

Multi-Server DRC Development System DS2000 family

DRC
Computer



APPLICATIONS

- ▶ modeling
- ▶ simulation
- ▶ rendering
- ▶ synthesis
- ▶ search/sequencing
 - ▶ sorting
- ▶ cryptography
- ▶ compression

MARKETS

- ▶ geoscience
 - ▶ pharma
 - ▶ defense
 - ▶ CAD
 - ▶ aerospace
- ▶ government
 - ▶ finance
- ▶ entertainment
 - ▶ biotech

The multi-server application accelerator for scalable arrays and high-availability clusters

The DRC Development System is a complete development platform for modifying your application subroutines to run in hardware.

Designed for multi-server development, the system is a standard PC workstation enhanced with DRC Reconfigurable Processor Units (RPU). It's a fully-functional, ready-to-go system that's scalable to mimic your cluster environment so you can reliably port and test your most challenging applications with maximum efficiency.

DRC offers two models in the DS2000 family, both with DDR memory, disk drives, and graphics controller.

- ▶ DS2002: 2-way system with one dual core AMD Opteron™ and one DRC RPU
- ▶ DS2004: 4-way system with two dual core Opterons and two DRC RPUs

The system comes with or without development software. Our development tools partners offer various bundles, some preconfigured with your purchase from DRC, others purchased separately.

If you need to easily and quickly create an environment that can handle sophisticated HPC applications, the DS2000 is the system for you.

Get rid of your scalable development system headaches with a solution that's completely integrated, fully configured, and ready to go!

Multi-Server DRC Development System

DS2000 family



TECHNICAL SPECIFICATIONS

	DS2002	DS2004
Standard Hardware Configuration		
CPU	AMD Opteron™ Model 275	Two Opterons, Model 875
RPU	One RPU110-L200	Two RPU110-L200s
Motherboard	Tyan S2891 2-way	Tyan S4881 4-way
Memory DDR	6GB (4 GB / CPU, 2 GB / RPU)	12GB 2x (4 GB / CPU, 2 GB / RPU)
Graphics	NVIDIA 7600GT PCI Express video card	NVIDIA 7600GT PCI Express video card
Hard Disks	160 GB SATA and 80 GB ATA	160 GB SATA and 80 GB ATA
DVD Drive	NEC 16X DVD +/-R/W dual layer drive	NEC 16X DVD +/-R/W dual layer drive
Networking	8-port Gigabit Ethernet switch	8-port Gigabit Ethernet switch
Power	120/240 Volt 50/60 Hz	120/240 Volt 50/60 Hz
Hardware Options		
RPU	One RPU110-L160	Two RPU110-L160s
Memory (RPU110-L200)	Additional 2GB (2 x 1GB) DDR2 miniDIMMs	Additional 2GB (2 x 1GB) DDR2 miniDIMMs
Cabinet	Tower or Rackmount (1U)	Tower with optional rack mount kit

Software and Tools

- ▶ Linux (64 bit) Ubuntu
- ▶ Linux drivers
- ▶ RPU manager
- ▶ MPICH
- ▶ Xilinx Design Tools (ISE)
- ▶ RPU Hardware OS



RPU System Programming Interfaces

- ▶ Reconfiguration over HyperTransport™
- ▶ Dev/Debug, JTAG

Optional Software

DRC's development environment partners offer various product bundles for purchase separately or through DRC.

DEVELOPMENT ENVIRONMENT PARTNERS

Celoxica

DSPlogic

impulse
accelerated technologies

mitrion™
by mitronics™

Synplicity

XILINX®

DRC RECONFIGURABLE PROCESSOR UNIT		Leveraging all of the features and benefits of AMD64 with Direct Connect Architecture and HyperTransport technology	
	RPU110-L160	RPU110-L200	
Configuration and Performance			
FPGA: Xilinx model number	Virtex™-4 LX 160	Virtex-4 LX 200	
HT bus Performance per connection	400 MHz x 16 bits	400 MHz x 16 bits	
Aggregate performance	3.2 GB/sec	3.2 GB/sec	
	9.6 GB/sec	9.6 GB/sec	
Motherboard memory Performance	4 GB (128 bit DDR 400)	8 GB (128 bit DDR 400)	
	6.4 GB/sec	6.4 GB/sec	
RPU RLDRAM Performance	128 MB	128 MB	
Aggregate performance	800 MB/sec	800 MB/sec	
	1.6 GB/sec	1.6 GB/sec	

AMD
Smarter Choice

HyperTransport
CONSORTIUM

DRC
Computer

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