

## DSPBrik™ 4-Channel Gigabit Ethernet Input/Output Module DG1000

*The DG1000 provides  
the user an FPGA  
reconfigurable  
architecture with High  
Speed Serial I/O  
capabilities.*

### Features

- Two reconfigurable 88-pin I/O ports plus four differential clock pairs
- 9,13,19,23-thousand slice Xilinx® Virtex™II Pro available (select at time of order)
- 66MHz 855T PowerPC with Brikhouse Linux available for command, control, and reprogrammability
- 10/100 Base-T network interface for command, control, and reprogrammability by a remote Linux, Unix®, or Windows® PC host
- 4-1/4" square form factor (connector edge to connector edge)

### Description

The Rincon Research Corporation Model DG1000 is a re-configurable FPGA DSPBrik™ platform that provides scalability and expandability through two high-density I/O edge connectors, one high-density I/O mezzanine connector, and four mutli-gigabit-per-second (MGT) serial I/O connectors. The FPGA reconfigurability permits the user to define the serial I/O configuration required for each individual's application from gigabit ethernet to fibre channel or other numerous serial I/O formats.

## Specifications

### General:

FPGA Size	9-,13-,19-,23-thousand slices
FPGA Clock	Edge, MGT, or 25-200MHz programmable PLL
PowerPC	66-MHz MPC855T, 16MB Flash, 32MB DRAM
Power Connector	Molex 3-pin Mini-Fit JR™

### High Speed Edge Input/Output:

Edge Connectors	2 ((1) QTH-090, (1) QSH-090)
Number of Ports	4 (maximum) per edge connector
Speed	250+ MHz

### High Speed Mezzanine Input/Output:

Vertical Connectors	1 (bottom side)
Number of Bits	64 data, 8 data strobes, address/ctrl
Speed	166 MHz (PC2700)
Capacity	up to 2 GBytes* *with optional SO-DIMM memory card (DG1000MC-2)

### High Speed Serial Input/Output:

Vertical Connectors	4 Serial ATA (SATA) style (top side)
Speed	1.25, 2.5 Gbps* *other speeds available with special oscillator configurations
Note:	1000BASE-X and 1000BASE-T interfaces supported with optional dual small-formfactor-pluggable (SFP) card (DG1000SFP-2xx)

### Physical Properties:

Dimensions	3-7/8"W X 3-7/8"H X 1-3/4"D (with mezzanine), Edge connectors add 3/16-inch to height and width
Temperature, Operating	0 to +50C
Power (Standard Configuration)	10-13VDC, 12VDC Nom.

### DG1000 Ordering Information:

Part Number	DG1000-ss-pt
ss (size)	20 (9,280 slices, 88 multipliers) 30 (13,696 slices, 136 multipliers) 40 (19,392 slices, 192 multipliers) 50 (23,616 slices, 232 multipliers)

p (performance)	5 6 7
t (temp range, components)	C - Commercial temperature range I - Industrial temperature range

**DG1000 Optional Accessories:**

DG1000MC	Mezzanine Memory Card for DG1000
DG1000MC-2	Mezzanine Memory Card for DG1000, 2GBytes SO-DIMM memory installed
DG1000SFP	Dual SFP adapter for MGT's
DG1000SFP-2CU	Dual SFP adapter with two 1000BASE-T (RJ45) copper Gigabit Ethernet transceivers
DG1000SFP-2LX	Dual SFP adapter with two 1000BASE-X (single-mode, long haul, 1310nm, Dual LC/PC) fiber optic Gigabit Ethernet transceivers

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