Scope

This demo system was designed to allow the evaluation and test of POWERLINK for CODESYS, an extension to the CODESYS SoftPLC technology to control I/O systems over the POWERLINK Ethernet protocol.

Functionality

The Industrial Control System is based on a BeagleBone Black board on which the CODESYS Control Runtime System for BeagleBone SL and the openPOWERLINK stack have been installed, turning the board into a CODESYS programmable POWERLINK Managing Node.

The programming of the ICS is done with CODESYS V3. The configuration of the POWERLINK bus is done with the POWERLINK Configuration Editor, a CODESYS plug-in editor.
Included in the demokit:

**Hardware**
- BeagleBone Black board from element14: [LINK](http://example.com)
- POWERLINK I/O modules (X20 BC 0083, X20 PS 9400, X20 DI 9371, X20 DO 9322) from B&R: [LINK](http://example.com)
- USB stick with CODESYS project and all documentation

**Software**
- CODESYS Control for BeagleBone SL license: [LINK](http://example.com)
- openPOWERLINK stack: [LINK](http://example.com)
- POWERLINK for CODESYS (CODESYS runtime I/O driver)
- 1 license POWERLINK e-learning on BE.educated®: [LINK](http://example.com)

**Documentation**
- System Information POWERLINK for CODESYS
- Datasheet POWERLINK for CODESYS
- Documentation from Texas Instruments

**First steps:**
- Power the system
- On your PC, install the following:
  - CODESYS Development System V3 ([store.codesys.com/codesys.html](http://store.codesys.com/codesys.html))
  - POWERLINK Configuration Editor ([store.codesys.com/powerlink-configuration-editor.html](http://store.codesys.com/powerlink-configuration-editor.html))
- Open project provided on USB stick
- Go through the e-learning course for POWERLINK on BE.educated® ([www.be-educated.net](http://www.be-educated.net)) following instructions as provided on the USB stick
- A complete training on CODESYS is available on BE.educated® ([www.be-services.net/education/courses.html#c486](http://www.be-services.net/education/courses.html#c486)) – not included in this demokit

**Engagement model**
One stop shopping, support and optional integration services are provided by BE.services.

**How to get?**

<table>
<thead>
<tr>
<th>Technology</th>
<th>Manufacturer</th>
<th>Part No.</th>
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<th>Price</th>
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<tbody>
<tr>
<td>Demokit - POWERLINK for CODESYS</td>
<td>BE.services GmbH</td>
<td>0230004</td>
<td><a href="mailto:info@be-services.net">info@be-services.net</a></td>
<td>249 EUR + VAT</td>
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</table>

**Featured Manufacturers**

[Texas Instruments](http://example.com)
[BE.](http://example.com)
[CODESYS](http://example.com)
[ETHERNET POWERLINK Standardization Group](http://example.com)

**Support**
Please contact info@be-services.net

Usefull links for POWERLINK: [www.ethernet-powerlink.com](http://www.ethernet-powerlink.com)
Usefull links for CODESYS: [www.codesys.com](http://www.codesys.com)