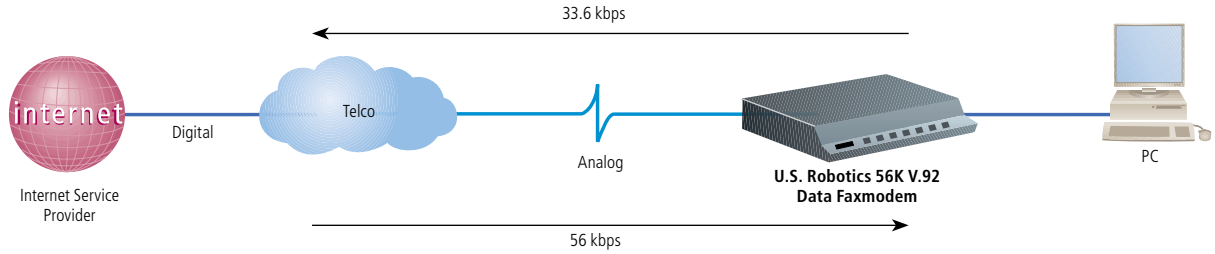
U.S. Robotics 56K V.90 and V.92 Data Faxmodems

Bring files, sounds, and high-bandwidth graphics to your desktop—at up to 56 kbps!

FEATURES

- Control all data and fax functions from your computer.
- Dual-mode support for the V.90 standard and legacy x2 technology.
- Line probing technology ensures reliable connections and fastest possible analog downloads.
- Packages include software and phone line for easy setup.
- Standalone or card versions available.
- Flash-ROM upgradable.

Download data or retrieve e-mail from the Internet at 56 kbps!



OVERVIEW

By upgrading to x2™ or V.90, you can achieve data-transmission speeds nearly twice as fast as standard V.34 modems. Want to take advantage of V.92 services from your ISP? Well, we have a faxmodem for that, too.

These analog, 56-kbps (*) data faxmodems are available in both standalone and internal PCI card versions for PCs. We also offer a V.90-only ISA card version.

As always, if you don't see what you're looking for, call Black Box Tech Support.

U.S. Robotics 56K V.92 External Data Faxmodem (USR5686E)

V.90 and V.92 upstream connections. That's what you get with the U.S. Robotics 56K V.92 External Data Faxmodem. This comprehensive support of new and previous standards means you get a wider choice of service providers and reduces your time to connect to and access a phone company's call management services.

Whether it's shopping on-line, accessing highly detailed documents, or processing bandwidth-intensive multimedia presentations, you need a modem that's equipped to handle them all. For the richest sounds and most vivid graphics, the U.S. Robotics 56K V.92 External Data Faxmodem helps you establish the fastest possible connection on your analog phone line.

Backward compatible, the faxmodem adjusts to the highest possible speed when it connects to a service provider. And advanced line probing technology finds the most efficient path for your connection. The modem not only offers fast downloads, but the V.92 standard brings three key enhancements to 56K technology(**):

Modem on Hold makes the most of your phone company's Call Waiting, Caller ID, and Voice Mail services. The modem's software alerts you to incoming calls while you're on-line and provides you with the caller's identity. If you take the call, the modem "suspends" your on-line session and lets you resume the session when you're through—all without any redialing required. If you don't want to take the call, it's automatically routed to your voice mail.

Quick Connect reduces the time it takes to make a connection to your service provider. It does this by "remembering" the line conditions from the previous connection and bypassing portions of its training sequence, so you get on-line faster.

V.PCM Upstream enables the V.92 faxmodem's upstream communication to reach speeds up to 48 kbps. But the decision is yours. You can maintain the fastest possible downstream speed (up to 53 kbps), or you can "balance" your connection for a bit slower downstream and faster upstream communication.

Easy to install and use, the 56K V.92 External Data Faxmodem comes with CD-ROM-based installation software, which makes installation a snap and enables you to get the most from your modem and the Internet. Installing the drivers is a simple matter of inserting the Installation CD into your CD-ROM drive and following the instructions for your specific operating system. This same CD also contains the ControlCenter software for configuring your modem settings.

**NOTE: These faxmodems are capable of receiving downloads at up to 56 kbps and sending at up to 31.2 kbps. Actual download speeds you experience may be lower due to varying line conditions. Although these modems are capable of 56-kbps downloads, FCC regulations limit download speed to 53 kbps. The modems require compatible analog phone line and server equipment.*

(**) NOTE: V.92 enhancements may not immediately be available from all ISPs. Contact your ISP to find out when its servers will be updated to support V.92 technology. The U.S. Robotics® 56K V.92 External Faxmodem is backward compatible and will negotiate the highest possible speed when connecting to an ISP. In addition, Call Waiting service from your phone company is required for using Internet Call Notification. Caller ID service from your phone company is required for using the Caller ID feature of Internet Call Notification.

U.S. Robotics 56K Internal PCI Faxmodem for Windows (USR5699B) and U.S. Robotics 56K Internal ISA Faxmodem (005687-03)

Experience fast analog downloads through your PC's PCI or ISA slot with one of these U.S. Robotics cards.

As with the external modem, the PCI card version supports both V.90 and V.92 standards and is renowned for its reliable connections and ease of use. The card is Internet phone ready, so your technology needs can be met now and in the future.

The ISA card enables you to take advantage of x2 technology and is ideal for applications where V.92 services aren't readily available or necessary.

Both PCI and ISA modems are controller-based and have powerful communication processing functions built into them. There's no need to tie up your computer's resources when you want greater power. The card provides superior performance and better throughput for Web functionality, whether you're working with vivid graphics, real-time audio and video, and other sophisticated capabilities delivered via the Internet.

And, like the standalone faxmodem, the internal versions feature advanced line probing technology. With it, the modem finds the most efficient path for each connection so you experience faster downloads and fewer dropped calls. This technology also instructs your ISP how to adjust its signal to avoid obstacles in the communications path to your PC and provide you with the fastest connection possible.

The PCI model has the same V.92 capabilities and Internet call notification features as external model. This way, you can take calls while online without dropping your Internet connection (and, therefore, eliminates the need for a second phone line in the home or small office).

Both PCI and ISA faxmodems include a software CD-ROM that makes setting up the modem easy. Once you install the card in a PCI or ISA slot, just insert the Installation disc into your PC's CD-ROM drive and follow the Add New Hardware Wizard. It's easy as point-and-click with this comprehensive CD driver package.

The PCI CD-ROM also includes ControlCenter software, which enables you to easily configure modem settings and automatically notifies you of any updates to your modem's code.

TECH SPECS

USR5686E:

Approvals — FCC Part 15, Class B/Part 68; IC; UL® and cUL listed
Operating Systems Supported — Windows® 3.1/95/98/Me, Windows 2000, Windows XP, Windows NT® 4.0, Linux®, and DOS
Modem Standards Supported — V.92 56K ITU; V.90 56K ITU; V.34 33.6-kbps ITU standard; compatible with ITU and Bell standards from 56 kbps to 1200 bps; V.42/MNP 2-4 error control, V.42 bis/MNP® 5 data compression; Fax: Class 1 and 2.0 Group III 14.4 kbps send and receive
Minimum System Requirements — IBM® compatible PC with serial port, 56K compatible local analog phone line; V.90 or V.92 ITU standard capable service provider; V.92 Call Notification feature requires Call Waiting service from your local phone company; V.92 Call Identification feature requires Call Waiting/ Caller ID services from your local phone company; RS-232 serial cable (sold separately); 486 DX or higher or Pentium® processor or compatible; 8 MB RAM, 2 MB available space on hard drive; CD-ROM drive
Interface — RS-232
Power — 115 VAC, 60 Hz
Size — 1.5"H x 6.5"W x 3.75"D (3.8 x 16.5 x 9.5 cm)
Weight — 2 lb. (0.9 kg)

USR5699B:

Approvals — FCC Part 15, Class B/Part 68; IC; UL and cUL listed
Operating Systems Supported — Windows 95/98/Me, Windows 2000, Windows XP
Modem Standards Supported — V.92 56K ITU, V.90 56K ITU, V.34, V.32bis, V.32, V.22bis, V.22, V.23, V.21; V.42/V.42 bis and MNP2-4/5, V.44; Fax: EIA 578 (Class 1) with V.17, V.29, V.27ter
Minimum System Requirements — IBM compatible PC with PCI slot, 56K compatible local analog phone line; V.90 or V.92 ITU standard capable service provider; V.92 Call Notification feature requires Call Waiting service from your local phone company; V.92 Call Identification feature requires Call Waiting/Caller ID services from your local phone company; Pentium 133-MHz processor or equivalent (Windows XP requires 300 MHz); 8 MB RAM, 2 MB available space on hard drive; CD-ROM drive
Interface — RS-232
Power — From the PC

005687-03:

Approvals — FCC Part 15, Class B/Part 68; IC; UL and cUL listed
Operating Systems Supported — Windows 95/98/Me, Windows 2000, Windows NT 4.0, Windows XP
Modem Standards Supported — V.90 56K ITU, V.34; compatible with ITU and Bell standards from 56 kbps to 1200 bps; V.80 videoconferencing support; Fax: Class 1 and 2.0 Group III 14.4 kbps send and receive
Minimum System Requirements — IBM compatible PC with ISA slot; 56K compatible local analog phone line; V.90 ITU standard capable service provider; 486DX or Pentium processor or equivalent; 8 MB RAM, 2 MB available space on hard drive; CD-ROM drive
Interface — RS-232
Power — From the PC

AND WHEN YOU'RE READY TO UPGRADE...

The Internet Update Wizard on the U.S. Robotics Web site makes it easy for you to update or upgrade your U.S. Robotics modem software code. This wizard identifies the make and model of your modem and lets you purchase a V.90 upgrade for your U.S. Robotics 33.6 modem or download a free update to your current U.S. Robotics 56K modem's code.

Technically Speaking

In the last 20-some years, phone companies have been replacing portions of their original analog networks with faster digital circuits, which encode information as either a binary one (1) or zero (0). But the slowest portion of the PSTN to be overhauled is the one you're most familiar with: the connection from your home to the phone company's central office . As a result, bottlenecks occur when you're trying to to surf the Internet or perform remote access from home. Why the slowdown?

Conversion. Data-transmission speeds are reduced when analog signals on one end of the link are converted to digital and then back to analog on the other end of the link. The difference between the original analog waveform and the reconverted signal is called quantization noise. It limits the analog data-communication channel to about 35 kbps.

V.34+ modems, with top speeds of 33.6 kbps, avoid the analog-to-digital hassles. They treat the PSTN as if it were entirely analog, avoiding all the conversion slowdowns. However, since one end of the connection is completely digital (the phone company's), V.34+ modems aren't making the most of the available bandwidth—and the digital bandwidth to be exploited is nearly 64 kbps.

V.90 technology

V.90 gets around the problem. Quantization noise affects only analog-to-digital conversions, not digital-to-analog. There are no analog-to-digital conversions between a V.90 digital modem and the PSTN, and the digitally connected transmitter uses only the 256 discrete 8-bit PCM (pulse code modulation) codes available on the digital portion of the phone network. So the digital information from the PSTN reaches the V.90 analog modem's receiver intact, so you can download at speeds up to 56 kbps. (In the U.S., the FCC limits the actual speed to 53 kbps.) Note that a V.90 analog modem's upstream, or send, channel does not go through an analog-to-digital conversion, limiting it to V.34+ speeds.

x2 technology

U.S. Robotics V.90 modems are compatible with its proprietary 56K technology, x2. With x2, you can download information nearly twice as fast as with ordinary V.34 modems and reduce waiting time. When your service provider upgrades to the V.90 standard, you can upgrade your modem with a simple flash download.

And when using an x2 faxmodem for telecommuting, you can speed up the delivery of information, which means you can access databases, get your e-mail, and access corporate Intranets faster, without investing in new equipment.

V.92 technology

With the introduction of x2 technology in 1997, U.S. Robotics introduced a marked change in the ease and availability of Internet data. The subsequent V.90 standard unified the data communications industry in its approach to providing dialup access to remote data.

Next came the V.92 standard. It improves the achievements of both x2 and V.90 technologies by making access to the Internet even simpler and less expensive.

The V.92 standard enhances V.90 in three major ways:

- It provides a faster, more balanced upstream to complement the 56 kbps downstream rate found in x2 and V.90 technologies.
- It defines a mechanism for significantly shortening the dialup connection time.
- It provides a method for effectively sharing a data line with voice functionality.

A V.92 modem "remembers" the connection conditions each time and tests for similar conditions each time it connects. If the conditions match those from the last time the modem was used, V.92 restores the previous connection, cutting 30 to 50 percent off the normal training time. In the case of a typical desktop computer setup, which often dials the same ISP point of presence from the same phone line every time, this situation will be common.

Whether you're ready for the power of V.92 depends a lot on your ISP. Does it currently support the new V.92 technology? Even if it doesn't, you can take advantage of Internet Call Notification (ICN) now. ICN enables you to identify callers attempting to reach you while you're on-line. And because V.92 is backward compatible to older technologies, you'll be ready to enjoy the benefits of V.92 as soon as your ISP upgrades.

USR5686E

What's included

USR5686E:

- ✦ External faxmodem
- ✦ AC power adapter
- ✦ (1) 7-ft. (2.1-m) RJ-11C phone cord
- ✦ Installation CD-ROM
- ✦ Quick-installation guide

USR5699B, 005687-03:

- ✦ PCI or ISA card faxmodem
- ✦ (1) 7-ft. (2.1-m) RJ-11C phone cord
- ✦ Installation CD-ROM
- ✦ Quick-installation guide

Item	Code
U.S. Robotics 56K V.92 Faxmodems	
External Data Faxmodem	**USR5686E**
Internal PCI Faxmodem for Windows	**USR5699B**
U.S Robotics 56K Internal ISA Faxmodem (V.90)	**005687-03**
You may also need...	
AT® Modem Cable, Standard, DB9 Female/ DB25 Male, 9-Conductor, 6-ft. (1.8-m)	**BC00301**
RS-232 Cable	**Call Us!**

Why Buy From Black Box? Exceptional Value. Exceptional Tech Support. Period.

Recognize any of these situations?

- You wait more than 30 minutes to get through to a vendor's tech support.
- The so-called "tech" can't help you or gives you the wrong answer.
- You don't have a purchase order number and the tech refuses to help you.
- It's 9 p.m. and you need help, but your vendor's tech support line is closed.

According to a survey by *Data Communications* magazine, 90% of network managers surveyed say that getting the technical support they need is extremely important when choosing a vendor. But even though network managers pay anywhere from 10 to 20% of their overall purchase price for a basic service and support contract, the technical support and service they receive falls far short of their expectations—and certainly isn't worth what they paid.

At Black Box, we guarantee the best value and the best support. You can even consult our Technical Support Experts before you buy if you need help selecting just the right component for your application.

Don't waste time and money—call Black Box today.