Connect One™
Connecting your Device to the Internet™

iModem™

iChip/Socket iChip Evaluation Platform

Benefits

- Enables any device to send and receive data via the Internet
- Complete, ready-to-integrate Internet modem
- Fastest time-to-market to Internet-enable existing devices
- Remotely updateable firmware
- Embedded and stand-alone versions
- Pass-through mode for standard modem use

The Internet within your Reach
iModem™ brings Internet connectivity within reach of many applications that require messaging and run in low-resource, price-sensitive devices. iModem sends and receives data as E-Mail, or a Web page enabling any device to communicate over the Internet without connecting to a PC or a gateway server. It also enables the use of up to 10 UDP and TCP socket interfaces.

The iModem Internet Engine
The Internet Engine inside the Connect One™ iModem is iChip™, a low-cost processor that runs PPP, UDP, TCP/IP, SMTP, POP3, MIME, FTP and HTTP protocols. All the protocols are remotely updateable via on-board SRAM and flash memory.

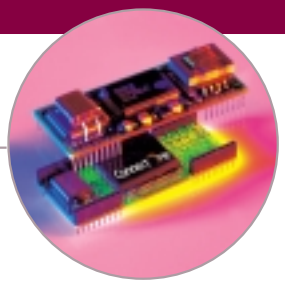
iModem communicates with the host processor via Connect One's extension to the Hayes AT command set. Connect One's AT+i™ protocol includes high level commands that simplify the development of an API between the host processor and iModem.

In Internet mode, iModem invokes the commands that run the Internet protocols. iModem then sends commands to dial, login, authenticate, communicate and sign off the ISP. iChip can be bypassed in standard mode, permitting direct communication between the host processor and the modem.

Stand-alone and Embedded Versions
The stand-alone iModem includes iChip, Conexant SocketModem™ or Multi-Tech's ModemModule™, LEDs, loudspeaker, DC power supply, RJ-11C connector, a DB-9 connector for an RS-232 serial connection and an enclosure. The embedded version includes iChip on a carrier board (Socket iChip™) that is pin-compatible with an accompanying SocketModem or ModemModule. It supports a TTL or RS232 level serial interface to the host. It also provides control signals for LEDs and a loudspeaker, as well as TIP and RING signals from the phone line. Modem data rates range from 2,400 to 56k bytes.

iModem™

Internet-Enable your Existing and Next-Generation Devices™



Specifications

Internet Protocols	PPP, UDP, TCP/IP, SMTP, POP3, MIME, HTTP and FTP
Internet Mode Operation	2 byte Message Type and Length; <64k byte data length
Data Buffer	16 Characters
Data Rate	2,400 bps and lower; 14,400 bps and lower; 33,600 bps and lower; 56,000 bps and lower
Data Modes	K56flex, V.34 (33.6 kbps), V.34 bis, V.32, V.32 bis, V.23, V.22, V.22 bis, V.22A/B, and V.21, Bell 212A, Bell 103 (depending on model)
Standard Mode Operation	Full or Half Duplex, Auto Redial, Auto Answer, Tone or Pulse
Command Set	Hayes AT Command Set plus Connect One's AT+i Internet Command Set extension
Data Format	Asynchronous Character: Serial, binary
Data Transmit Level	-9 dBm to -15 dBm
Receiver Dynamic Range	43 dB
Answer Tone Detection	2100 Hz,+/-40Hz (ITU-T mode); 2225 Hz, +/-40Hz (Bell mode)
Ring Frequency Detect	15.3 Hz to 60 Hz
Line Impedance	600 ohms
Off Hook DC Resistance	50 to 250 ohms
On Hook DC Resistance	≥7 K ohms
Operating Humidity	90% maximum (non-condensing)
Standard Operating Temperature Range	0° to 60° C (32° to 140° F)
Optional Operating Temperature Range	0° to 70° C (32° to 158° F)

	Embedded version	Stand-alone version
Size (L x W x H)	64.54 x 26.54 x 22 mm (2.541 x 1.045 x 0.866")	132 x 83 x 36 mm (5.196 x 3.267 x 1.417")
Weight	30 g. (1.05 oz.)	200 g. (7 oz.)
Power Supply Input	5 VDC	110 V. (+/-10%), 60Hz 220 V. (+/-10%), 50 Hz
Power Supply Output	Not Applicable	9 VDC, 350mA
Power Consumption (Operating)	**2,400 bps:** RS-232: 300 mW TTL: 155 mW **14,400 and 33,600 bps:** RS-232: 2.2 W TTL: 2.1 W **56,000 bps:** RS-232: 1.4 W TTL: 1.3 W	3 W @ 9 volts
Power Consumption (Idle)	**2400 bps:** RS-232: 180 mW TTL: 35 mW	3 W @ 9 volts
Connectors	Four 9-pin, 2 mm strip sockets	(1) female DB-9, (1) RJ-11C, 6mm power jack
LEDs	Not Applicable	TX, RX, Carrier, Ring, Power
Approvals	The module is designed to meet telecom and safety requirements.	FCC Part 15, FCC Part 68, CTR21, UL, CE

Ordering Information:

New Order No.	Old Part No.	Description
iM024UC-SA-xxx	50-2000-02	iModem with CO561AD-S, 2,400 bps, 9 V
iM144UC-SA-xxx	50-2001-02	iModem with CO561AD-S, 14,400 bps, 9 V
iM336UC-SA-xxx	50-2002-02	iModem with CO561AD-S, 33,600 bps, 9 V
iM560UC-SA-xxx	50-2003-02	iModem with CO561AD-S, 56,000 bps, 9 V
iM024UC-SS-xxx	50-2030-02	iModem with Socket iChip, 2,400 bps, 9V
iM144UC-SS-xxx	50-2031-02	iModem with Socket iChip, 14,400 bps, 9 V
iM336UC-SS-xxx	50-2032-02	iModem with Socket iChip, 33,600 bps, 9 V
iM560UC-SS-xxx	50-2033-02	iModem with Socket iChip, 56,000 bps, 9 V
iM024UC-EM	50-2040-02	Embedded iModem (Socket iChip and SocketModem), 2,400 bps, 5 V
iM144UC-EM	50-2041-02	Embedded iModem (Socket iChip and SocketModem), 14,400 bps, 5 V
iM336UC-EM	50-2042-02	Embedded iModem (Socket iChip and SocketModem), 33,600 bps, 5 V
iM560UC-EM	50-2043-02	Embedded iModem (Socket iChip and SocketModem), 56,000 bps, 5 V

Notes:
For "U", substitute: C = CTR21 European Countries, J = Japan, U = USA, Canada
For xxx, substitute 110 or 220 according to the voltage required.

Part Number 10-2000-03

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International
Connect One Ltd.
2 Hanagar St.
Kfar Saba 44425, Israel
Tel: +972-9-766-0456
Fax: +972-9-766-0461
E-mail: info@connectone.com
http://www.connectone.com

USA
Connect One Semiconductors, Inc.
4677 Old Ironsides Drive, Suite 280
Santa Clara, CA 95054
Tel: 408-986-9602
Fax: 408-986-9604
E-mail: info@connectone.com
http://www.connectone.com