standard 7 are registered trademarks or trademarks of Microsoft Corporation in the USA and/or other countries. Any additional trade names given in this documentation are trademarks of their corresponding owners.
1.3 References

The installation, technical data as well cutout and outline dimensions of the panels are described in the installation manual for each HMI panel. Please refer to the Installation manuals and the Kollmorgen Visualization Builder manual for further information.

Note:
Current documentation and software updates can be found on http://www.kollmorgen.com
## 1.4 Operating Systems

<table>
<thead>
<tr>
<th>Panel family</th>
<th>Runtime Versions (licenses)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>– AKI-MOD-CDA</td>
<td>Windows CE6</td>
<td>Includes support of most existing features.</td>
</tr>
<tr>
<td>– AKI-MOD-CDB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>– AKI2G-MOD-CDA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>– AKI2G-MOD-CDB-07T</td>
<td>Windows Embedded Compact 2013 Runtime (Entry)</td>
<td>Basic license, not supporting: Streaming Media Playback PDF Reader VB Script Jscript</td>
</tr>
<tr>
<td>– AKI2G-MOD-CDB-12T</td>
<td>Windows Embedded Compact 2013 Runtime (General embedded)</td>
<td>Includes support of most existing features.</td>
</tr>
</tbody>
</table>
2 BOOT

2.1 Welcome Screen

1. Apply power to the HMI panel.
2. Within 20–30 seconds, the Welcome Screen will appear.

The following items about the HMI panel are listed:
• Size of internal memory card, if applicable
• IP address
• Panel image version

If a project has been downloaded to the panel, it will be loaded automatically.
If there is no project in the panel, touching the screen will display the Service Menu.

![Welcome Screen on an HMI panel](image)

**Figure 2-1:** The Welcome Screen on an HMI panel

<table>
<thead>
<tr>
<th>Position</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>HMI panel type.</td>
</tr>
<tr>
<td>2</td>
<td>External Memory card status.</td>
</tr>
<tr>
<td>3</td>
<td>Network status. If a network cable has been detected, an asterisk is shown after the IP address.</td>
</tr>
<tr>
<td>4</td>
<td>Panel image main version and build number.</td>
</tr>
</tbody>
</table>
3 SERVICE MENU

The service menu for the HMI panel can be accessed before a project is downloaded.

3.1 Service Menu in an Empty Panel

When no project is loaded in the panel memory, the panel will boot, displaying the Welcome screen.

• Press anywhere on the panel display to enter the service menu.

3.2 Service Menu in a Panel containing a Project

Perform the following steps to enter the service menu:

1. Apply power to the panel.
2. When the hourglass appears, press a finger on the screen and hold for approximately 20 seconds.
3. If the service menu is password protected, you will be prompted for a pin code. Enter pin code.
4. The touch calibration screen will display the following message: “Tap anywhere on screen or touch calibrate will start in 10 seconds.”
5. Press the screen once again to enter the service menu.

3.3 IP Settings

The following parameters can be set:

• IP address
• Subnet mask
• Default gateway
• DNS settings for the Ethernet port on the HMI panel

The default setting for LAN A is: IP address 192.168.1.1, Subnet mask 255.255.255.0
If the HMI panel is equipped with two Ethernet ports, then a second tab is shown in the IP settings dialog. The default setting for LAN B is “Obtain and IP address via DCHP”.

### 3.4 Date / Time

The date/time settings dialog allows setting of the Time zone, date, time and also setting automatic adjustment of clock for daylight saving.

### 3.5 Edit Project

The edit project / restore image dialog allows modifying the project in an HMI panel and, if needed, restore the panel image to a previous version.

#### 3.5.1 Copy Project from External Memory

This option enables the function to copy an Kollmorgen Visualization Builder project from an external memory, USB flash drive or storage device connected to one of the HMI panels USB-ports.

#### 3.5.2 Copy Project to SD Card

This option enables the function to copy the Kollmorgen Visualization Builder project and all the files needed to run the application to an external SD Card.
3.5.3 Copy Project to USB

The Kollmorgen Visualization Builder project and all the files needed to run the application are copied to an external USB flash drive or other USB connected storage device. Make sure that the storage device is connected before trying this option.

3.5.4 Delete Project

The Kollmorgen Visualization Builder project and all its corresponding files are deleted from the HMI panel. There is no way of undeleting a project, make sure that the project should be deleted before confirming the deletion.

3.5.5 Restore Panel to Previous Image

The HMI panel image can be restored to the panel image version the HMI panel was using, before a new panel image was loaded into the HMI panel. This option is used to restore a panel to a known working condition.

![Restore Previous Image]

Note: This option is only available on AKI2G-MOD-CDB

3.5.6 Restore Panel to Factory Image

The HMI panel image can be restored to the panel image version that the HMI panel was shipped with from the factory. Use this option if all else fails, this will downgrade the HMI panel to its initial state.

Note: This option is only available on AKI2G-MOD-CDB
3.6 **Self Test**

The self test screen looks a little different depending on HMI panel type. To be able to fully test the Carrier unit, a complete set of test plugs, SD-card and a USB flash drive is needed.

![Self Test Screen](image)

3.7 **Touch Calibrate**

The touch calibration screen enables the function to recalibrate the touch screen. The recalibration consists of five steps, where a crosshair on the screen is pressed and held. Take care and try to do this as precise as possible, an incorrect calibration makes it hard to use the HMI panel.

![Touch Calibrate Screen](image)

3.8 **Debug Logging**

The Debug Logging dialog enables the function to enable and disable the debug logging on the HMI panel. It also enables the function to move a previously created set of debug log files from the HMI panel to an USB flash drive.

![Debug Logging Screen](image)

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable Logging</td>
<td>The HMI panel will start or continue to store additional debug log information in log files. A total of 10 log files of a maximum of 100 kB per file will be kept in the HMI panel internal memory. If the log files are filled to the limit, the oldest file will be over written first. This function should only be used for a limited time, as it will continuously write data to the flash memory and by that add to the flash memory wear.</td>
</tr>
<tr>
<td>Disable Logging</td>
<td>The HMI panel stops storing debug log data. The data will remain in the HMI panel internal memory.</td>
</tr>
<tr>
<td>Move Log to USB Memory</td>
<td>Moves the debug log files in the HMI panel to an external USB storage device.</td>
</tr>
</tbody>
</table>
## 3.9 Diagnostic

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diagnostics</strong></td>
<td>Shows how many times the HMI panel has been started, how long the operating panel has been running, measured temperatures and the wear of the flash memory.</td>
</tr>
<tr>
<td><strong>Image Information</strong></td>
<td>Displays a list of the panel images available on the HMI panel.</td>
</tr>
<tr>
<td><strong>Panel Information</strong></td>
<td>Shows the make, model and revision of the HMI panel.</td>
</tr>
<tr>
<td><strong>System Board</strong></td>
<td>Shows hardware information of the System board in the HMI panel.</td>
</tr>
<tr>
<td><strong>Display Card</strong></td>
<td>Shows hardware information of the Display card in the HMI panel.</td>
</tr>
</tbody>
</table>

### Diagnostics

<table>
<thead>
<tr>
<th>Cost Code</th>
<th>Type</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>D00001</td>
<td>D715</td>
<td>1</td>
</tr>
<tr>
<td>T00001</td>
<td>123</td>
<td>2</td>
</tr>
<tr>
<td>E00001</td>
<td>456</td>
<td>3</td>
</tr>
<tr>
<td>S00001</td>
<td>789</td>
<td>4</td>
</tr>
</tbody>
</table>

### Image Information

- **Flash Memory:** 128 MB
- **Operating System:** Windows Embedded Standard

### Panel Information

- **Make:** Kollmorgen
- **Model:** Panel Image
- **Revision:** 1.0

### System Board

- **Type:** 32-bit (1)
- **Operational Time:** 234.8 h
- **Manufacturer:** Schneider Electric
- **Board Temperature:** 45°C
- **Board Temp. Range:** 20°C to 55°C
- **Board Temp. Unit:** °C
- **Display:** LCD

### Display Card

- **Model:** Panel Image 1001
- **Version:** 1.0
- **Revision:** 2.0
- **Firmware:** 3.6
- **Display Memory:** 128 MB

### Selftest

- **Result:** Passed

### Summary of Flash Drive Storage

- **Type:** NAND Flash
- **Capacity:** 1 GB
- **Free Space:** 500 MB

### Network Adapters

- **IP Address:** 192.168.1.10
- **Netmask:** 255.255.255.0
- **Gateway:** 192.168.1.1
- **Default Gateway:** 192.168.1.1
- **MAC Address:** 00:10:00:00:00:00
Note:
The information (layout and number of screens) on the diagnostic screen pages appear differently depending on
screen size. The screenshots above are taken from a AKI2G-MOD-CDB-12T-000 HMI panel.

3.9.1 Export Diagnostic Information

Click **Save to USB memory** to export the diagnostic information to an external USB flash drive or
other USB connected storage device. Make sure that the storage device is connected before trying
this option.
4 IMAGE UPDATE

In the HMI panel, KVB Runtime comes pre-loaded on delivery. KVB Runtime can be updated, either via Ethernet using a PC, or in some cases, using an external storage device. The Image Loader utility is used to create Image Loader SD-cards and USB-sticks or to transfer a panel image to an HMI panel over Ethernet.

Note:
The Make Recovery SD Card option should only be used after first consulting with Kollmorgen support.

4.1 Updating the Panel Image using USB or SD-Card

4.1.1 Preferred Way

Using a USB flash drive or SD-card to update the image in an HMI panel is the preferred method of updating the panel. This makes it possible to upgrade the panel image without the use of a PC.

Note:
AKI-MOD-CDA and AKI2G-MOD-CDA do not support updates from external storage.

4.1.2 Image + New Kollmorgen Visualization Builder Project

It is possible to upgrade both the panel image and the Kollmorgen Visualization Builder project on an HMI panel. This is done in two steps:

1. Create a panel image USB flash drive or SD-card using the Image Loader utility.
2. Export the Kollmorgen Visualization Builder project from within Kollmorgen Visualization Builder, to that same USB flash drive or SD-card.

4.2 Updating the Panel Image over Ethernet

The Image Loader utility can be used to upgrade the panel image over Ethernet.

**Note:**
Before trying to update the panel over Ethernet, make sure that your PC is on the same IP-subnet as the HMI panel. If your panel has an IP address of 192.168.1.1, and a netmask of 255.255.255.0, then your PC has to have an IP address in the range of 192.168.1.2 – 192.168.1.254 and a netmask of 255.255.255.0, in order to be able to communicate with the panel.

1. Enter the panel target IP address in the dialog and click on **Update** to start the update.

![Update Screen](image1)

2. Make sure that the IP address of the panel matches the actual panel that you want to upgrade.

![Update Confirmation](image2)
3. The dialog shows the current installed image and the new image the panel will be updated to after the upgrade. Click on **Update now!** to confirm the update.

4. The progress bar shows the upgrade status. When the upgrade is done, the panel will restart.

4.3 Kollmorgen Visualization Builder Project Status after Panel Image Update

On AKI2G-MOD-CDB, the Kollmorgen Visualization Builder project is unchanged after a panel image update is performed. If the panel image upgrade is made over Ethernet, an additional dialog will pop up to confirm an erasing of the current Kollmorgen Visualization Builder project. The default setting is not to erase the Kollmorgen Visualization Builder project.
5 CREATING A CUSTOM WELCOME SCREEN

The default Welcome Screen on a AKI2G-MOD-CDB HMI panel can be replaced with a custom picture.

1. Create a start-up picture with the following characteristics:
   - Size: The exact same resolution as the panel the picture will be used in
   - Name: iXCustomSplash.bmp
   - Picture format: .bmp

2. Create a Kollmorgen Visualization Builder project for the panel you want to replace the Welcome Screen on.

3. Add the picture to the project's Project Files.

4. Download the project to the HMI panel.

5. Reboot the panel to load the new Welcome Screen.

Tip:
To check the panel resolution, start Kollmorgen Visualization Builder, and in the wizard select the correct panel type, and then check the technical data displayed for the HMI panel.
About KOLLMORGEN

Kollmorgen is a leading provider of motion systems and components for machine builders. Through worldclass knowledge in motion, industry-leading quality and deep expertise in linking and integrating standard and custom products, Kollmorgen delivers breakthrough solutions that are unmatched in performance, reliability and ease-of-use, giving machine builders an irrefutable marketplace advantage.

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