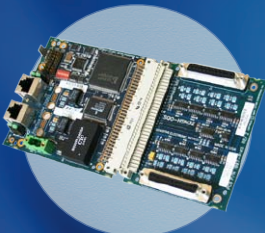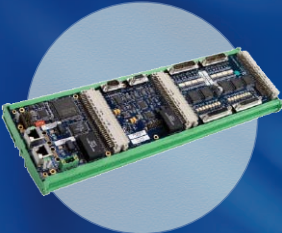# Performance. Motion. Network.

SynqNet™ Developer Kits

SynqNet®

Why SynqNet Developer Kits?

Customize & Differentiate Your Products

The SynqNet™ Developers kit contains everything you need to successfully design a SynqNet interface into a drive, I/O block, or custom network node. Support is provided for servo and stepper drives, I/O, and feedback devices, in single and multiple axis configurations. Developing integrated SynqNet products provides a cost effective way to benefit from SynqNet's unique features and adds value to new or exisitng products.

All-Digital Network Performance

SynqNet is a high performance network technology designed by Kollmorgen based on IEEE 802.3 (100BaseT) to simplify machine development and manufacture, and lower the cost of in-field support and upgrade. SynqNet replaces the noise-prone analog drive - motion controller interface (±10V + Encoder) with a real-time digital network that brings additional diagnostic, performance and reliability benefits to a machine. SynqNet supports native I/O solutions for convenient integration with motion programming and other system APIs.

SynqNet Developer Kits Includes:

- Three Development Options – SynqNet Interface for: Remote Motion Block, I/O Interface, or Drive Integration
- Schematics
- Programmable Images – FPGA and CPLD
- Bill of Materials
- SynqNet On-Site Training Program
- Design review
- Prototype integration into network
- Performance and interoperability testing

Easy Developer Kit Selection.

Choosing the Right Package Made Easy

Drive Integration Kit

- Servo or stepper drive support for full integration and customization of drive design to "plug-n-play" on SynqNet network.
- Example: Integrate SynqNet into your exisitng drive, adding network functionality to a new or exisitng product line.

Motion Block Kit

- Custom Motion Block nodes support legacy (non-network) drives
- Example: Custom node interfaces to +/-10V drive/amplifier or CW/CCW pulse drive

I/O Module Kit

- Custom I/O modules connect to SQID node.
- Example: Custom module with special pinout for analog and digital I/O

All SynqNet Developer Kits offer

- Device configuration through the network, from one centralized controller. A server can also access the SynqNet host over a TCP/IP network for remote configuration.
- Eliminates discrete wiring: Connecting SynqNet nodes only require plugging a single connector (CAT5 cable with RJ45's or custom connectors) into the SynqNet network interface on each node.
- Machines designed with SynqNet are lower cost, easier to build, more reliable, and easier to troubleshoot than machines designed with analog motion control systems.
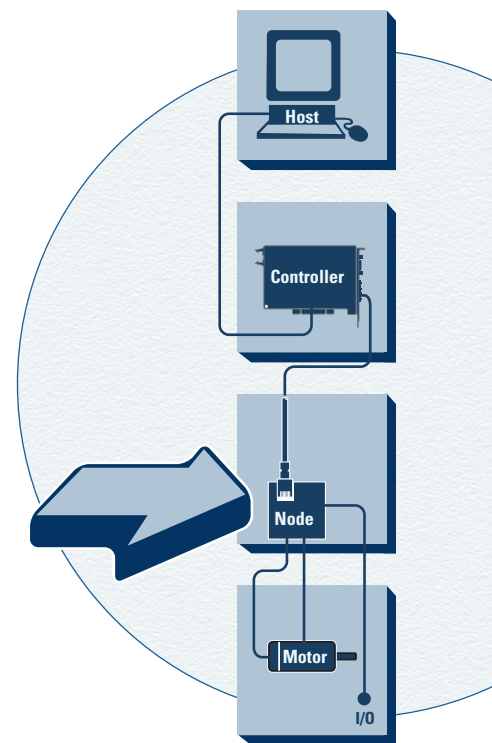
SynqNet Drive Integration Kit

Servo or Stepper Drive Interfaces Directly to SynqNet

Synqnet Reference Design Package:

- Technical introduction to SynqNet
- SynqNet Drive Interface Specification
- SynqNet Node Module Specification
- Reference Schematic for SynqNet Node
- Reference Bill of Materials (BOM)
- Standard FPGA binary images (boot and run-time)
- Standard CPLD binary image
- Software API & utilities for verification and debugging
- Technology cross license agreement

Design Engineering Support

All support is provided from SynqNet's facility in California:

- Training session: overview of SynqNet, MPI, and reference design review
- Customer schematic review session (video conference optional)
- PCB design layout review (email Gerber files, video conference)
- Integration and test session

Interoperability & Software Integration

- Driver development & software integration of partner SynqNet Node into MPI Motion library
- Motion Utility Integration for Windows point & click accessibility
- Cooperative interoperability test and final report

Ongoing Support

- 3 months telephone & email support after issuance of conformance

SynqNet.org Marketing

- Product information, images, and press releases placed on http://www.synqnet.org.

Online 24/7 Support

Access technical documentation on SynqNet controller and network technology at http://support.motioneng.com. The online system features up-to-date documentation, dynamic hyperlinks, complete search functionality, sample code for easy copy and paste usage, and print friendly PDF documentation. For in-depth information on SynqNet, supporting software, hardware, sample applications, general definitions and much more, information is only a click away.

Performance.

SynqNet Motion Block Kit

Custom Nodes Interface to Non-Network Drives/Amplifiers (+/-10V, CW/CC pulse drive, etc.)

Synqnet Reference Design Package:

- Technical introduction to SynqNet
- SynqNet Node Module Specification
- Reference schematic for SynqNet Motion Block
- Reference Bill of Materials (BOM)
- Standard FPGA binary images (boot and run-time)
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Interoperability & Software Drivers

- Driver development & software integration of partner SynqNet Node into
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- Motion Utility Integration for Windows point & click accessibility
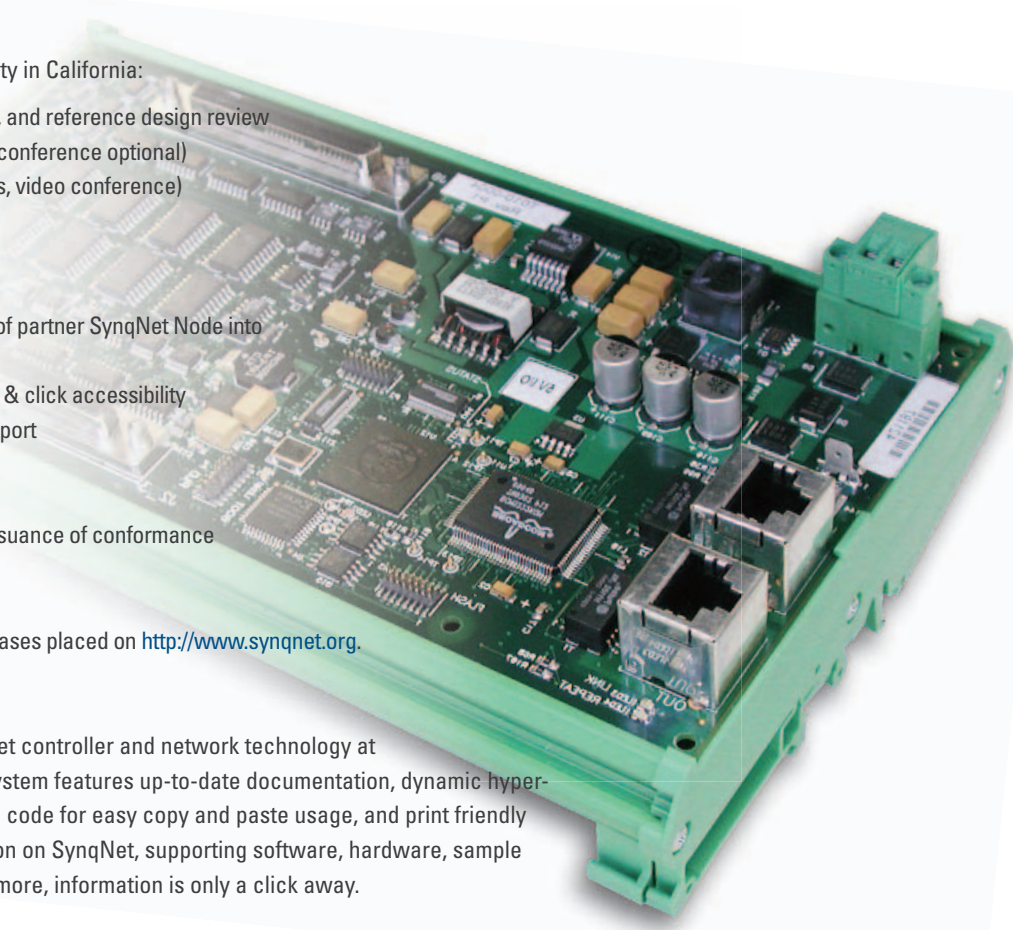- Cooperative interoperability test and final report

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Motion.

Custom I/O Module Kit

Custom Analog or Digital I/O Modules for SQID Node

Synqnet Reference Design Package:

- SQIO Designers Manual
- SQIO EEPROM Specification
- Reference schematic for SynqNet I/O Modules
- Reference Bill of Materials (BOM)
- Standard CPLD binary image
- Technology cross license agreement

Design Engineering Support

All support is provided from SynqNet's facility in California:

- Training session: overview of SynqNet, MPI, and reference design review
- Customer schematic review session (video conference optional)
- PCB design layout review (email Gerber files, video conference)
- Integration and test session

Interoperability & Software Drivers

- Standard library supports custom I/O modules
- Motion Utility for Windows point & click accessibility
- Cooperative interoperability test and final report
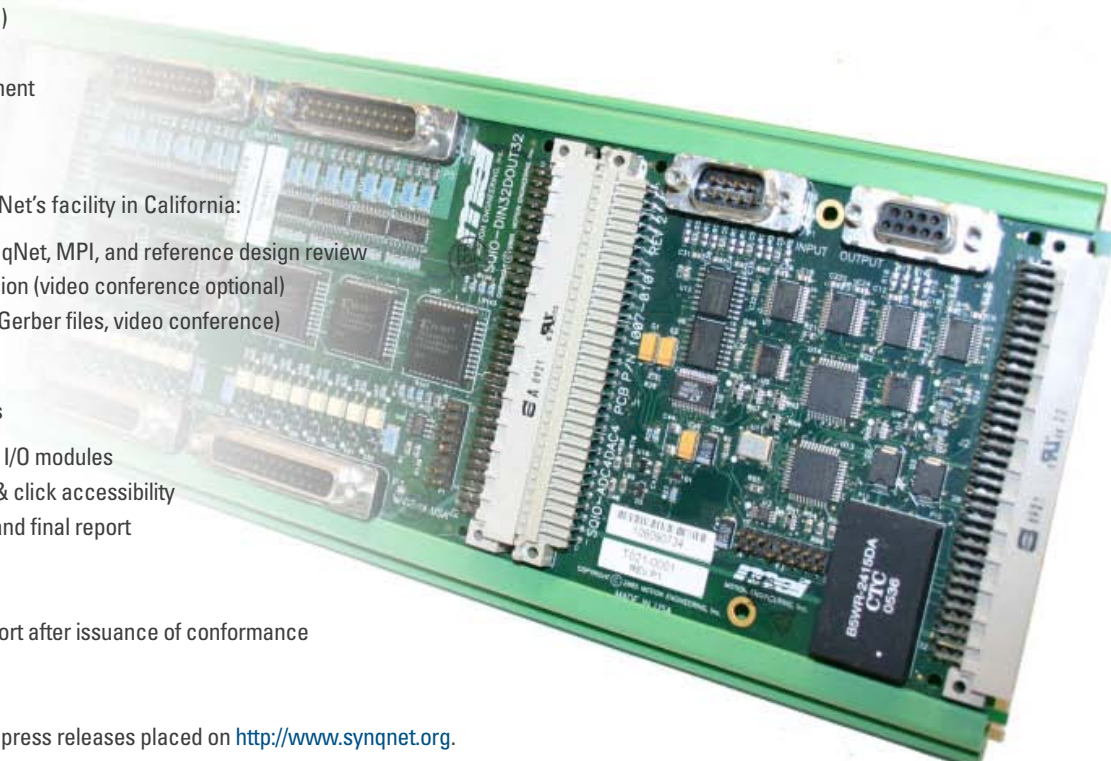
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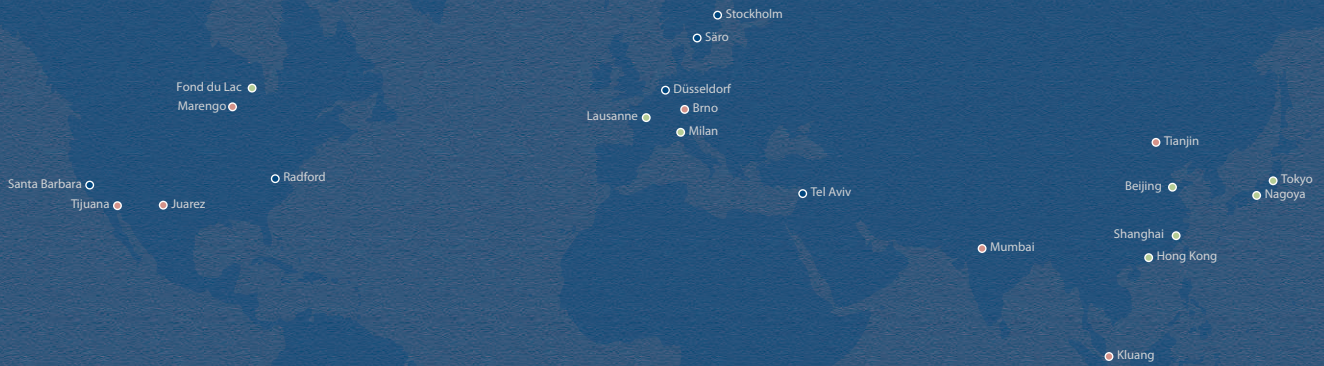
Network.

SynqNet Interest Group Contact Information

The SynqNet Interest Group is open to anyone interested in learning more about Synqnet and why it is the most widely accepted motion network.

Membership is free. Join today and receive exclusive access to SynqNet case studies, white papers, eNewsletters, SynqNet Experts, and invitations to SynqNet conferences.

Learn more at http://www.synqnet.org/interestgroup/

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