SPiiPlusES

High Performance Multi-Axis EtherCAT®
Controller & DS402 Multi-Axis EtherCAT® Drive Node

SPiiPlusES as a DS402 Multi-Axis EtherCAT Drive Node

- Can be managed by any EtherCAT Automation Controller
- Up to 8 axes utilizing standard DS402 CoE drive commands
- Up to 64 axes utilizing manufacturer’s specific DS402 CoE drive commands
- Distributed clock
- Up to 5kHz EtherCAT cycle rate

SPiiPlusES as an EtherCAT Master

- Identical to SPiiPlusEC, powerful EtherCAT Motion Controller
- Up to 64 axes and many I/Os
- Up to 5kHz EtherCAT cycle rates
- NetworkBoost™ for cable failure detection and recovery
- Can be synchronized to the distributed clock of the external network

The SPiiPlusES is a high performance programmable motion controller and EtherCAT Master that can be connected as a node to any EtherCAT network utilizing the standard DS402 CAN Over EtherCAT (CoE) protocol. To the external EtherCAT Master it looks like a highly programmable multi-Axis motor drive.

The SPiiPlusES expands the capability of any EtherCAT Automation Controller to manage up to 64 axes and thousands of I/O utilizing ACS EtherCAT sub-network. With up to 8 drives/axes, standard DS402 commands are used. For additional drives/axes, up to 64, DS402 manufacturer’s specific commands are used. It supports distributed clock and the ability to synchronize the two EtherCAT networks. Any application in the fields of Semiconductors, Laser micro-machining, Electronics manufacturing, digital printing and more, that uses an EtherCAT automation controller will benefit from the unique and advanced capabilities of ACS programmable motion controller and wide range of drives to enhanced accuracy and throughput.

CE Pending
EtherCAT® is registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany

Contact us: sales@acsmotioncontrol.com | www.acsmotioncontrol.com
Specifications

Number of Axes
As a Master: Up to 64 axes
As a Slave: Up to 64 axes, Thousands of I/O's

Motion Types
• Multi-axis point-to-point, jog, tracking and sequential multi-point motion
• Multi-axis segmented motion with look-ahead
• Arbitrary path with PVT cubic interpolation
• Third order profiles (S-curve)
• Smooth on-the-fly change of target position or velocity
• Inverse/Forward kinematics and coordinate transformations
  (at application level)
• Master-slave with position and velocity locking (electronic gear/cam)

Programming
• ACSPL+ powerful motion language
  › Real-time program(s) execution
  › Up to 64 simultaneously running programs / threads
• NC programs (G-code)
• C/C++, .NET and many others standard languages

EtherCAT Ports
Communication with an External EtherCAT Master:
EtherCAT In & EtherCAT Out, RJ45 connectors
DS402 protocol
As an EtherCAT Master:
EtherCAT In & EtherCAT Out, RJ45 connectors
NetworkBoost* (optional) - Automatic network failure detection and recovery using ring topology and redundancy

Additional Host Communication Ports
Serial: two RS-232. Up to 115,200 bps
Ethernet: One,100/1000 Mbs

MPU
RAM - 1GB
Flash - 512MB
EtherCAT cycle rates: 1,2,4,5kHz (depends on the number of axes)

Power Supply
Input: 24Vdc ± 20%, < 0.8A
Protection: reverse polarity

Environment
Operating range: 0 to + 50°C
Storage and transportation range: -25 to +60°C
Humidity (operating range): 5% to 90% non-condensing

Dimensions
158 x 48 x 149 mm³

Weight
700 gr.

Accessories
Din rail mounting kit (DINM-13-ACC) included with product

Ordering Options

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<thead>
<tr>
<th>Field</th>
<th>Example selection by user</th>
<th>Optional Values</th>
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<td>Maximum number of axes</td>
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<td>EtherCAT 3rd party Servo Drive</td>
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<tr>
<td>EtherCAT 3rd party Step motor Drive (open &amp; closed loop)</td>
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<tr>
<td>EtherCAT 3rd party IO EtherCAT node</td>
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Example SP+ES08040432NAY4NAYN

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