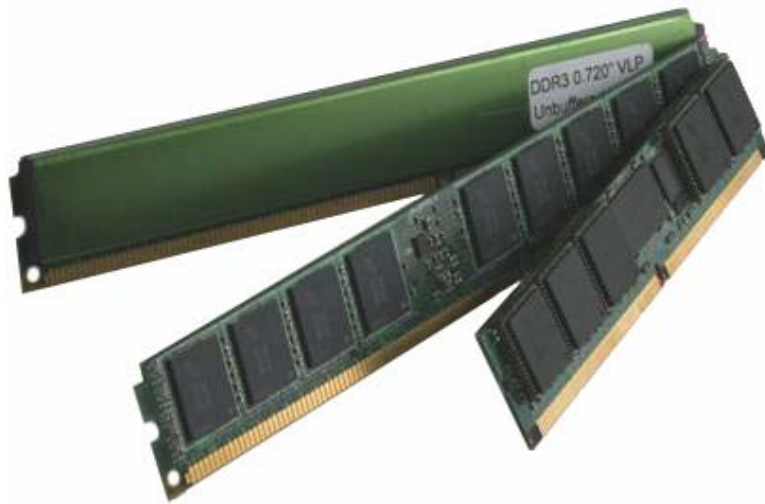


DDR3 Low-Profile (VLP) family of SODIMMs



Features:

- 204-pin, VLP small outline dual in-line memory modules (SODIMMs)
- Proposed JEDEC pin-out
- 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
- 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 VLP (Very Low Profile: 0.72" high) small outline dual in-line memory modules in a selected range of densities, speeds and features.

The VLP form-factors are well suited for space constrained systems with height restrictions and low airflow requirements.

Virtium's low profile SORDIMMs, SODIMMs & SODIMMs are designed to satisfy the demanding memory applications for Embedded, Telecom, Networking, Storage, Military, Aerospace and Ruggedized Computer marketplace.

VLP (Very Low Profile) SORDIMM

| DENSITY | HGT. | THICKNESS | MAX SPEED | COMP. DENSITY | COMP. PACKAGE | COMP. CONFIG. | MODULE RANKS | CL | PART NUMBER |
|---------|-------|-----------|-----------|---------------|---------------|---------------|--------------|----|---------------|
| 2GB | 0.72" | 0.320" | PC3-10600 | 1Gbit | BGA stack | x8 | 2 | 9 | VL43B5669E-K9 |
| 2GB | 0.72" | 0.320" | PC3-8500 | 1Gbit | BGA stack | x8 | 2 | 8 | VL43B5669E-G8 |
| 2GB | 0.72" | 0.320" | PC3-8500 | 1Gbit | BGA stack | x8 | 2 | 7 | VL43B5669E-F8 |
| 1GB | 0.72" | 0.140" | PC3-10600 | 1Gbit | Monolithic | x8 | 1 | 9 | VL43B2863E-K9 |
| 1GB | 0.72" | 0.140" | PC3-8500 | 1Gbit | Monolithic | x8 | 1 | 8 | VL43B2863E-G8 |
| 1GB | 0.72" | 0.140" | PC3-8500 | 1Gbit | Monolithic | x8 | 1 | 7 | VL43B2863E-F8 |

VLP (Very Low Profile) SOUDIMM

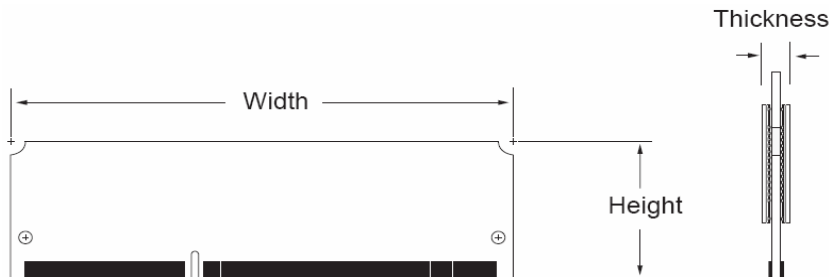
| DENSITY | HGT. | THICKNESS | MAX SPEED | COMP. DENSITY | COMP. PACKAGE | COMP. CONFIG. | MODULE RANKS | CL | PART NUMBER |
|---------|-------|-----------|-----------|---------------|---------------|---------------|--------------|----|---------------|
| 2GB | 0.72" | 0.320" | PC3-10600 | 1Gbit | BGA Stack | x8 | 2 | 9 | VL41B5669E-K9 |
| 2GB | 0.72" | 0.320" | PC3-8500 | 1Gbit | BGA Stack | x8 | 2 | 8 | VL41B5669E-G8 |
| 2GB | 0.72" | 0.320" | PC3-8500 | 1Gbit | BGA Stack | x8 | 2 | 7 | VL41B5669E-F8 |
| 1GB | 0.72" | 0.140" | PC3-10600 | 1Gbit | Monolithic | x8 | 1 | 9 | VL41B2863E-K9 |
| 1GB | 0.72" | 0.140" | PC3-8500 | 1Gbit | Monolithic | x8 | 1 | 8 | VL41B2863E-G8 |
| 1GB | 0.72" | 0.140" | PC3-8500 | 1Gbit | Monolithic | x8 | 1 | 7 | VL41B2863E-F8 |

VLP (Very Low Profile) SODIMM

| DENSITY | HGT. | THICKNESS | MAX SPEED | COMP. DENSITY | COMP. PACKAGE | COMP. CONFIG. | MODULE RANKS | CL | PART NUMBER |
|---------|-------|-----------|-----------|---------------|---------------|---------------|--------------|----|---------------|
| 2GB | 0.72" | 0.320" | PC3-10600 | 1Gbit | BGA Stack | x8 | 2 | 9 | VL47B5669E-K9 |
| 2GB | 0.72" | 0.320" | PC3-8500 | 1Gbit | BGA Stack | x8 | 2 | 8 | VL47B5669E-G8 |
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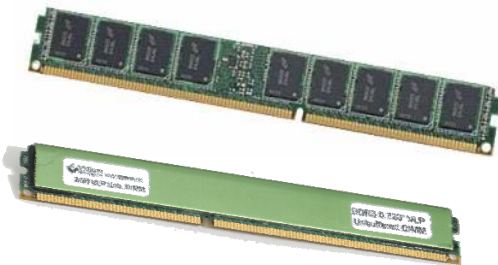
Mechanical Outlines

VLP



| Unit | Width | Height | Thickness |
|-------------|-------|--------|--------------|
| Inches | 2.661 | 0.720 | 0.14 - 0.320 |
| Millimeters | 67.60 | 18.29 | 3.56 - 8.13 |

Additional Virtium Memory Products



Virtium DDR3, UDIMM (Unbuffered) with ECC & Non-ECC

- 240-pin dual in-line memory module
- Standard 1.18" and VLP 0.72" heights
- Unbuffered or UDIMM in 4GB, 2GB and 1GB densities
- Fast data transfer rates: 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 platforms.

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