

# PCMCIA Presents ExpressCard™ Technology



PCMCIA is a non-profit trade association founded in 1989 to establish technical standards for modular peripherals and to promote interchangeability among computer systems.

PC Card technology is already a feature in almost every notebook computer, empowering users to configure systems and create unique, integrated solutions to meet their computing interconnect needs.

Based in San Jose, California, the association has more than 100 member companies worldwide.



- **A Smaller & Faster PC Card Solution**
- **Suitable for Mobile and Desktop Systems**
- **Supports USB 2.0 and PCI Express Applications**
- **Lower System and Card Complexity**

# Introduction

PCMCIA developed the ExpressCard™ standard to carry forward the benefits of 'plug-in' I/O cards to the next generation of personal computing devices.

The standard was developed by a large number of PCMCIA member companies including technology leaders, system manufacturers, card manufacturers, and representatives from all other parts of the PC Card industry.



# Module Sizes

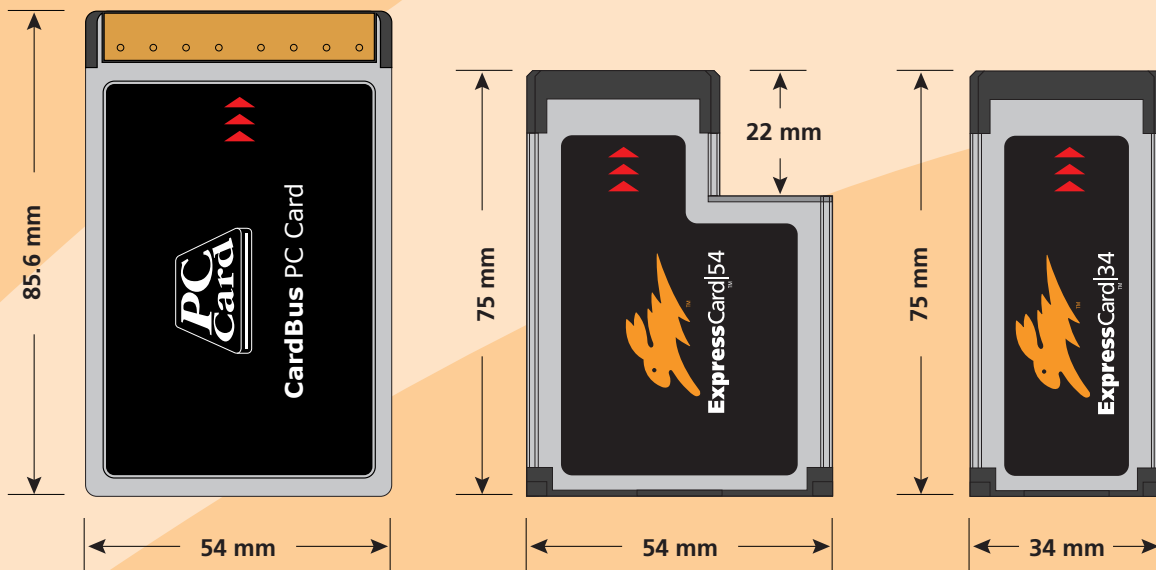
To support the broadest range of applications there are two sizes of module. Both are smaller than today's CardBus card.

The smallest card, the ExpressCard/34 module, is almost half the size of a CardBus card. We expect this size to be well suited to a very broad range of applications covering communications, media, and general purpose add-ins.

The standard also specifies a wider card called an ExpressCard/54 module. This is to

support those technologies which require a physically larger module. In this space we will see devices such as smartcard readers, CompactFlash adapters, and 1.8" hard drives.

All ExpressCard modules are 5mm thick but the standard also allows for card developers to build longer 'extended' modules. These can have thicker portions which project beyond the envelope of the host system.



# Native Bus Connections

The ExpressCard standard supports both the USB 2.0 and PCI Express interfaces.

Card manufacturers are able to choose whichever bus is appropriate to their application; the performance of PCI Express, or from the wide range of solutions supported by USB.

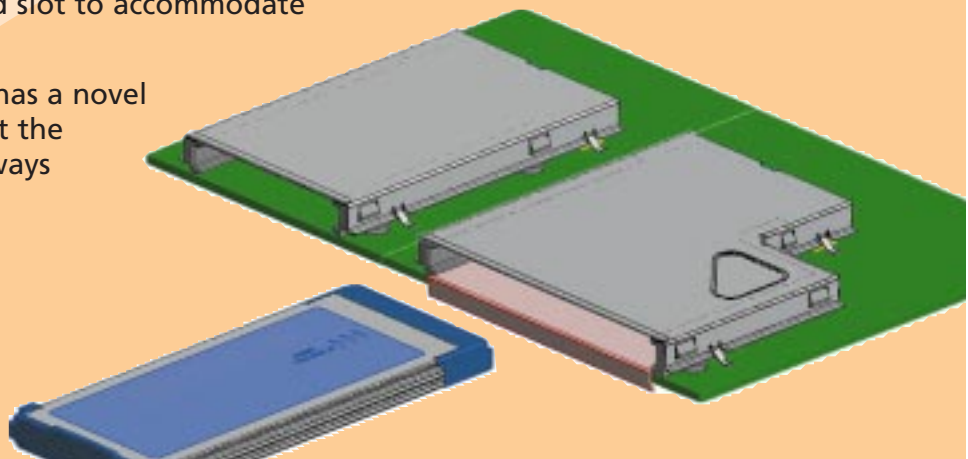
All host PC ExpressCard slots will support cards using either interface. The host platform no longer needs to incorporate a bridge chip between the chipset and the socket. PCI Express and USB 2.0 are fully hot-pluggable.



# Host System Slots

Mobile and Desktop host systems can provide ExpressCard/34 slots when space is at a premium, or the wider Universal ExpressCard slot to accommodate both module sizes.

The Universal ExpressCard slot has a novel guidance feature to ensure that the ExpressCard/34 modules are always correctly inserted.



# PCMCIA Membership

## Benefits of Membership

- Free PCMCIA Standards
- Complete access to the ExpressCard Specifications
- Access to all proposals and working materials while in progress, before public release
- Committee Minutes
- PCMCIA Update Quarterly Publication
- Access to Members-Only Web Site
- Use of PC Card Logo
- PlugFest Interoperability Workshops
- Free Manufacturer's Tuple ID
- PCMCIA Membership Plaque Annually
- Meeting Participation (Executive and Associate only)
- Proposal Submission (Executive and Associate only)
- Free Mobile Advisory Council (MAC) membership (Executive and Associate only)

## Membership Levels

There are three levels of membership in PCMCIA that offer something for any company involved in the manufacture, design, or distribution of PC Card products.

### Executive Membership (\$10,000/year)

Executive Members plan the strategic future of PCMCIA and modular peripheral technology by controlling the By-laws of PCMCIA and by filling seven of eleven seats on PCMCIA's Board of Directors. Executive members also enjoy full voting rights on all technical, marketing, and organizational issues. Executive members are also entitled to submit proposals for changes to the PC Card Standard.

Five contacts at each Executive member company receive the PC Card Standard and PCMCIA Update, and may register for PCMCIA meetings free of charge. As the driving force behind PCMCIA, Executive members receive valuable exposure on PCMCIA's home page and in all PCMCIA literature.

### Associate Membership (\$3500/year)

Associate Members are the backbone of PCMCIA activity. With full voting rights on all PCMCIA technical and marketing committees and four of eleven seats on PCMCIA's Board of Directors, Associate membership is perfect for companies that want to help drive the promotion and advancement of PC Card technology. Associate members are also entitled to submit proposals for changes to the PC Card Standard.

One contact receives all mailings and literature, including the PC Card Standard and all updates, and may register for meetings free of charge.

### Affiliate Membership (\$1500/year)

Affiliate Membership is ideal for companies that need up-to-date information about PC Card technology and want to participate in PCMCIA's marketing and promotional activities. Affiliate members may not attend meetings, but do receive complete meeting results following each meeting, along with access to all of PCMCIA's marketing activities and members-only web site.

One contact receives all mailings and literature, including the PC Card Standard and all updates. Affiliate member companies are entitled to one free product listing on the PC Card Resource Directory.

PCMCIA Membership Level/Benefits Grid	Executive	Associate
Access to NEWCARD specifications	✓	✓
Free PC Card Standard and Updates	✓	✓
80%+ Discount on additional Standard copies	✓	✓
PCMCIA Update Quarterly Publication	✓	✓
Access to Members-only Web Site	✓	✓
Free access to download PC Card Standard	✓	✓
Use of PC Card logo on products	✓	✓
Free Permanent Manufacturer's Tuple ID	✓	✓
Access to Proposals while in process	✓	✓
# of Contacts (Free meetings, Standards)	5	1
Listings on the PCMCIA Resource Directory	10	3
Mobile Advisory Council Membership	✓	✓
Attend Membership Meetings	✓	✓
Submit Proposals	✓	✓
Voting rights in Committee	✓	✓
Seats on the PCMCIA Board of Directors	7	4
Control of PCMCIA By-laws	✓	
Logo on PCMCIA Web Site Home Page	✓	

## PCMCIA Mission Statement

To develop standards for modular peripherals and promote their worldwide adoption.

### Executive Members

Dell Computer

Intel

SCM Microsystems



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