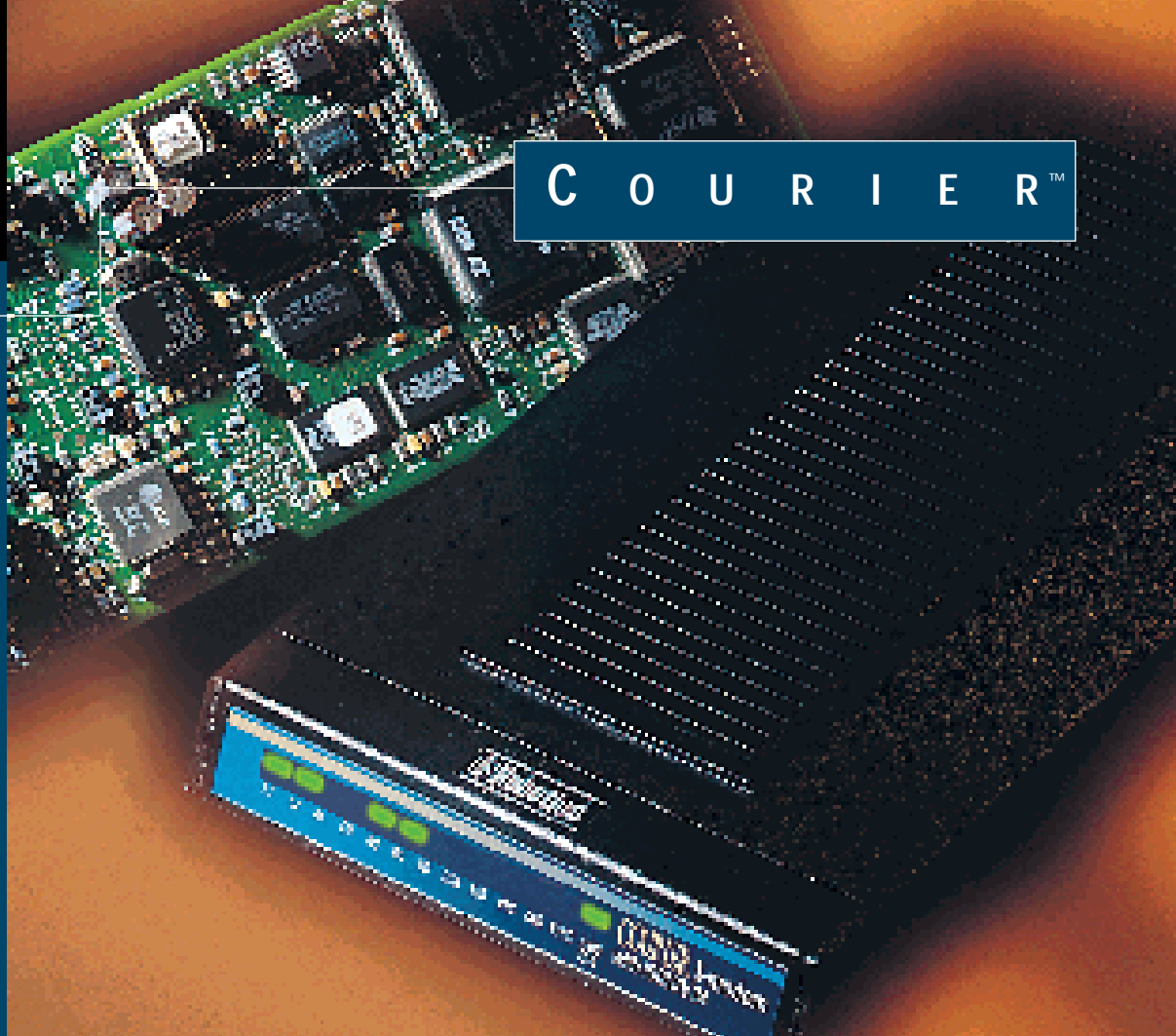# I-MODEM
FOR PC AND
MACINTOSH®

C O U R I E R™

ACCESS BOTH HIGH-SPEED
ISDN NETWORKS

AND ANALOG MODEMS
OR FAX DEVICES

Courier I-modem family of terminal adapters is ideal for any application requiring high-speed ISDN or analog connectivity. Connections between ISDN and analog devices occur transparently at the highest possible digital or analog speed. By combining ISDN performance features with an integral V.Everything™/V.34 Courier modem, the I-modem is especially useful for graphic designers, film houses, print service bureaus, educators or corporate telecommuters that need high-speed ISDN for graphical Internet access, graphics and data file transfers or remote access to a corporate LAN without losing compatibility to analog applications such as online services, mobile traveler correspondence, Bulletin Board Services (BBS), telephone banking, and local electronic records access.

Desktop (external) and ISA Card (internal) versions available. The Courier I-modem integrates an ISDN terminal adapter, NT-1 device, an analog device port, and a Courier V.34 modem into a single unit that is physically connected to the Basic Rate

Interface (BRI) ISDN wall jack. It supports the standard Courier feature set, including 33.6 Kbps. The hassle-free compatibility of Universal Connect™ automatically connects at the highest possible international standard or proprietary protocol. Courier I-modem automatically detects and connects incoming or originated calls no matter whether the remote device is connected via analog, switched 56K or ISDN. The transition to ISDN is transparent because I-modem uses the standard AT command set and requires no special communications software. Courier I-modem is available in two different form factors. The desktop versions feature a choice of S/T interface, for use with an external NT-1 or U interface with an integrated NT-1. Convenient LED status light indicators instantly provide connection status, B-channel usage, connection rate, plus the full range of modem status indicators found on the Courier V.Everything modem. The space saving ISA card version, installed directly into a PC, supports Microsoft® Plug 'n Play functionality to autoconfigure the card in a PC running Windows®95.

APPLICATIONS

High-speed file/imaging transfer. Especially useful in the medical, insurance, real estate, design, and print production areas, ISDN transmission speeds offered by the Courier I-modem are often double or more than those of an analog connection. The integral V.Everything/V.34 modem offers speeds up to 33.6 Kbps

ensuring compatibility with the vast installed base of analog devices. The Universal Connect feature automatically detects the type of remote device and connects at the highest possible speed. User productivity is increased by minimizing connect and data transfer times.

US Robotics®
The Intelligent Choice in Information Access

Telecommuting. Telecommuters can use the I-modem to establish high speed connections to their corporate LAN. Applications such as e-mail, database access, imaging and graphics transfer all benefit by the high bandwidth provided by an ISDN connection. An integrated analog device port and an NT-1 telco connection provide a complete solution which allows direct cabling to the telco wall jack for analog equipment such as fax machines, telephones, and answering machines.

Internet access. With the I-modem, Internet users can dramatically improve throughput by utilizing ISDN capabilities for faster file transfer, which is particularly important when downloading large graphic files or connecting to graphics-intensive Web sites.

FEATURES

Universal Connect™ automatically detects ISDN or analog calls and connects at the highest possible digital or analog rate supported by the device at the other end of the connection.

Software Downloadable Flash ROM preserves an investment in a Courier I-modem. The newest performance and capability features may be downloaded from U.S. Robotics.

Integrated V.34 Fax/Modem translates analog data or fax transmissions for seamless connectivity between the ISDN (Integrated Services Digital Network) and PSTN (Public Switched Telephone Network).

Award-Winning V.Everything™ incorporates the true ITU-T V.34 standard (28.8 Kbps), proprietary V.FC (28.8 Kbps), and proprietary V.32*terbo* (19.2 Kbps), as well as V.32*bis*, V.32, and other ITU-T standards down to 300 bps. It is the only feature set in the market today that includes all three high speed data transmission protocols, providing the fastest possible connections to other modem devices.
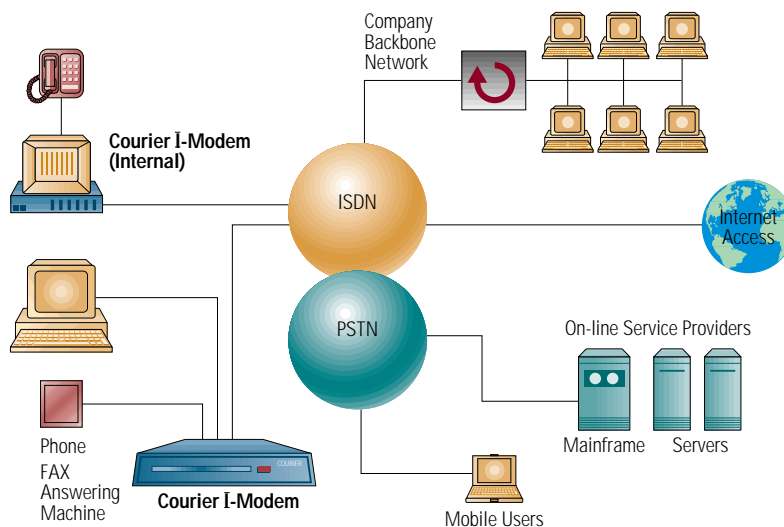
Analog Device Port is an analog port in the back of the I-modem used to connect an analog device such as a telephone, facsimile or answering machine. Full ringing support is available for automatic answer of incoming calls with the desktop version.

Integrated NT-1 provides a "single box" solution for direct connection to an ISDN wall jack without the requirement of a standalone network termination device. This saves space and the cost of an external NT-1. (Not available with the S/T model.)

TurboPPP™ is a unique set of high-performance ISDN standards-based features developed by U.S. Robotics to provide maximum ISDN performance on every call no matter what ISDN device they're connecting to. With TurboPPP:

> **Multilink PPP** combines the two 64 Kbps B-channels of an ISDN BRI line into a single 128 Kbps channel.

> **Multiple Compression Types** (Stac®, Microsoft®, and Ascend®) supported in software, allow Courier I-modem to adjust the compression type based on what is supported by the equipment on the other end of the call. Other devices, which execute compression in hardware, are limited to supporting a single type.

> **Bandwidth-on-Demand** provides dynamic allocation/deallocation of an additional B-channel based on metered throughput.

Asychronous/Synchronous PPP is supported in the I-modem for ISDN access to Internet service providers (ISPs). I-modem converts asynchronous PPP traffic from client applications running on the computer to Sync PPP across ISDN connections to the Internet or other TCP/IP networks.

Windows®**95 Enhancements** open the potential of ISDN to Windows 95-based applications that do not support Multilink PPP or multiple compression types. In these applications TurboPPP enhancements provide the

THE COURIER I-MODEM SOLUTION

Courier I-Modem (Internal)

Company Backbone Network

ISDN

PSTN

Courier I-Modem

Phone
FAX
Answering Machine

Mobile Users

Internet Access

On-line Service Providers

Mainframe   Servers

MVP 1995 WINNER PC Computing

performance benefits of Multilink PPP and compression (up to 512 Kbps), even when the application supports only PPP (64 Kbps).

Multi-Vendor Interoperability is achieved through the support of a variety of ISDN standards including V.120 (North American) and V.110 (European) Rate Adaption standards for compatibility with other ISDN devices. Rate Adaption occurs to enable asynchronous connections over the synchronous ISDN media. V.42*bis* compression is supported.

User Configurable Dial Security verifies passwords prior to passing a remote originated call or initiates dialback based on device configuration.

Plug and Play Support allows an IBM compatible PC running Windows®95 to automatically detect and configure the ISA card during installation.

SYSTEM REQUIREMENTS

An IBM-compatible computer (with an available ISA bus full-length expansion slot for internal version) or a Power PC (Macintosh OS) or Macintosh Computer

ISDN Basic Rate Interface (BRI) line

NT-1 and power supply (required for I-modem S/T for PC only)

Any third party communications software (QuickLink II is provided with the PC product, MacComCenter is provided with the Macintosh product)

Microsoft 3.1 or later (for Windows configurator; Macintosh OS for Macintosh configurator)

Async PPP stack (for remote LAN or Internet access)

Courier I-modem Family Model Numbers/Part Numbers

Model 1 units include an analog device port, integrated NT-1, and U-interface:

SKU#	Description
000698-0	Courier I-modem with ISDN/V.34 and Analog Device Port (External)
000700-0	Courier I-modem with ISDN/V.34 and Analog Device Port (Internal)
001370-0	Courier I-modem for Macintosh with ISDN/V.34 and Analog Device Port (External)

Model 2 units include an integrated NT-1 and U-interface, but do not have an analog device port:

SKU#	Description
000699-0	Courier I-modem with ISDN/V.34 (External)
000701-0	Courier I-modem with ISDN/V.34 (Internal)

Model 3 units utilizes an S/T interface, but do not include an NT-1 or analog device port:

SKU#	Description
001102-0	Courier I-modem with ISDN/V.34 (S/T Only) External
001101-0	Courier I-modem with ISDN/V.34 (S/T Only) Internal

Model 4 includes an S/T interface and analog device port, but does not include an NT-1:

SKU#	Description
001336-0	Courier I-modem with ISDN/V.34 (S/T Only) External

Optical Cable (external versions only):

SKU#	Description
1.009.686.B	DB-25 to 34-pin conversion cable assembly

TECHNICAL INFORMATION

D-Channel Signaling

ISDN data link layer	ITU-T Q.921
ISDN call control signaling	ITU-T Q.931/I.451

Central office switch types supported

-AT&T 5ESS Custom
-Northern Telecom supported DMS-100
-National ISDN-1 and 2

Digital data compatibility
For end-to-end transmission over ISDN

-ITU-T V.120/I.462
-ITU-T V.110/I.463
-Sync PPP for connection to ISDN-based services
-Error correction using V.120/I.462

Analog data compatibility
V.Everything technology, supporting

-ITU-T V.34 at 33.6, 31.2, 28.8 Kbps, and slower speeds
-V.FC at 28.8 Kbps and slower speeds
-V.32*terbo* at 19.2 Kbps and slower speeds
-ITU-T V.32*bis* at 14.4 and 12.0 Kbps
-ITU-T V.32 at 9600, 7200, and 4800 bps
-ITU-T V.22*bis* at 2400
-ITU-T V.22 at 1200 bps
-Bell 212A at 1200 bps
-Bell 103 at 300 bps
-V.17 fax at 14.4 Kbps, Group III; Class 1 and Class 2.0
-Synchronous speeds from 1200 bps to 28.8 Kbps
-Error correction using ITU-T V.42 and MNP 2-4
-Data compression using ITU-T V.42*bis* and MNP 5

DTE interface

-Supports standard DTE rates up to 230.4 Kbps
-Asynchronous Operation
-Supports maximum DCE rates in synchronous operation mode. (DCE supplies Tx clock)
-Electrical: RS-232
-Port rates: 230.4 Kbps-300 bps

ISA Card Power (internal version for PC only)

- 1.2A @ 5VDC
- .32A @ 12VDC

Desktop Power Supply

30 W @ 110VAC

Ringer Equivalence (desktop version only)   REN: 3

[Note: Ringer equivalence is defined as the maximum sum of REN values for attached analog devices. A typical telephone would have an REN value of 0.6, therefore the Courier I-modem would support up to five phones connected through the analog device port.]

Physical Dimensions

Approx 6.375 inches width by 10.30 inches length by 1.337inches height
Approx 4.092 inches height by 11.803 inches length (ISA card for the PC)

Physical Interfaces

S/T	RJ-45
U	RJ-45
Analog Device Port	RJ-11
Serial Device Port	DB-25 (Desktop only)

Regulatory/Agency Approvals

- FCC approved (Part 15 Class B)	- UL listed
- IC (formerly DOC) approved	- CSA approved

United States Contacts

For Corporate Accounts and Corporate Resellers
U.S. Robotics Corporate/Systems Division
8100 N. McCormick Blvd.
Skokie, IL 60076-2999
Phone: 1-800-USR-CORP
Fax: (847) 933-5800

For Retail Distributors, Resellers, and Consumers
U.S. Robotics Personal Communications Division
7770 N. Frontage Road
Skokie, IL 60077-2690
Phone: 1-800-DIAL-USR
Fax: (847) 676-7320

Fax on demand
1-800-762-6163
(708) 676-8536

BBS   (847) 982-5092
Mac BBS   (847) 676-1598

Web Site Address
http://www.usr.com

European Contacts

France
U.S. Robotics, s.a.
Cityparc, 3 Rue Lavoisier
F-59650 Villeneuve d'Ascq
France
Phone: 33-20-19-19-39
Fax: 33-20-91-99-27
Technical Support: 33-20-19-19-59

United Kingdom
BBS   44-1734-692200

U.S. Robotics, Ltd.
650 Wharfdale Road
Winnersh, Wokingham
Berkshire RG41 5TP
England
Phone: 44-1734-228200
Fax: 44-1734-695555
Technical Support: 44-1734-441000

Warranty

Five-year limited warranty; factory repair or replacement

Services

U.S. Robotics' customers are backed by a full range of customized technical support services including the I-Team. The I-Team is a customer support group focused on providing pre-sales information, installation services and post-sales support programs for ISDN related products. For more information, call 1-800-550-7800.

Manufactured in the U.S.A.

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