Series 61
Intelligent Programmable Communication Controller

With new Series 61 GOEPBEL electronic offers the powerful communication controllers for CAN, LIN, K-Line, MOST and FlexRay. This intelligent programmable architecture enables the portability to different hardware platforms. Based on the current Series 61 modules for PCI, PXI, USB and Ethernet, and the compact automotive tester magicCAR³ are available.

The new concept allows the user to configure the controller individually and flexibly with a wide range of options to satisfy their needs or expand the functionality at a later stage. In the basic configuration, the user has two separate communication interfaces. These can be optionally extended by up to four additional ports. This results in a variety of configuration options and thus possibility of applications.

All the communication resources of the Series 61 are supported by a powerful PowerPC in connection with an extensive onboard firmware. With this architecture complex and computationally intensive processes can be realized without host PC system.

In addition to the parameterisation of the controller via the standard Windows API from GOEPBEL electronic, the user can run and debug own program code directly onboard of the Series 61 module with support of the onboard API. Later after successful installation the Series 61 module can start the user code automatically without PC support.
Hardware

- PowerPC 600 MHz with real-time operating system QNX
- 512 megabytes of RAM
- 256 megabytes of flash memory
- Maximum up to six separate communication ports for CAN, LIN, K-Line and FlexRay
- Exchangeable bus transceivers
- Up to six analogue inputs and outputs in parallel with the communication ports
- Up to eight digital inputs and outputs in parallel with the communication ports
- Galvanic isolation of all resources

Software

- General API including HardwareExplorer for Windows
- Onboard firmware features to support all resources
- Onboard API for user programming
- LabVIEW® driver library
- Onboard support for transport protocols, diagnostics, network management, etc.
- Trace and replay functions

Configuration Overview

<table>
<thead>
<tr>
<th>Function</th>
<th>6153</th>
<th>6161</th>
<th>6173</th>
<th>6181</th>
<th>6191</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port 1</td>
<td>CAN</td>
<td>MOST</td>
<td>LIN / K-Line</td>
<td>CAN</td>
<td>FlexRay</td>
</tr>
<tr>
<td>Port 2</td>
<td>CAN</td>
<td>Option 1</td>
<td>LIN / K-Line</td>
<td>Option 1</td>
<td>Option 1</td>
</tr>
<tr>
<td>Port 3</td>
<td>Option 1</td>
<td>Option 1</td>
<td>Option 1</td>
<td>Option 1</td>
<td>Option 1</td>
</tr>
<tr>
<td>Port 4</td>
<td>Option 1</td>
<td>Option 1</td>
<td>Option 1</td>
<td>Option 1</td>
<td>Option 1</td>
</tr>
<tr>
<td>Port 5</td>
<td>Option 2</td>
<td>Option 2</td>
<td>Option 2</td>
<td>Option 2</td>
<td>Option 2</td>
</tr>
<tr>
<td>Port 6</td>
<td>Option 2</td>
<td>Option 2</td>
<td>Option 2</td>
<td>Option 2</td>
<td>Option 2</td>
</tr>
<tr>
<td>Analogue and digital-I/O</td>
<td>Option 3</td>
<td>Option 3</td>
<td>Option 3</td>
<td>Option 4</td>
<td>Option 4</td>
</tr>
</tbody>
</table>

Option 1: one additional CAN or LIN / K-Line port
Option 2: one additional FlexRay port
Option 3: eight digital inputs; eight digital outputs; six analogue inputs; six analogue outputs
Option 4: eight digital inputs; eight digital outputs; four analogue inputs; four analogue outputs; one SPI interface
Option 5: four digital inputs; four digital outputs