Quick Installation Reference Card

Raptor V.90/K56 Flex

Box Type Dual Mode Modem

With Voice Mail Speakerphone

8FM-56KRAPTOR

- ☑ **56,000* bps Data Modem supporting both V.90 and K56Flex**
- ☑ **14,400 bps Send & Receive Fax**
- ☑ **Smart DAA Technology**
- ☑ **Full Featured Voice Messaging**
- ☑ **Speakerphone Functions**
- ☑ **V.42 Error Correction and V.42bis 4-to-1 Data Compression**
- ☑ **Linux Supports**

- Capable of receiving at up to 56kbps, and send at up to 31.2kbps. Due to FCC regulations on power output, receiving speeds limited to 53kbps. Actual speeds vary. Requires compatible phone line and server equipment. Complies with both the V.90 56k standard and K56Flex technology protocols.

Zoltrix

Features of Raptor 56K

- Dual Mode: Automatically detects all ITU V.90, K56Flex or 33.6 kbps connections
- Serial port (Asynchronous RS-232)
- · SmartDAA technology
  - Caller ID (U.S. version only)
  - Line-in-use detection
  - Remote hang-up detection
  - Extension off-hook detection
  - Digital PBX line protection
- Wake-on ring filtered in hardware
  - No false detects from picking up extension phone lines
- Enhanced voice features
  - Extension pick-up detection
  - Line-in-use; stops recording TAM message, etc.
  - Detection by monitoring Tip/Ring Voltage
- Data/Fax/Voice call identification
- Full-duplex speakerphone
- With hardware based modem controller and DSP (digital signal processor)

Technical Specifications

- Data: ITU-T V.90/K56Flex, V.34, V.32bis, V.32, V.22bis, V.22, V.21, V.23, Bell 212A/103
- Fax: ITU-T V.17, V.27ter, V.29, V.21 Channel 2, Group 3, EIA/TIA 578 Class 1 and T.31 Class 1.0, and Class 2 commands
- Data Compression: ITU-T V.42 LAPM, MNP 5
- Error Correction: ITU-T V.42 LAPM, MNP class2-4
- H.324, V.80 for video conferencing over Internet and point to point connection
- AT and extended AT command set compatible

Voice Speaker Phone Feature Notes

In addition to high-speed fax and data transfer functions, your fax/modem supports the following additional voice and speakerphone features:

Personal Voice Messaging System

- Automatically detect and route incoming voice, fax and data calls.
- Create up to 999 voice mailboxes, each with a personal mailbox-greeting message.
- Listen to voice messages through the telephone handset or speakers.
- Record your own greeting messages for each mailbox.
- Monitor incoming calls and answer the calls at your own convenience.
- Password-protection for each mailbox.
- Log of received incoming messages for each mailbox displaying status, date and time received, assigned record number, duration and file size of each message.
- Call from a remote location with a touch-tone telephone to retrieve messages.
- Call your pager to notify you of received messages.

Speaker Phone

- Turns your computer into a full-functioned speaker phone (active speakers and microphone required)
- Places and answers telephone calls directly from your computer
- Features mute, redial, hold, pause and clear functions
- Phonebook with speed dialing access
- Software volume control

Installing your fax/modem

Necessary Equipment

Make sure that you have all necessary equipment at hand before you begin.
You should have:

- The ***Zoltrix Raptor 56K Modem***
- A Pentium 100 or faster compatible computer with an available serial port
- Windows 95, 98, 98SE, Millennium, 2000, Linux
- A modular telephone outlet and cable
- A telephone set (Optional)
- Shielded PC speakers or headset (required for speaker phone)
- Microphone (required for speakerphone)

Installation Steps

The steps to install your modem are shown in order in this section. For some steps, you may need to refer to your computer's User's Manual.

Installing Telephone Line and serial cable

The Fax/Modem has modular telephone jack on the back of the modem. You will need to connect your Fax/Modem to the wall outlet via a modular telephone cord. If your wall outlet is not a modular type, you can purchase an inexpensive converter at most electronics or phone stores. It is suggested that you connect your modem to a "*dedicated line*". A dedicated line is a regular phone line that does not go through a switchboard, PBX, etc.

To connect the telephone line to the modem follows these steps:

1. Insert one end of the phone line into the jack on the modem labeled **Line**.
2. Insert the other end of the phone line into the phone jack, (usually located on your wall).

If you wish to use the speakerphone functions of your modem:

1. Using a microphone with a 1/8" mono plug, install the plug into the jack labeled, **MIC**.
2. Connect speakers with a 1/8" stereo plug; install the plug into the jack labeled, **SPK**.

Finally please connect the Serial port connector into the modem's Serial port and turn on the power switch after connecting with power adapter.

Note on driver Installation: This modem is only designed for use in Windows 98, SE, Millenium, Windows 2000, and Linux. The locations of drivers are as follows:

Windows 95/98/SE	E:\Raptor\Win9X\SCMSVS.INF
Windows Millenium	E:\Raptor\WinME\SCMSVS.INF
Windows 2000	E:\Raptor\Win2K\SCMSVS2K.INF
Linux	As Raptor is a hardware external modem, Linux already has built-in driver, so none of any driver for Linux will be provided. User should use the generic / standard 56k modem driver in Linux.

Windows 98 Driver Installation

Starts Windows 98. Connect the modem (ensure the power adapter is also connected and switch on the power button at the back of the modem) with the computer before the Windows is loaded. You should see a diagram as the lower left window appears. Click the "Next" button to proceed. And select "Search for the best driver for your device. (Recommended)", and press "Next" to proceed.

Note:

Windows Millennium and Windows 2000 will automatically select driver to install at this stage.

3. On the lower left window, select "Specify a location" and click on the Browse button to select the correct drive and directory containing the Win 98 driver. Click on the "Next" button to proceed. If you have the Zoltrix COMMUNICATION CD-ROM in your CD-ROM drive, select E:\Raptor\Win9x. Press "Next" to install the driver automatically.

Note: Replace E: with the driver letter of your CD-ROM drive if necessary.

4. Drivers are now installed. Click on the " FINISH" button to complete the modem driver installation.

Setting up the modem for country code

This extended syntax command selects and indicates the country of installation for the modem. This parameter selects the settings for any operational parameters that need to be adjusted for national regulations or telephone networks.

Syntax

+GCI=<country_code>

Defined Values

<country_code>

8-bit country code from Annex A of T.35. The value is the hexadecimal equivalent of the T.35 code, with bit 8 treated as the most significant bit and bit 1 treated as the least significant bit.

The supported countries are:

Country	Code	Country	Code	Country	Code
Australia	09	Hong Kong	50	Norway	82
Austria	0A	Hungary	51	Philippines	89
Belgium	0F	India	53	Poland	8A
Brazil	16	Ireland	57	Portugal	8B
Bulgaria	1B	Israel	58	Russia	B8
Canada	20	Italy	59	Singapore	9C
China	26	Japan	00	South Africa	9F
Czech and Slavak Federal Republic	2E	Korea	61	Spain	A0
Denmark	31	Luxembourg	69	Sweden	A5
Finland	3C	Malaysia	6C	Switzerland	A6
France	3D	Mexico	73	Taiwan	FE
Germany	42	Netherlands	7B	United Kingdom	B4
Greece	46	New Zealand	7E	United States	B5

Default
If the modem is specified for use in only one country, that country code is the default. Otherwise, the default is defined by the OEM. Factory default is B5 (United States).

Front Panel Description

PWR (Power)	- Lit when modem is powered.
AA (Auto Answer)	- Lit when the modem is in Auto Answer mode.
OH (Off Hook)	- Lit when the modem is in Off Hook mode.
Data	- Flashes when data is being transmitted and received.
SPK (Speaker)	- Speakers jack.
MIC (Microphone)	- Microphone jack.

Common Problems and Their Solutions

Problem: Modem answers incoming calls and then returns to the on-hook condition, disconnecting the caller.

This occurs most often when connecting to a UNIX system. In most case, the host does not prefer to see any result or command echo codes. If this is the case, adding E0 Q1 to the modem configuration string can disable the codes.

Problem: No echo from modem

An I/O address or IRQ conflict normally causes this. Verify that the COM Port is not in use by any other serial device and if necessary use another COM Port or I/O address setting. Refer to Appendix A for information on Determining What Serial Ports Are Installed On Your Computer. You may also need to refer to your computer or I/O card hardware manual.

Problem: The modem dials and appears to complete the connection, but the communications software does not enter the correct mode. (The screen remains blank.)

There may be an I/O conflict (See the solution for the previous problem, "No echo from modem").

The Result Codes may have been disabled by the software configuration set up. Check if Q1 is in the configuration or initialization string. If so, change it to Q0.

Your software may require numeric result codes rather than verbal result codes. Use either V0 for numeric result codes or V1 for verbal result codes in your initialization or configuration string.

Some software requires full-extended result codes (i.e. CONNECT 33600 instead of CONNECT). This can be controlled by the Xn command. X0 sends a summarized code (CONNECT) and X4 sends a full-extended code (CONNECT 33600).

Problem: The modem does not auto answer.

The auto answer mode is determined by the S0 register. If S0 has been set to 0, the modem will not answer. Assign another value to S0 by entering the following command S0=n, where n=the number of rings to occur before the call is answered (ATS0=2, the modem answers after two rings).

Problem: The modem always answers the phone

Set the S0 register to 0. ATS0=0

Problem: The communications software displays, "No Dial tone".

Make sure that your phone cable is working properly and that it is firmly seated to the phone socket at your phone jack and in the rear panel of the modem.

Problem: A high-pitched squeal is emitted from the external speakers.

This phenomenon is "feedback" and occurs when the microphone is pointed at the external speaker or is close enough to pick up the speaker output. This may be remedied by using a unidirectional microphone, making sure that it is pointed away and as far from the speaker as functionally possible. Another option is to use a headset with an attached microphone.

On-line Technical Support

If you have access to the World Wide Web be sure to visit the Zoltrix home page at:

http://www.zoltrix.com