Dual/Single Socket CardBus and UltraMedia Controller With Dedicated Flash Media and Smart Card Sockets

FEATURES

- ***PC Card Standard* 8.1 compliant**
- ***PCI Bus Power Management Interface Specification* 1.1 compliant**
- ***Advanced Configuration and Power Interface (ACPI) Specification* 2.0 compliant**
- ***PCI Local Bus Specification Revision 2.3* compliant**
- **PC 98/99 and PC2001 compliant**
- **Windows Logo Program 2.0 compliant**
- ***PCI Bus Interface Specification for PCI-to-CardBus Bridges***
- **1.5-V core logic and 3.3-V I/O cells with internal voltage regulator to generate 1.5-V core V_{CC}**
- **Universal PCI interfaces compatible with 3.3-V and 5-V PCI signaling environments**
- **Supports PC Card or CardBus with hot insertion and removal**
- **Supports 132-MBps burst transfers to maximize data throughput on both the PCI bus and the CardBus**
- **Supports serialized IRQ with PCI interrupts**
- **Programmable multifunction terminals**
- **Many interrupt modes supported**
- **Serial ROM interface for loading subsystem ID and subsystem vendor ID**
- **ExCA-compatible registers are mapped in memory or I/O space**
- **Intel 82365SL-DF register compatible**
- **Supports ring indicate, $\overline{\text{SUSPEND}}$, and PCI $\overline{\text{CLKRUN}}$ protocols and PCI bus Lock ($\overline{\text{LOCK}}$)**
- **Provides VGA/palette memory and I/O, and subtractive decoding options, LED activity terminals**
- **Compliant with *Intel Mobile Power Guideline 2000***
- **Power-down features to conserve energy in battery-powered applications include: automatic device power down during suspend**
- **PCI power-management D0, D1, D2, and D3 power states**
- **Advanced submicron, low-power CMOS technology**

DESCRIPTION

The Texas Instruments PCI6621 controller is an integrated dual-socket UltraMedia PC Card controller, Smart Card controller, and flash media controller. This high-performance integrated solution provides the latest in PC Card, Smart Card, Secure Digital (SD), MultiMediaCard (MMC), Memory Stick/PRO, SmartMedia, and XD technology.

The Texas Instruments PCI6421 controller is an integrated dual-socket UltraMedia PC Card controller, and flash media controller. This high-performance integrated solution provides the latest in PC Card, SD, MMC, Memory Stick/PRO, SmartMedia, and XD technology.

The Texas Instruments PCI6611 controller is an integrated single-socket UltraMedia PC Card controller, Smart Card controller, and flash media controller. This high-performance integrated solution provides the latest in PC Card, Smart Card, SD, MMC, Memory Stick/PRO, SmartMedia, and XD technology.

The Texas Instruments PCI6411 controller is an integrated single-socket UltraMedia PC Card controller and flash media controller. This high-performance integrated solution provides the latest in PC Card, SD, MMC, Memory Stick/PRO, SmartMedia, and XD technology.

NOTE:

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This product is for high-volume PC applications only. For a complete datasheet or more information contact support@ti.com.

PACKAGING INFORMATION

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead/Ball Finish	MSL Peak Temp (3)
PCI6411GHK	OBSOLETE	BGA MICROSTAR	GHK	288		TBD	Call TI	Call TI
PCI6411ZHK	OBSOLETE	BGA MICROSTAR	ZHK	288		TBD	Call TI	Call TI

(1) The marketing status values are defined as follows:
ACTIVE: Product device recommended for new designs.
LIFEBUY: TI has announced that the device will be discontinued, and a lifetime-buy period is in effect.
NRND: Not recommended for new designs. Device is in production to support existing customers, but TI does not recommend using this part in a new design.
PREVIEW: Device has been announced but is not in production. Samples may or may not be available.
OBSOLETE: TI has discontinued the production of the device.

(2) Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check http://www.ti.com/productcontent for the latest availability information and additional product content details.
TBD: The Pb-Free/Green conversion plan has not been defined.
Pb-Free (RoHS): TI's terms "Lead-Free" or "Pb-Free" mean semiconductor products that are compatible with the current RoHS requirements for all 6 substances, including the requirement that lead not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI Pb-Free products are suitable for use in specified lead-free processes.
Pb-Free (RoHS Exempt): This component has a RoHS exemption for either 1) lead-based flip-chip solder bumps used between the die and package, or 2) lead-based die adhesive used between the die and leadframe. The component is otherwise considered Pb-Free (RoHS compatible) as defined above.
Green (RoHS & no Sb/Br): TI defines "Green" to mean Pb-Free (RoHS compatible), and free of Bromine (Br) and Antimony (Sb) based flame retardants (Br or Sb do not exceed 0.1% by weight in homogeneous material)

(3) MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

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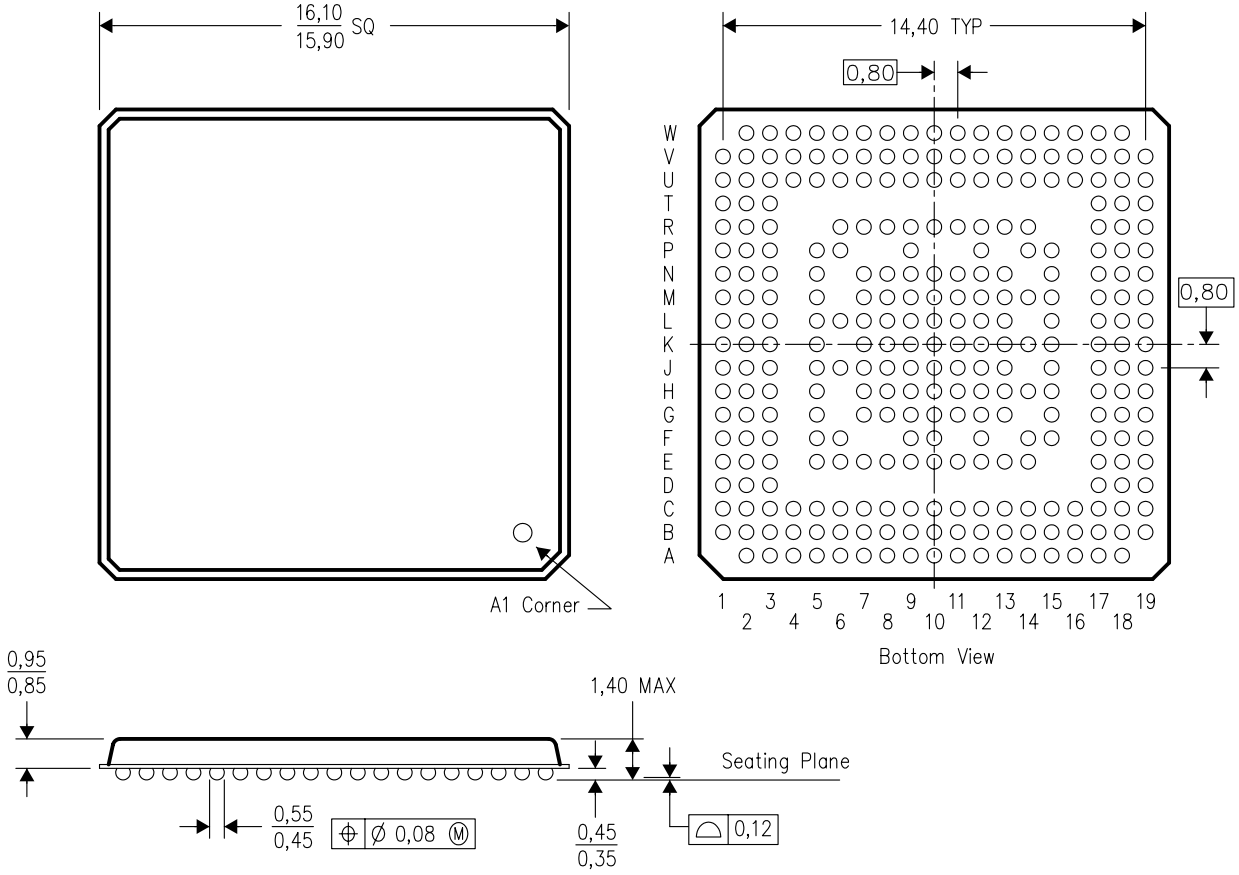
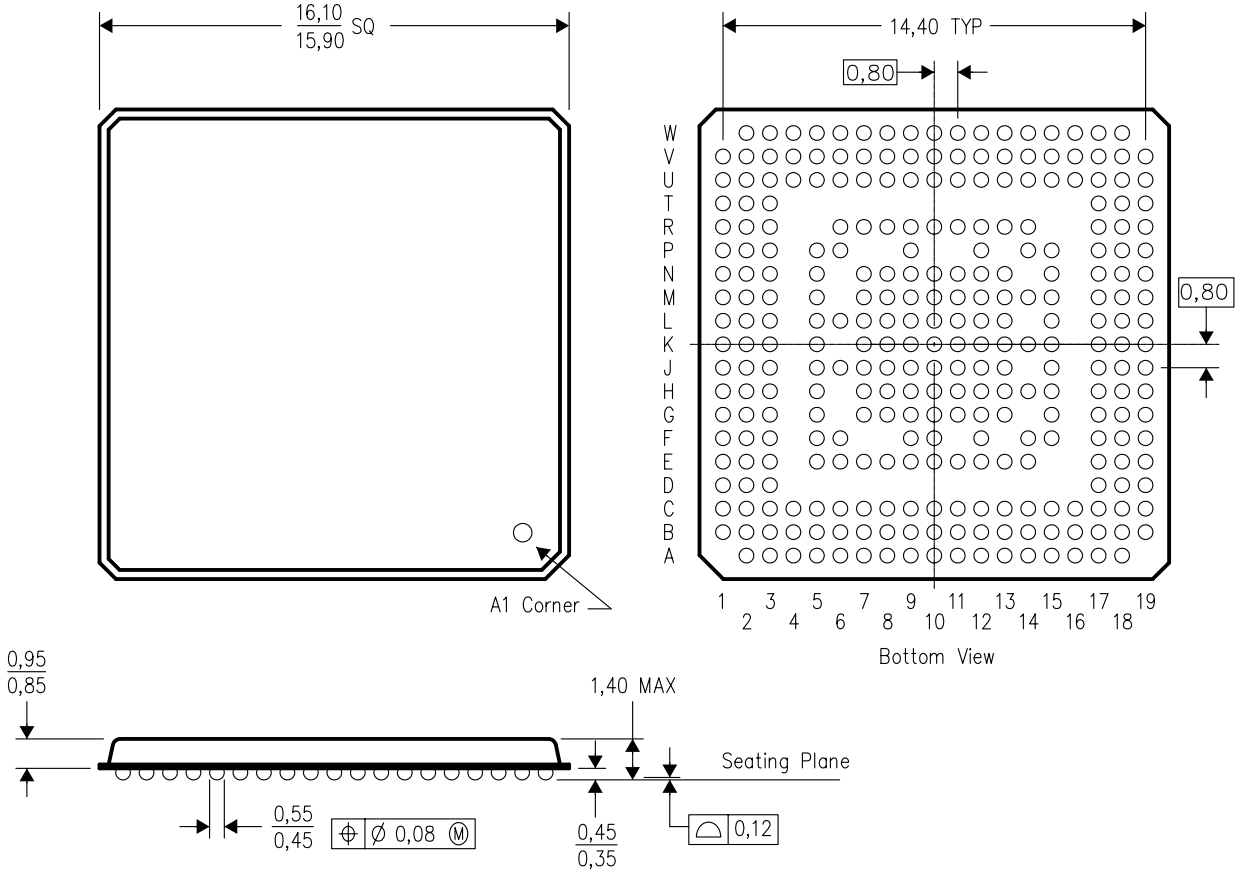
GHK (S–PBGA–N288) PLASTIC BALL GRID ARRAY



NOTES: A. All linear dimensions are in millimeters.
B. This drawing is subject to change without notice.

ZHK (S–PBGA–N288) PLASTIC BALL GRID ARRAY



NOTES:
A. All linear dimensions are in millimeters.
B. This drawing is subject to change without notice.
C. This is a lead–free solder ball design.

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