

## 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

<b>Internet Protocols</b>	PPP, UDP, TCP/IP, SMTP, POP3, MIME, HTTP and FTP
<b>Internet Mode Operation</b>	2 byte Message Type and Length; <64k byte data length
<b>Data Buffer</b>	16 Characters
<b>Data Rate</b>	2,400 bps and lower; 14,400 bps and lower; 33,600 bps and lower; 56,000 bps and lower
<b>Data Modes</b>	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)
<b>Standard Mode Operation</b>	Full or Half Duplex, Auto Redial, Auto Answer, Tone or Pulse
<b>Command Set</b>	Hayes AT Command Set plus Connect One's AT+i Internet Command Set extension
<b>Data Format</b>	Asynchronous Character: Serial, binary
<b>Data Transmit Level</b>	-9 dBm to -15 dBm
<b>Receiver Dynamic Range</b>	43 dB
<b>Answer Tone Detection</b>	2100 Hz, +/-40Hz (ITU-T mode); 2225 Hz, +/-40Hz (Bell mode)
<b>Ring Frequency Detect</b>	15.3 Hz to 60 Hz
<b>Line Impedance</b>	600 ohms
<b>Off Hook DC Resistance</b>	50 to 250 ohms
<b>On Hook DC Resistance</b>	≥7 K ohms

### 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.

Specifications are subject to change without notice. iChip, iChip LAN, iChip Plus, Socket iChip, Internet Controller, AT+i, iModem, iLAN and Connect One are trademarks of Connect One Ltd. © Connect One Ltd., August 2001.

<b>Operating Humidity</b>	90% maximum (non-condensing)	
<b>Standard Operating Temperature Range</b>	0° to 60° C (32° to 140° F)	
<b>Optional Operating Temperature Range</b>	0° to 70° C (32° to 158° F)	
	<b>Embedded version</b>	<b>Stand-alone version</b>
<b>Size (L x W x H)</b>	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")
<b>Weight</b>	30 g. (1.05 oz.)	200 g. (7 oz.)
<b>Power Supply Input</b>	5 VDC	110 V. (+/-10%), 60Hz 220 V. (+/-10%), 50 Hz
<b>Power Supply Output</b>	Not Applicable	9 VDC, 350mA
<b>Power Consumption (Operating)</b>	<b>2,400 bps:</b> RS-232: 300 mW TTL: 155 mW <b>14,400 and 33,600 bps:</b> RS-232: 2.2 W TTL: 2.1 W <b>56,000 bps:</b> RS-232: 1.4 W TTL: 1.3 W	3 W @ 9 volts
<b>Power Consumption (Idle)</b>	<b>2400 bps:</b> RS-232: 180 mW TTL: 35 mW	3 W @ 9 volts
<b>Connectors</b>	Four 9-pin, 2 mm strip sockets	(1) female DB-9, (1) RJ-11C, 6mm power jack
<b>LEDs</b>	Not Applicable	TX, RX, Carrier, Ring, Power
<b>Approvals</b>	The module is designed to meet telecom and safety requirements.	FCC Part 15, FCC Part 68, CTR21, UL, CE

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Connecting your Device to the Internet™

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