

Selecting a Network Card For Your Notebook Computer

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Introduction

More and more of our clients are buying notebook computers for use in their practices, and they are being hooked up to their networks for constant or occasional use as a network workstation. A network interface card (NIC) is required for this, just like for desktop workstations, but the options are different. The jack used for connecting to the network cable is the main difference between the brands of cards, and some are sturdier than others.

This document discusses the four basic network connection alternatives. We don't discuss using a docking station or port replicator.

Types of Network Cards

There are four kinds of connection methods. They vary chiefly in the sturdiness of the connection mechanism.

- **Internal NIC.** A few notebooks come with proprietary network interface cards built into the computer case itself. This is a great alternative since the network cable plugs directly into the side of the case.

The other three methods are used with pc cards (sometimes referred to as PCMCIA cards), which plug into a slot in the side of the notebook computer. The cards are about the length and width of a credit card and are about three times as thick. Most notebooks have two pc card slots, one above the other.

- **PC Card with Xjack® connector.** Xjack® is a 3Com trademark and mechanism. In this scenario, the jack is built into the end of the card that sticks out of the notebook. The jack is spring-loaded so you push on it to extend it and then push it back into the case when you're through. Here's a picture. Notice the yellow circle at the upper-right side of the card – this is the XJack connector.



The advantage of an XJack connector is that it's unobtrusive when not being used and it doesn't require a "dongle" (see below). The disadvantage is that it's relatively flimsy and tends to break unless you're very careful whenever you plug or unplug the cable.

- **PC Card with "dongle."** A "dongle" is a short connecting cable that plugs into a connector built into the side of the card and contains the jack on its other end.

The advantage of the dongle approach is that you're not plugging the cable into the card at a right-angle. The disadvantages are that you're still plugging something into the card using a relatively flimsy connection at the card itself, and that it's possible to lose the dongle. Either

proposition is expensive; if you break the connector you buy a new card, if you lose the dongle you buy a new one. Dongles are not an industry-standard device, so you are at the mercy of the card manufacturer if you have to buy a new one.

- **PC Card with Realport adapter.** This is a completely different type of connection method. It combines the flexibility of a pc card with the strength of a built-in connector. The picture shows that rather than popping out a connector or using a dongle, the port is built into the end of the card. The result is an extremely strong, reliable connector that cannot be broken.



The only disadvantage of this kind of card is that it spans both card slots in the notebook, making it impossible to plug in a second card. For 99% of users, this is a non-issue because the only cards used are typically modem and network cards, and all Realport cards can be purchased with both these features combined into one card.

Our strong recommendation is that notebook users purchase a pc card with a Realport adapter if the notebook does not come with a built-in network port. They can be more expensive, but when the cost of downtime due to a broken connector and a replacement card is factored in, the extra expense is worth it.

Xircom has been the market leader in Realport type cards, but as of this writing other manufacturers are coming to market with their own versions of cards featuring this type of connection method.

16- or 32-bit card?

Manufacturers have both 16-bit and 32-bit pc card nic's. The 32-bit cards are also called Cardbus cards. We recommend a 32-bit nic; check with the manufacturer of your notebook computer to find out whether or not your computer will support it. Virtually all notebooks made in the last three years do.

Conclusion

Choosing a pc card network interface card for your notebook computer can be somewhat confusing, and there are several connection methods to choose from. Animal Intelligence Software, Inc. recommends use of a Realport-type card for all users unless special needs require the use of a second card.