UeiBridge suit users guide

# Introduction

UeiBridge application mediates between a testing simulator and Uei-Cube which contains several i/o cards.

# UeiBridge (main application)

## Application activity

Udp messages[[1]](#footnote-1) that are sent to UeiBridge, are translated to commands which are applied to one of the output cards.

UeiBridge constantly reads the input cards, convert the data to icd format, and send udp messages with the data to the test-simulator

## Cube Configuration

The configuration of each cube is saved in a dedicated file ('<file>.config'). This is an XML file with an entry for each device (card). An entry might refer to input device, output device, or both.

The configuration file is first produced by UeiBridge. If UeiBridge can't find an existing configuration file for connected cube at startup, it automatically generates new default file. This file might be edited later with the CubeDesign GUI application.

### Output device

Here is an example for minimal configuration of output device:

<DeviceSetup xsi:type="AO308Setup" IsEnabled="true">

<DeviceSlot>0</DeviceSlot>

<DeviceName>AO-308</DeviceName>

<LocalEndPoint>

<Address>227.3.1.10</Address>

<Port>50200</Port>

</LocalEndPoint>

</DeviceSetup>

Details:

**IsEnabled**: User can decide to disable a certain device. In this case UeiBridge will not refer to this device (as if it not exists).

**DeviceSlot**: Each device is laid in a specific slot in the cube/rack. Slot numbering starts from zero. Not that the slot number and the device name **must** match.

**DeviceName**: The name that is given to the device by the manufacture.

**LocalEndPoint**: This field is unique to output devices. It defines the multicast address in which UeiBridge listen to messages that are aimed to this device. Basically, UeiBridge listen to incoming udp messages from selected NIC (see "Selection of local network card for multicast"). An option to listen on all network interfaces is not defined yet.

### Input device

Here is an example for minimal configuration of input device

<DeviceSetup xsi:type="AI201100Setup" IsEnabled="true">

<DeviceSlot>2</DeviceSlot>

<DeviceName>AI-201-100</DeviceName>

<DestEndPoint>

<Address>227.2.1.10</Address>

<Port>50201</Port>

</DestEndPoint>

</DeviceSetup>

Details:

**IsEnabled** , **DeviceSlot**, **DeviceName**: Same definitions as for 'Output Device'.

**DestEndPoint**: This field is unique to input devices. It defines the multicast address into which UeiBridge shall send messages with samples read from this device. UeiBridge sends these messages through selected NIC (see "Selection of local network card for multicast").

## Selection of connected cube

## Selection of local network card for multicast

# StatusViewer

## How StatusViewer select network card for multicast

# ByteStreamer3

# CubeDesign

# CubeNet

1. Udp multicast messages with predefined icd format. [↑](#footnote-ref-1)