



## Artisan Technology Group is your source for quality new and certified-used/pre-owned equipment

- FAST SHIPPING AND DELIVERY
- TENS OF THOUSANDS OF IN-STOCK ITEMS
- EQUIPMENT DEMOS
- HUNDREDS OF MANUFACTURERS SUPPORTED
- LEASING/MONTHLY RENTALS
- ITAR CERTIFIED SECURE ASSET SOLUTIONS

### SERVICE CENTER REPAIRS

Experienced engineers and technicians on staff at our full-service, in-house repair center

### *InstraView*<sup>SM</sup> REMOTE INSPECTION

Remotely inspect equipment before purchasing with our interactive website at [www.instraview.com](http://www.instraview.com) ↗

### WE BUY USED EQUIPMENT

Sell your excess, underutilized, and idle used equipment. We also offer credit for buy-backs and trade-ins. [www.artisanng.com/WeBuyEquipment](http://www.artisanng.com/WeBuyEquipment) ↗

### LOOKING FOR MORE INFORMATION?

Visit us on the web at [www.artisanng.com](http://www.artisanng.com) ↗ for more information on price quotations, drivers, technical specifications, manuals, and documentation

**Contact us:** (888) 88-SOURCE | [sales@artisanng.com](mailto:sales@artisanng.com) | [www.artisanng.com](http://www.artisanng.com)

## HIGH PERFORMANCE A/D BOARDS



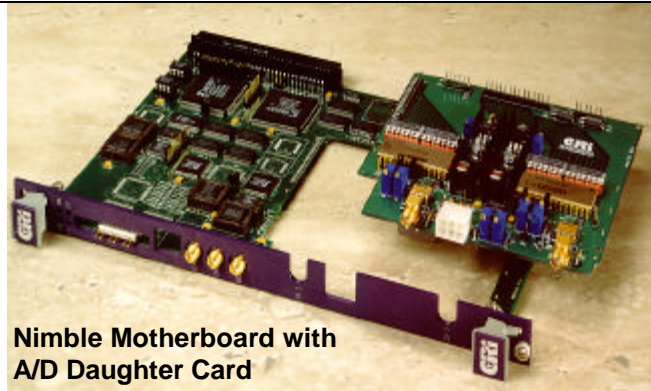
# NIMBLE: High Performance A/D Product Family for the VME/VSB Bus

### **BENEFITS / FEATURES**

- Versatile design consists of separate digital motherboard and A/D daughter card
- Daughter cards exist for a variety of A/D ICs which allow Nimble to conform to specific performance needs
- All digital signals driving the analog daughter card are optocoupled for total isolation (for  $F_s < 30$  MHz)
- Analog daughter card receives its power from separate linear supply for clean operation and digital isolation
- Daughter cards range from 10 - 16 bits with sampling rates beyond 50 MSPS
- Digital sampling control including Frame Start and Sample Gate (see **DESCRIPTION** for details)
- 6U x 160 mm VME single slot form factor
- VME slave interface (A16/A24, D32)
- Optional VSB master allows Nimble to download data to off-the-shelf memory boards and general purpose machines
- High-speed front panel parallel port (directly compatible with CRI DSP boards)
- On-board FIFO (up to 64K samples deep for one channel; 32K samples deep for dual channel configurations)
- Front panel SMA input for convert clock, Frame Start, and Sample Gate
- External convert clock source standard; on-board crystal option available
- Various input impedance and voltage ranges available
- Power for digital motherboard: 2.6A @ +5V

### **APPLICATIONS**

- Digital Receivers
- Radar
- Signal Intelligence
- Data Acquisition



**Nimble Motherboard with A/D Daughter Card**

### **DESCRIPTION**

The Nimble product line is an extremely flexible design in a 6U x 160 mm VME format. A daughter card contains the entire A/D section; all signals that drive the daughter card are optocoupled (for  $F_s < 30$  MHz). In addition, the daughter card receives its own source of linear power from a front panel connector. This linear supply source is regulated down to the required voltages. Thus, the Nimble design isolates the digital motherboard from the A/D section.

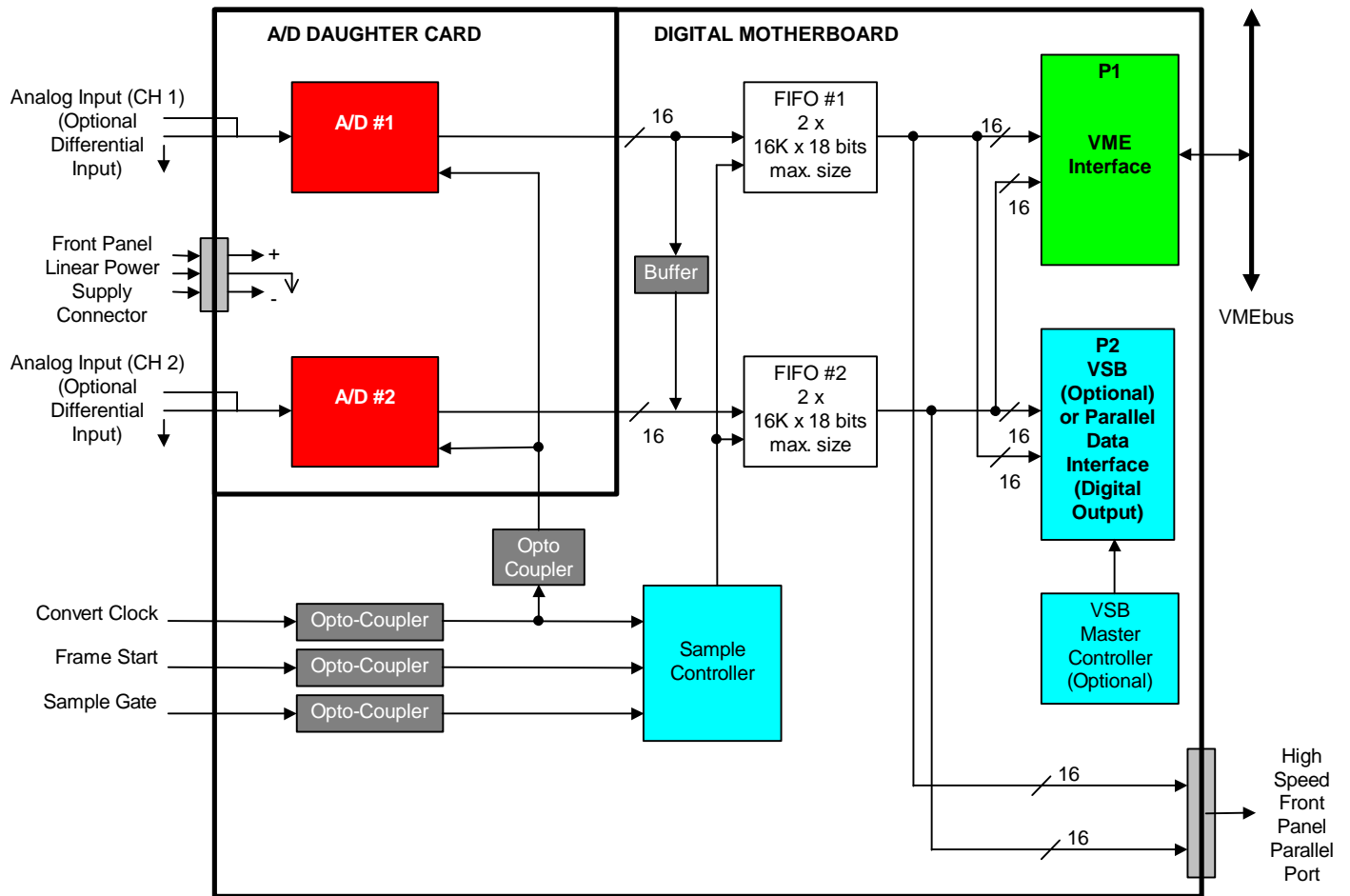
CRI has designed an entire family of A/D daughter cards around various A/D ICs. Based upon various manufacturers' A/D technology, the Nimble daughter cards provide anywhere from 16 bits @ 2 MSPS to 12 bits @ 41+ MSPS. Single or dual channel configurations are available.

The digital motherboard has functions specifically designed for radar and image processing applications. The functions control the sampling digitally instead of gating the sampling clock; this arrangement keeps the A/Ds very stable for improved performance.

Sample Gate is a front panel SMA input which the operator can use to turn sampling on or off. Frame Start is a front panel SMA trigger input which signals Nimble to collect "n" samples. "n" is completely programmable over the VMEbus.

An optional VSB interface is available on Nimble to facilitate data transfers to off-the-shelf mass memory boards or to general purpose processing machines.

The information provided herein is believed to be reliable. However, CRI assumes no responsibility for inaccuracies or omissions. CRI assumes no responsibility for the use of this information, and all use of such information shall be entirely at the user's own risk. Prices and specifications are subject to change without notice. No patent rights or licenses to any of the circuits described herein are implied or granted to any third party. CRI does not authorize or warranty any CRI product for use in life support devices and/or systems.



**FIGURE 1: NIMBLE A/D BOARD BLOCK DIAGRAM**

**DESCRIPTION (CONTINUED)**

The digital motherboard contains four synchronous FIFOs. At present, each FIFO can be up to 16K samples deep. In a dual channel configuration, each channel uses a pair of FIFOs. This configuration results in a maximum depth of 32K per channel. Single channel operation permits a maximum depth of 64K samples.

CRI designed the Nimble board to seamlessly interface with CRI's other off-the-shelf DSP products. The 40-pin front panel output port is a high speed parallel port (two 16-bit data channels).

Each channel of A/D data is in 2's complement format and sign-extended to fit within the channel's 16-bit field.

**ORDERING INFORMATION**

For delivery and pricing information, please contact CRI. The various daughter card options are listed below:

- Nimble 6 (16 bit, 2 MSPS hybrid performance)
- Nimble 7 (14 bit, 10 MSPS monolithic performance)
- Nimble 8 (12 bit, 41+ MSPS monolithic performance; DC coupled)
- Nimble 9 (12 bit, 41+ MSPS monolithic performance, AC coupled)



**Main Office:**  
 1321 Aeroplaza Drive  
 Colorado Springs, CO 80916  
 phone: 719 637 0880  
 fax: 719 637 3839

**East Coast Office:**  
 70 Walnut Street  
 Wellesley, MA 02181  
 phone: 781 239 8078  
 fax: 781 239 8005

**Internet:**  
 sales@cri-dsp.com  
 support@cri-dsp.com  
 www.cri-dsp.com

The information provided herein is believed to be reliable. However, CRI assumes no responsibility for inaccuracies or omissions. CRI assumes no responsibility for the use of this information, and all use of such information shall be entirely at the user's own risk. Prices and specifications are subject to change without notice. No patent rights or licenses to any of the circuits described herein are implied or granted to any third party. CRI does not authorize or warranty any CRI product for use in life support devices and/or systems.



## Artisan Technology Group is your source for quality new and certified-used/pre-owned equipment

- FAST SHIPPING AND DELIVERY
- TENS OF THOUSANDS OF IN-STOCK ITEMS
- EQUIPMENT DEMOS
- HUNDREDS OF MANUFACTURERS SUPPORTED
- LEASING/MONTHLY RENTALS
- ITAR CERTIFIED SECURE ASSET SOLUTIONS

### SERVICE CENTER REPAIRS

Experienced engineers and technicians on staff at our full-service, in-house repair center

### *InstraView*<sup>SM</sup> REMOTE INSPECTION

Remotely inspect equipment before purchasing with our interactive website at [www.instraview.com](http://www.instraview.com) ↗

### WE BUY USED EQUIPMENT

Sell your excess, underutilized, and idle used equipment. We also offer credit for buy-backs and trade-ins. [www.artisanng.com/WeBuyEquipment](http://www.artisanng.com/WeBuyEquipment) ↗

### LOOKING FOR MORE INFORMATION?

Visit us on the web at [www.artisanng.com](http://www.artisanng.com) ↗ for more information on price quotations, drivers, technical specifications, manuals, and documentation

**Contact us:** (888) 88-SOURCE | [sales@artisanng.com](mailto:sales@artisanng.com) | [www.artisanng.com](http://www.artisanng.com)