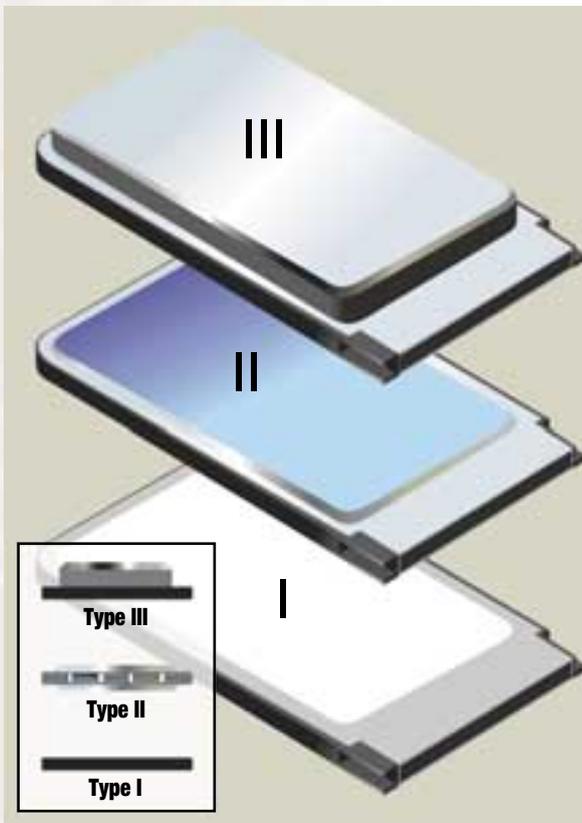# How PC Cards Work

I n order to show how PC Card technology works, we had to dramatically increase the image because PC cards are typically the size of a credit card.
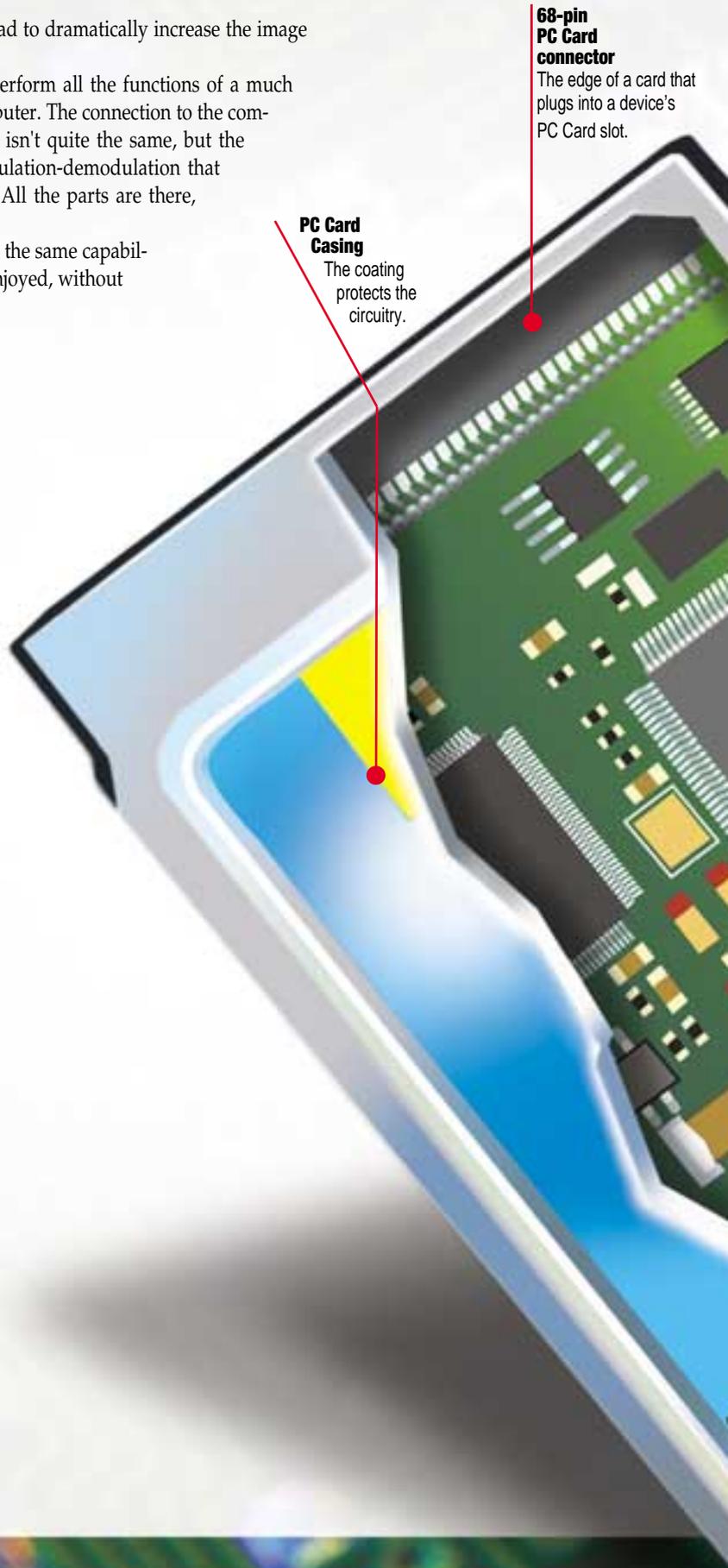
The compact PC Card modem shown here is able to perform all the functions of a much larger internal or external modem used by a desktop computer. The connection to the computer is different, even the connection to the phone line isn't quite the same, but the inner-workings of the PC Card modem handle the modulation-demodulation that makes a modem a modem, just like its bigger brothers. All the parts are there, they're just much smaller.
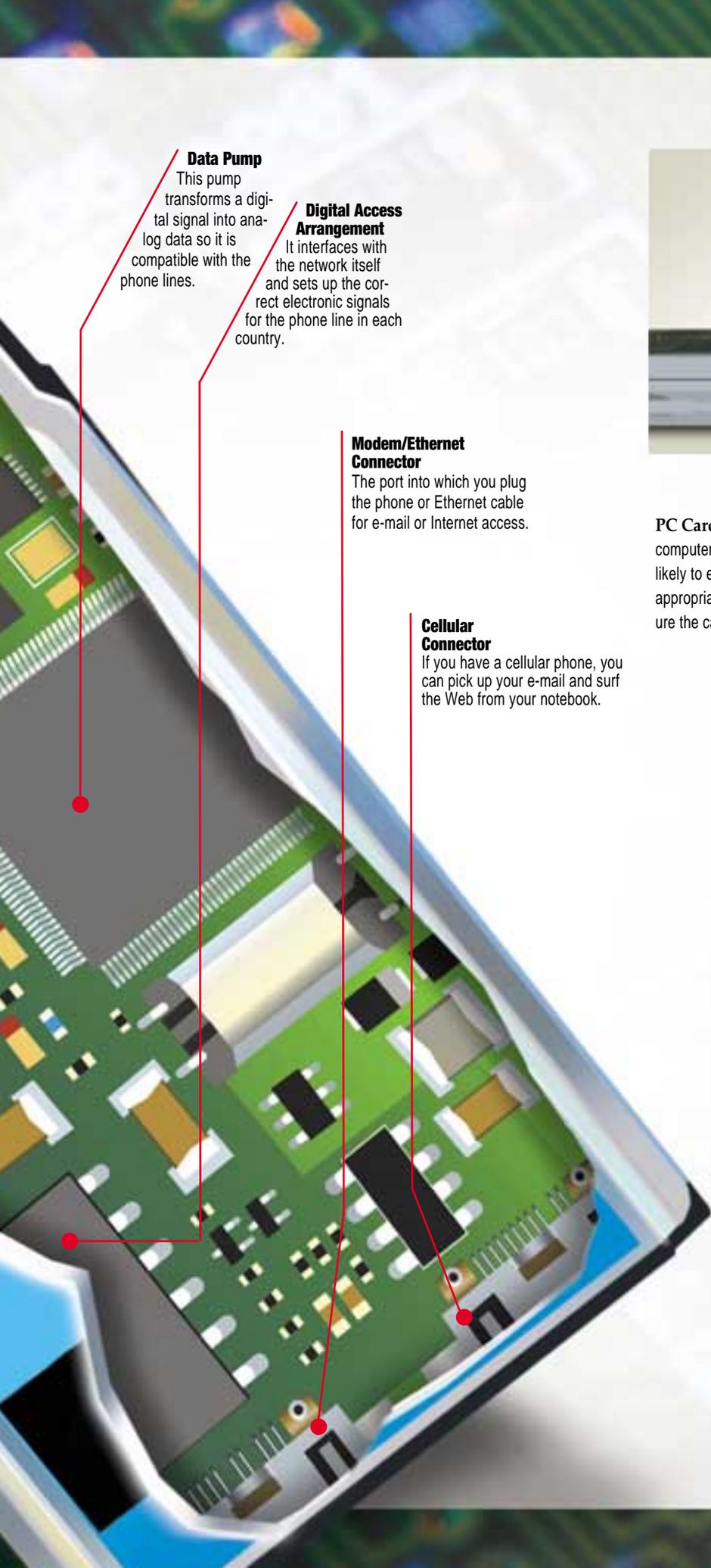
Thanks to PC Cards, notebook computer users can enjoy the same capabilities and upgradeability that desktop users have always enjoyed, without giving up the portability they require.

68-pin PC Card connector
The edge of a card that plugs into a device's PC Card slot.

PC Card Casing
The coating protects the circuitry.

How PC Cards Measure Up

III

II

I

Type III

Type II

Type I

PC Cards Types: There are three types of PC Cards: Type I, Type II, and Type III, all named by the Personal Computer Memory Card International Association (PCMIA). The cards share the same length (85.6mm) and width (54 mm), but vary in thickness, with Type I PC Cards measuring a mere 3.3mm, Type II PC Cards measuring 5mm, and Type III P Cards measuring 10.5mm. Type I cards, the original PC Cards, let you add memory to your portable. Type II PC Cards are the most common, and they let you add everything from modems and network cards to input peripherals. Type III cards are generally used to add additional storage, as they most often house miniature hard drives.

Data Pump
This pump transforms a digital signal into analog data so it is compatible with the phone lines.

Digital Access Arrangement
It interfaces with the network itself and sets up the correct electronic signals for the phone line in each country.

Modem/Ethernet Connector
The port into which you plug the phone or Ethernet cable for e-mail or Internet access.

Cellular Connector
If you have a cellular phone, you can pick up your e-mail and surf the Web from your notebook.

PC Card Slots: Installing a PC Card in the PC Card slot of a portable computer is probably the most simple hardware installation you are likely to encounter in personal computing. Simply slide the card into the appropriate slot and the computer's software should detect and configure the card for immediate use.

Modem: A PC Card modem, with a phone line jack such as this, lets you connect your portable to the Internet.

CD-ROM Drive: For flashy multimedia, connect an external CD-ROM drive to your portable using the PC Card slot.

Joystick: Most portables lack a joystick port, but the right PC Card can help turn your notebook into a gaming machine.

Scanner: A PC Card with a SCSI or USB adapter lets you plug your scanner into your portable computer to input text and images.