VG-PD6722

Data Sheet

FEATURES

- **Single-chip PC Card host adapters**
- **Direct connection to ISA (PC AT) bus and one or two PC Card sockets**
- **Compliant with PC Card Standard, PCMCIA 2.1, and JEIDA 4.1**
- **82365SL-compatible register set, ExCA™-compatible**
- **Automatic Low-Power Dynamic mode for lowest active power consumption**
- **Programmable Suspend mode**
- **Hardware-enabled Super Suspend mode**
- **Five programmable memory windows per socket and two programmable I/O windows per socket**
- **Programmable card access cycle timing**
- **8- or 16-bit system bus interface**
- **8- and 16-bit PC Card interface support**
- **ATA disk interface support**
- **DMA support (VG-PD6722)**
- **Card-voltage sense support**
- **PC Card activity indicator**
- **Mixed-voltage operation (3.3/5.0 V)**
- **Single-socket interface: 144-pin VQFP for smallest form factor (CL-PD6710)**
- **Dual-socket interface: 208-pin PQFP or VQFP (VG-PD6722)**

ISA–to–PC-Card Host Adapters

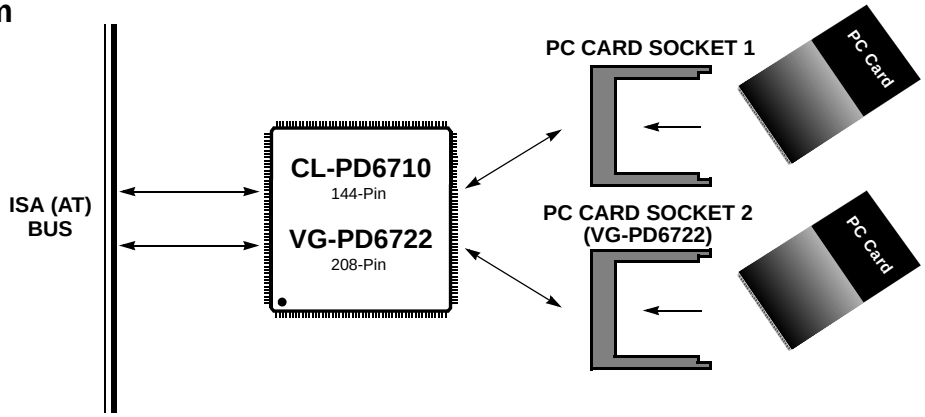
OVERVIEW

The CL-PD6710 and VG-PD6722 are single-chip PC Card host adapter solutions capable of controlling one (CL-PD6710) or two (VG-PD6722) PC Card sockets. The chips are compliant with PC Card Standard, PCMCIA 2.1, and JEIDA 4.1 and are optimized for use in notebook and handheld computers where reduced form factor and low power consumption are critical design objectives. With the CL-PD6710, a complete PC Card solution with power-control logic can occupy less than 1.5 square inches (excluding the socket connector). With the VG-PD6722, a complete dual-socket PC Card solution with power-control logic can occupy less than 2 square inches (excluding socket connectors).

The chips employ energy-efficient mixed-voltage technology that can reduce system power consumption by over 50 percent. The chips also provide: a Low-Power Dynamic mode, which automatically stops the internal clock during periods of card inactivity; a software-controlled Suspend mode, which dramatically reduces power by disabling most of the internal circuitry and stopping data transactions to

(cont.)

System Block Diagram



OVERVIEW (cont.)

the PC Cards; and a hardware-controlled Super Suspend mode, which reduces current to the μA range.

Personal computer applications typically access PC Cards through a third-party socket/card-services software interface. To assure full compatibility with industry-standard socket/card-services software and PC Card applications, the register set in the CL-PD6710 and VG-PD6722 is a superset of the Intel® 82365SL register set.

The chips provide fully buffered PC Card 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 PC Card bus.

Notebook Computer Design Priorities	*Supporting Features*
n Small Form Factor	r Single-chip solutions r No external buffers for host or socket r Efficient board layout
n Minimum Power Consumption	r Automatic Low-Power Dynamic mode r Hardware- and software-controlled Suspend modes r Mixed-voltage operation
n High Performance	r Write cache r Programmable timing supports more cards, faster reads and writes r Automatic bus sizing for 8- or 16-bit r DMA available with the VG-PD6722
n Compatibility	r Compliant with PC Card Standard, PCMCIA 2.1, and JEIDA 4.1 r 82365SL A-step register-compatible, ExCA™-compatible

Host Adapter Form Factor