FEATURES

- n **Single-chip PCMCIA host adapter**
- n **Direct connection to PCI bus**
- n **Direct connection of two PCMCIA sockets**
- n **ZV Port support for multimedia applications**
- n **Compliant with PCI 2.1**
- n **Compliant with PCMCIA 2.1 and JEIDA 4.1**
- n **82365SL-compatible register set, ExCA™-compatible**
- n **Automatic Low-power Dynamic mode for lowest power consumption**
- n **Programmable Suspend mode**
- n **Five programmable memory windows per socket**
- n **Two programmable I/O windows per socket**
- n **Programmable card access cycle timing**
- n **8- or 16-bit PCMCIA card support**
- n **ATA disk interface support**
- n **Automatic flash memory timing support**
- n **3.3V, 5V, or mixed 3.3/5V operation**
- n **Supports PCMCIA low-voltage card specification**
- n **Multiple VG-PD6729s can be used on the PCI bus without external hardware**
- n **208-pin PQFP**

PCI-to-PCMCIA Host Adapter

OVERVIEW

The VG-PD6729 is a single-chip PCMCIA host adapter solution capable of controlling two fully independent PCMCIA sockets. The chip is fully PCMCIA-2.1 and JEIDA-4.1 compliant and is optimized for use in notebook and handheld computers where reduced form factor and low power consumption are critical design objectives. With the VG-PD6729, a complete dual-socket PCMCIA solution with power-control logic can occupy less than 2 square inches (excluding connectors).

The VG-PD6729 chip employs energy-efficient, mixed-voltage technology that can reduce system power consumption by over 50 percent. The chip also provides a Suspend mode, which stops the internal clock, and an automatic Low-power Dynamic mode, which stops transactions on the PCMCIA bus, stops internal clock distribution, and turns off much of the internal circuitry. *(cont.)*

System Block
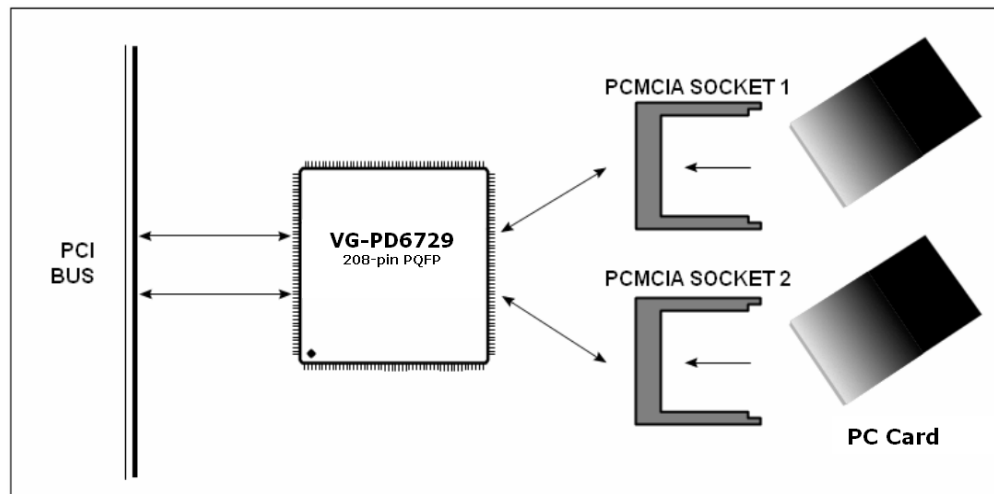
OVERVIEW (cont.)

PC applications typically access PC cards through the socket/card-services software interface. To assure full compatibility with existing socket/card-services software and PC-card applications, the register set in the VG-PD6729 is a superset of the Intel® 82365SL register set.

The chip provides fully buffered PCMCIA interfaces, meaning that no external logic is required for buffering signals to/from the interface, and power consumption can be controlled by limiting signal transitions on the PCMCIA bus.

Notebook Computer Design Priorities

n Small Form Factor

n Minimum Power Consumption

n High Performance

n Compatibility

Supporting Features

r Single-chip solution

r No external buffers for host or socket interfacing

r Efficient board layout

r Automatic Low-power Dynamic mode

r Suspend mode

r Mixed-voltage operation

r Write FIFO

r Programmable timing supports more cards, faster reads and writes

r Compliant with PCMCIA 2.1 and JEIDA 4.1

r Compliant with PCI 2.0

r 82365SL A-step register-compatible, ExCA™-compatible

Host Adapter Form Factor