

## DDR3 Unbuffered DIMM – VLP & Standard UDIMM



### FEATURES:

- 240-pin, Unbuffered dual in-line memory module (UDIMM)
- Proposed JEDEC pin-out
- PC3-12800, PC3-10600, PC3-8500, PC3-6400
- VDD = VDDQ = 1.5V +/- 0.075V
- VDDSPD = 3V to 3.6V
- JEDEC standard 1.5V +/- 0.075V I/O (SSTL\_15 compatible)
- Operating temperature: 0°C to 85°C
- Industrial temperature range also available
- 8 Banks
- 8-bit pre-fetch architecture
- Bi-directional Differential Data-Strobe
- Programmable Burst Length (8)
- On-die termination (ODT)
- Average Refresh Period 7.8us
- Serial presence detect with EEPROM
- Fly-by topology
- Lead-free, RoHS compliant

### BENEFITS:

- Very Low Profile (VLP)
- Low Power
- High densities
- High operational frequency

### APPLICATIONS:

- Single Board Computers
- Embedded Computing Platforms
- Telecommunication Servers
- Networking & Storage Appliances
- Military & Aerospace Systems

### DESCRIPTION:

Virtium offers DDR3 unbuffered dual in-line memory module (UDIMM) in a selected range of densities, speeds and form factors.

The VLP (Very Low Profile: 0.72" high) form-factor is well suited for space constrained systems with height restrictions and low airflow requirements.

Virtium UDIMMs are designed to satisfy the demanding memory applications for Embedded, Telecom, Networking, Storage, Military, Aerospace and Ruggedized Computer marketplace.

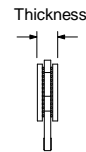
### VLP (Very Low Profile)

DENSITY	HEIGHT	THICKNESS	MAX SPEED	COMP. DENSITY	COMP. PACKAGE	COMP. CONFIG.	MODULE RANKS	CL	PART NUMBER
2GB	0.72"	0.144"	PC3-12800	1Gbit	Monolithic	x8	2	11	VL31B5663E-K0
2GB	0.72"	0.144"	PC3-10600	1Gbit	Monolithic	x8	2	9	VL31B5663E-K9
2GB	0.72"	0.144"	PC3-8500	1Gbit	Monolithic	x8	2	7	VL31B5663E-F8
1GB	0.72"	0.144"	PC3-10600	1Gbit	Monolithic	x8	1	9	VL31B2863E-K9
1GB	0.72"	0.144"	PC3-8500	1Gbit	Monolithic	x8	1	8	VL31B2863E-G8
1GB	0.72"	0.144"	PC3-8500	1Gbit	Monolithic	x8	1	7	VL31B2863E-F8

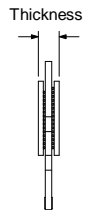
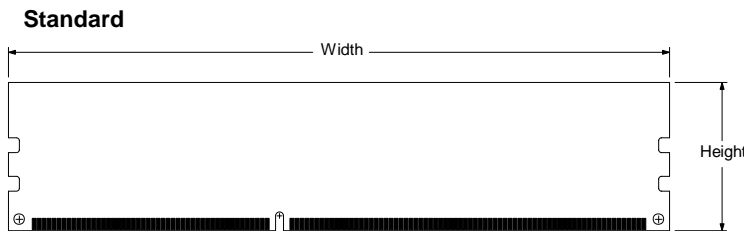
## Standard Height

DENSITY	HEIGHT	THICKNESS	MAX SPEED	COMP. DENSITY	COMP. PACKAGE	COMP. CONFIG.	MODULE RANKS	CL	PART NUMBER
4GB	1.181"	0.144"	PC3-12800	2Gbit	Monolithic	x8	2	11	VL31B5263A-K0
4GB	1.181"	0.144"	PC3-10600	2Gbit	Monolithic	x8	2	9	VL31B5263A-K9
4GB	1.181"	0.144"	PC3-8500	2Gbit	Monolithic	x8	2	7	VL31B5263A-F8
2GB	1.181"	0.144"	PC3-12800	1Gbit	Monolithic	x8	2	11	VL31B5663A-K0
2GB	1.181"	0.144"	PC3-12800	1Gbit	Monolithic	x8	2	9	VL31B5663A-H0
2GB	1.181"	0.144"	PC3-10600	1Gbit	Monolithic	x8	2	9	VL31B5663A-K9
2GB	1.181"	0.144"	PC3-8500	1Gbit	Monolithic	x8	2	7	VL31B5663A-F8
1GB	1.181"	0.144"	PC3-12800	1Gbit	Monolithic	x8	1	11	VL31B2863A-K0
1GB	1.181"	0.144"	PC3-10600	1Gbit	Monolithic	x8	1	9	VL31B2863A-K9
1GB	1.181"	0.144"	PC3-8500	1Gbit	Monolithic	x8	1	7	VL31B2863A-F8

## Mechanical Outlines



Unit	Width	Height	Thickness
Inches	5.25	0.72	0.144 - 0.320
Millimeters	133.35	18.29	3.67 - 8.15



Unit	Width	Height	Thickness
Inches	5.25	1.181	0.144 - 0.320
Millimeters	133.35	30.00	3.67 - 8.15

## Additional Virtium Memory Products

### Virtium DDR3, RDIMM (Registered)



- 240-pin, dual in-line memory module
- Available in standard 1.181" and VLP 0.72" heights
- RDIMM offered in 8GB, 4GB, 2GB and 1GB densities
- Fast data transfer rates: PC3-12800, PC3-10600, PC3-8500 or PC3-6400
- JEDEC Standard form factor
- Targeted for high-speed operations
- RoHS compliance



*Virtium Technology provides memory and solid state storage solutions for single board computers and high-reliability systems.*

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