

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Nallatech BenADDA* at our website: *Click HERE*

BenONE-PCI™

Single-slot DIME-II™ Motherboard PCI card

Entry Level DIME-II Motherboard with the advantages of PCI for easy integration

Overview

The BenONE-PCI is a low-cost motherboard providing a host platform for a single width DIME-II module. As part of the scalable DIME-II family, the BenONE-PCI can be easily integrated into systems, through the range of available DIME-II motherboards and associated software/firmware.

DIME-II

Building upon the global success of the award-winning DIME standard, the DIME-II modular systems platform with TeraOPS performance enables users to harness the full capability of advanced FPGAs. DIME-II brings together unparalleled off-module I/O, flexible FPGA device support and exceptional bandwidth capabilities for next-generation systems design. The scaleable DIME-II family of products includes DIME-II motherboards, modules, firmware and software, providing a complete systems solution. The firmware and software associated with the DIME-II hardware products are designed to make FPGA and Software application design easy and integration into existing systems straightforward – reducing risk, costs and time to market.

FUSE™ Software

FUSE (Field Upgradeable Systems Environment) is Nallatech's Reconfigurable Computing Operating System. The BenONE is supplied with a Multiple Device Edition of either FUSE for Windows® or FUSE for Linux®. FUSE facilitates flexible and scaleable control and configuration of FPGA-based systems and allows data to be transferred between the BenONE and Host PC, hence allowing data transfer to and from designs running in on-board FPGAs. FUSE provides a number of interfaces, including the scripting language DIMEscript, the FUSE GUI application and FUSE development APIs for C/C++ supplied as standard. Upgrades to additional development APIs for MATLAB® or Java™ are also available.

Key Features

The on-board Spartan-II PCI FPGA is supplied pre-configured with Nallatech firmware for PCI interfacing/board control. The PCI/control firmware and low level drivers abstract the PCI interfacing from the user, resulting in a simplified design process for user designs/applications. Unlike most other Nallatech motherboards, a User FPGA is not necessary on the BenONE, since it is a single-module solution. The PCI FPGA communicates directly with the FPGA on the DIME-II module hosted by the BenONE. The BenONE also features optional USB or Ethernet connectivity, for stand-alone capability.

BenONE



DIME-II™ FUSE™

BenONE Highlights

- ✓ **DIME-II Motherboard with Single DIME-II Module Slot**
- ✓ **Connection to PC via 64bit/33MHz PCI, USB or Ethernet**
- ✓ **Xilinx Spartan-II (2S150-5) PCI FPGA, pre-configured with PCI & board control firmware**
- ✓ **Virtex-II & Virtex-II Pro supported on DIME-II modules**
- ✓ **Includes Multiple Device Edition of either FUSE for Windows® or FUSE for Linux®.**
- ✓ **FUSE includes C/C++ development API as standard**
- ✓ **FUSE upgrade to MATLAB® or Java™ development APIs**

Applications

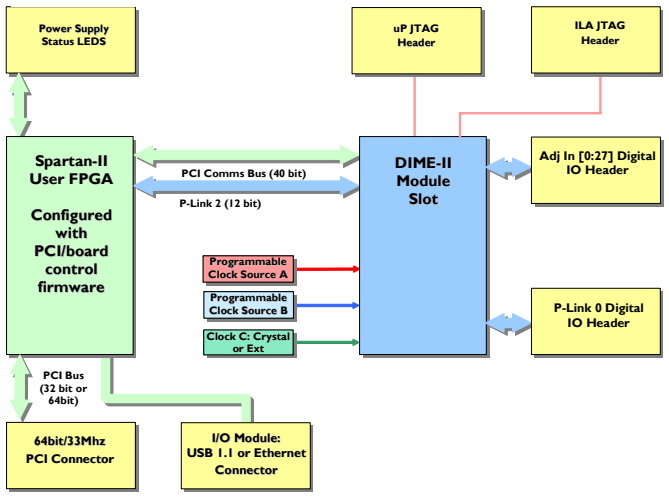
Some examples of applications for the BenONE are:

- **FPGA/ASIC development/prototyping**
- **Reconfigurable computing**
- **DSP and Imaging applications**
- **DSP/HDL/FPGA teaching laboratories**

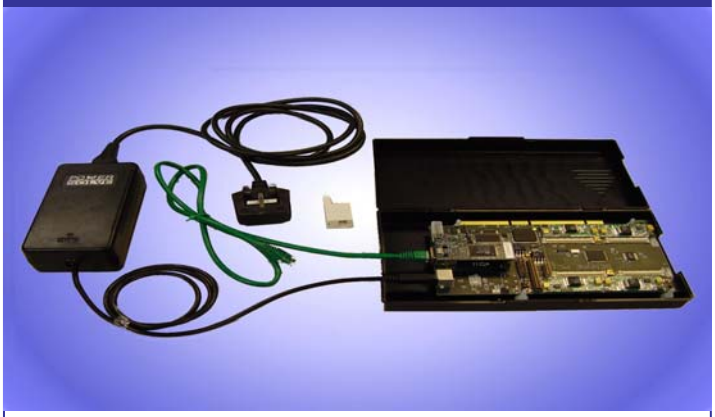
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

BenONE-PCI™

BenONE Functional Diagram



BenONE USB/Ethernet Kit



The BenONE is available for PCI use, or as the BenONE USB Kit for USB use (supported by FUSE for Windows® only) or as the BenONE Ethernet Kit (supported by FUSE for Windows® or FUSE for Linux®) for network use. This kit provides a BenONE, stand-alone case, external power supply and USB/Ethernet cable, in addition to the FUSE software supplied with all BenONEs. The BenONE USB Kits and BenONE Ethernet Kits are available with power supplies for UK, European or US style electrical sockets.

BenONE cards supplied as part of the BenONE USB/Ethernet kit can also be used as PCI cards, as the USB/Ethernet I/O module is detachable and the BenONE can be removed from the stand-alone case supplied.

BenONE Specification

- PCI, USB or Ethernet interfacing to host PC
- 64bit/33MHz or 32Bit/33MHz PCI interface for PCI interfacing
- Supports 3.3V and 5V PCI
- 1x Spartan-II 2S150-5 PCI/USB FPGA
- Board comes pre-configured with 32bit/33MHz PCI & USB, 32bit/33MHz PCI & Ethernet or 32bit/33MHz and 64bit/33MHz PCI
- Programmable Clock Sources plus external clock input option or fixed oscillator
- Ethernet Specification:
  - 10/100 Base-TX Ethernet/IEEE 802.3
  - Auto-Negotiation

Order Codes

Product	Order Code
BenONE-PCI	BenONE-PCI-***A***
BenONE-PCI USB Kit: BenONE, plus USB firmware, USB I/O Module, and external power supply.	BenONE-PCI-USB-Kit-***A-BB***
BenONE-PCI Ethernet Kit: BenONE, plus Ethernet firmware, Ethernet I/O module, and external power supply.	BenONE-PCI-Ethernet-Kit **A-BB**

Select appropriate FUSE and power supply options for A and BB from those listed below:

A:	***W***	Windows® version of FUSE	***L***	Linux® version of FUSE			
BB:	***EU***	European power supply	***UK***	UK power supply	***US***	US power supply	

Additional Options	Order Code
Additional Licence FUSE for Windows®	FUSE-Windows
Additional Licence FUSE for Linux®	FUSE-Linux
Additional FUSE Development API for MATLAB®	FUSE-MATLAB
Additional FUSE Development API for Java™	FUSE-Java

Example of part number creation.
Order code = BenONE-PCI-USB-Kit-W-US
BenONE fitted with the USB option and supplied with Windows® version of FUSE and a US power supply.

DIME-II User I/O Bus Support

Bus	All versions
Adjacent Bus In	28 bits (0:27)
Adjacent Bus Out	8 bits (0:7)
Local Bus (64 bit)	32 bits (0:31)
Comm Links 0 & 2	0 only – 12 bits
Comm Links 1 & 3	Not supported
Comm Links 4 & 6	Not supported
Comm Links 5 & 7	Not supported
GPIO Bus (21 bit)	Not supported

Further Information

Contact Nallatech for further product information:

Email contact@nallatech.com

Web www.nallatech.com

Europe & Asia-Pacific

Phone: +44 (0)1236 789 500
Fax: +44 (0)1236 789 599

North America

Phone: +1 407 384 9255
Fax: +1 407 384 8555

NT190-0122 – Issue 5. The Nallatech logo, DIME, DIME-II, FUSE , and BenONE are Trademarks of Nallatech Limited. All products or brand names mentioned herein are used for identification purposes only and are trademarks, registered trademarks, or service marks of their respective owners. E&OE. Copyright © 2004 Nallatech Limited. All rights reserved. Windows® is a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP