

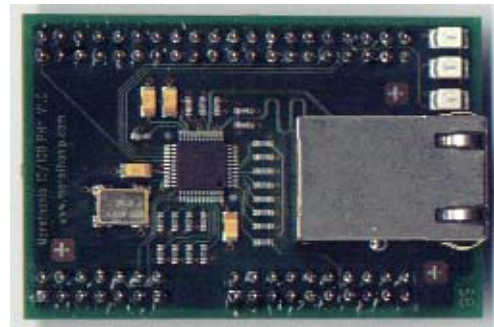
### PhyworkX Ethernet PHY Development Kit

The MorethanIP PhyworkX Fast Ethernet PHY Development Kit provides an Ethernet PHY Daughter Board enabling 10/100 Ethernet copper connectivity to embedded systems. The daughter board gives designers the ability to implement Fast Ethernet solutions for prototyping and evaluation as well as embedded software development. The daughter board is designed for use in combination with Altera Development Kits. The PhyworkX-A board provides Ethernet connectivity for 10Mbps and 100Mbps and interfaces directly to low cost Base-T copper infrastructure through a standard RJ45 connector.

In combination with the MorethanIP 10/100 Ethernet MAC the PHY daughter board can be used to quickly design, implement, prototype and test embedded Ethernet Telecom or Industrial applications with the same hardware and software environment. The PhyworkX development kit is delivered with software drivers for TCP/IP networking stacks that can be used to develop and prototype Telecom or Industrial applications.

#### PhyworkX Hardware Features Overview

- Daughter Board implemented with high performance National DP83848 10/100 Ethernet PHY device
- Mechanically and electrically compatible with Altera Santa-Cruz 74-pin Expansion Prototype Connector
- Implements Autonegotiation for automatic speed selection and automatic cable crossover configuration
- Board connector allows usage of standard MII as well as RMII (Media Independent Interface / Reduced Media Independent Interface)
- 2-Wire PHY MDIO Management Interface for PHY configuration / status available on the board connector
- Standard Ethernet Copper RJ45 connector for 10 Base-T, 100 Base-T networks
- Status LEDs providing PHY current speed information and traffic indications
- Stackable on any Altera Development Kits such as Altera Stratix / Stratix-II / Cyclone / Cycone-II NIOS-II or PCI-X boards



#### PhyworkX Software Development Kit Overview

- Software Development Kit libraries and include files for provided reference platforms based on a 32-Bit NIOS-II embedded processor
- C Software drivers for MorethanIP 10/100 Ethernet MAC Core peripheral
- Drivers for TCP/IP protocol stack supporting the MorethanIP 10/100 Ethernet MAC Core peripheral
- C Drivers for PHY control and MDIO interface
- Example applications showing Ethernet MAC raw packet transfers as well as TCP/IP stack usage with full DMA support
- Plug and Play Server Application with DHCP support
- Requires standard Nios-II Processor development environment (IDE) with Altera GNUpro compiler, debugger and linker

#### Design Package and Support

- Includes 10/100 Ethernet National DP83848 PHY daughter Board
- Reference designs in bitstream format for Altera FPGAs
- C Software for all Reference Designs with associated libraries, include files, drivers and examples in source code.
- Detailed user's and methodology guides

#### Ordering Information

MTIP-PHYWORKX-NS848-Kit