Overview

The purpose of the D413 – MVB Software Development Kit – is to support the integration of any Duagon MVB Interface into a customer controller platform. The application engineer can start implementation of the MVB application software before the final hardware platform is ready. The D413 offers the same API (Application Programming Interface) as any Duagon MVB Interface. An application implemented using the D413 just needs to be linked with the MVB driver software ported to the customer hardware platform.

Operation Mode

The D413 can operate in both, MDFULL and SERVER mode (selectable by switch).

- **MDFULL**
  - passive interface, i.e. direct access to MVB Controller
  - MVB Process Data communication (full range of 4096 ports)
  - MVB Bus Administrator

- **SERVER**
  - active interface, i.e. Client-Server architecture running MVB communication stack on board
  - MVB Process Data communication (full range of 4096 ports)
  - MVB Message Data communication
  - MVB Bus Administrator

Configuration of Duagon MVB Interfaces

The operation modes MDFULL and SERVER of D413 are the same like the available configuration of any Duagon MVB Interface. Please note, that the MVB Bus Administrator is optional on some MVB interfaces.

The integration of any Duagon MVB Interface into a customer controller platform mainly means the following three steps:
1. hardware integration
2. porting of driver software
3. implementation of MVB application software

With D413 you can start MVB application software development immediately.

USB is used as communication interface between D413 and the development workstation. The D413 is also powered by the USB connection.

The D413 supports both configuration available for any Duagon MVB Interface:
- MDFULL
- SERVER

MVB communication is possible with ESD+ and EMD based networks.
Host Interface
The host system for the D413 will be a standard PC workstation. It will be connected using the USB interface, which also provides power supply.

Note: The D413 will be delivered with an USB cable.

MVB Type
The D413 supports MVB type ESD+ and EMD, which is selectable by switches.

Note: The D413 will be delivered with a MVB cable D297 (EMD).

Software
Overview
The Driver Kit for D413 contains all software ready to run your own MVB application:
• USB device driver
• MVB driver for MDFULL and SERVER (binary library as well as source code)
• MVB network administration tool D2000
The Driver Kit supports standard PC operating systems (i.e. Win32).

Supported MVB Interfaces
- D113: PC/104
- D013: MVB Controller Component
- D015: PC/30
- D016: PC/30+ (PCI Express)
- D213: PCI
- D215: cPCI (Compact PCI)
- D217: PMC (PCI Mezzanine Card)

Summary Technical Data
<table>
<thead>
<tr>
<th>Outer Dimensions</th>
<th>100 x 96 x 35 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Supply</td>
<td>5V (driven by USB connection)</td>
</tr>
<tr>
<td></td>
<td>Typ. 200mA, Max. 500mA</td>
</tr>
<tr>
<td>MVB Interface</td>
<td>MVB physical layers ESD+ and EMD (selectable by switches)</td>
</tr>
<tr>
<td></td>
<td>MVB according to IEC61375</td>
</tr>
<tr>
<td>PC Interface</td>
<td>USB</td>
</tr>
<tr>
<td></td>
<td>Net transfer time (PC to MVB) for 1 Byte approx. 100µs</td>
</tr>
<tr>
<td>Operation Mode</td>
<td>MDFULL or SERVER (selectable by switch)</td>
</tr>
</tbody>
</table>

Order Code
D413

Related Documents
- Quick Start Guide: g_d413.pdf
- Software Driver Kit: devkit_d413.zip

For further information, please refer to our website www.duagon.com or contact us by email at support@duagon.com.