

USER'S MANUAL

Q-modem 800P

Palm V series (V/Vx) attachable CDMA modem

Document number: Q-modem 800P010317

Revised: March 17, 2001

CONFIDENTIALITY AND PROPRIETARY INFORMATION

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Please read this information before use

FCC RF EXPOSURE COMPLIANCE

In August 1996 the Federal Communications Commission (FCC) of the United States with its action in Report and Order FCC 96-326 adopted an updated safety standard for human exposure to radio frequency (RF) electromagnetic energy emitted by FCC regulated transmitters. Those guidelines are consistent with the safety standard previously set by both U.S. and international standards bodies. The design of this phone complies with the FCC guidelines and these international standards.

Use only the supplied or an approved antenna. Unauthorized antennas, modifications, or attachments could impair call quality, damage the phone, or result in violation of FCC regulations.

This CDMA modem module has been tested for FCC RF exposure hand and body SAR compliance with the Palm V/Vx handheld organizer. In order to comply with FCC RF exposure requirements, the CDMA modem module must be operated with the Palm V/Vx handheld organizer. The use of this device in any other type of host configuration may not comply with FCC RF exposure requirements and should be avoided. During operation, a 0.5cm separation distance should be maintained between the antenna, whether extended or retracted, and the user's/bystander's body (excluding hands, wrists, feet, and ankles) to ensure FCC RF exposure compliance.

CAUTION

Changes or modifications without the express consent of QMtel Co., Ltd. voids the user's authority to use the equipment. This equipment has been tested and found to comply with the limits pursuant to Part 22 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in an appropriate installation. This equipment generates, uses, and can radiate radio frequency energy and, if not used in accordance with instructions, can cause harmful radiation to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If the equipment does cause harmful interference in radio and television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation distance between the equipment and the receiver
- Contact QMtel Co., Ltd. Technical Support for assistance.

Introduction

Q-modem 800P is Palm attachable modem based on CDMA technology. Q-modem 800P supports wireless data transaction with attachment to Palm V series (Palm V/Vx) on CDMA coverage territory.

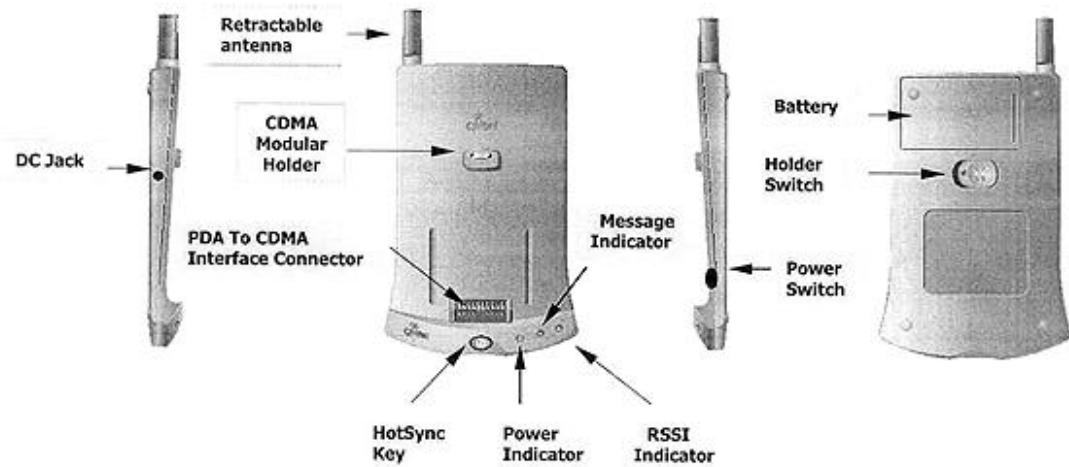
General Features

- Ultra compact design & size
- High capable li-ion rechargeable battery pack
- 64kbps data transfer rate support-up to CDMA coverage
- IS-95A/B CDMA Protocol Support
- Wireless e-mail sending & receiving anywhere & anytime
- Wireless Internet access & surfing anywhere & anytime
- Standard RS-232 Interface
- TIA/EIA IS-95A/B(Common Air interface) compatible: Protocol between MS and BTS
- TIA/EIA IS-98A compatible: Minimum Performance Requirements for MS
- IS-707 compatible: Async Data Service
- IS-637 compatible: Short Message Services

Unpacking

1. Q-modem 800P
2. Adaptor
3. Rechargeable battery

Description



Getting ready

1. Open the battery cover and install rechargeable li-ion battery pack into battery compart.
2. Connect adaptor to DC jack to recharge. Upon delivery, Battery is not fully charged. Please recharge before initial use till the power LED indicator turns green.
3. Connect Q-modem 800P with Palm V/Vx. And the following is configuration & setup instruction to connect your WISP/Carrier.

Configuration & Setup Instruction

1. Click "Prefs".
2. Click "Connection" at the right upper menu. Then click "New" out of the left bottom menu.
3. Enter **the name**, whatever you want at "Name". Ex) **qmodem 800p**. And choose "Serial to Modem" at "Connection Method". And choose "TouchTone" at "Dialing" and choose whatever you want at "Volume". Then click "Details" out of the right bottom menu.
4. Adjust 115,200bps at "Speed". And set "On" or "Automatic" at "Flow Ctrl". Then set "at+crm=129" for 9.6kbps Internet access or "at+crm=131" for 14.4kbps Internet access or "at+crm=135" for 64kbps Internet access at "Init String". And click "OK" out of the left bottom menu.
5. Return "preferences" mode. And choose "Network".
6. Enter "sktelecom" at "User Name" and choose "Prompt" at "Password".
7. Choose **the above name you made already** at "Connection" and enter "1501" at "Phone". Then, click "Connect" at the left bottom of menu.
8. You can access Internet once connected.

Power and Display Specifications

The modem has power function with external 4.5V AC/DC adaptor and internal Li-ion Cell battery. The adaptor must supply $4.5V \pm 5\%$ power to the modem. The nominal voltage of internal single Li-ion battery is 3.7V. The modem turns on by two methods, applying EXT_PWR_ON to the modem and pressing the side switch on the modem for 1 second. Palm V attached with Qmodem-800P sends EXT_PWR_ON signal when the HOT SYNC button on the modem is pressed for 1 second. The modem turned on by 1st method, pressing HOT SYNC button, is turned off when the Palm V is detached. The modem turned on by 2nd method, turns off by pressing the side switch one more time for 1 second.

***The modem also has power on/off button. Modem power is controlled by power on/off button.**

Display specification is to be changed in the future.

LEDs status and their meanings

Status	RSSI LED	Power LED	Incoming Call LED	Remark
Green Steady	During power-on	AC used		One time blink during power-on
Green Blinking	Indicate strong signal area	Battery good		
Red Steady		Battery low		Battery mode
LED Off	No service area	Battery cut-off		

Specifications

Mechanical Specifications

- Dimensions 86.2mm × 125.2mm × 12.0mm
- Weight 72grams Max
- Mounting 4 positions(4holes)

Environmental Specifications

- Storage Temperature -35°C ~ +70°C
- Operating Temperature -20°C ~ +50°C
- Humidity (Operating) 85%(50°C) relative humidity (non-condensing)

Electrical Specification

- DC Power input voltage Refer to Table 2.4-1 below.
- Maximum current 1.0A
- Operating voltage(digital) 3.0V
- Power consumption Refer to Table 2.4-2 below.

DC Power Input Voltage

	Minimum	Normal	Maximum
DC Voltage	4.2V	4.5V	4.8V

Typical Supply Current

	Sleep	Idle	Traffic
DC Current	2~4mA	80mA	290mA~ ⁽¹⁾

⁽¹⁾(1) CDMA Traffic mode current is highly dependent upon the output power.

RF Unit

General specifications

Item	Specification	Remark
Air Interface Standard	IS-95A/B	
Number of Channel	1~1023	
Channel Bandwidth	1.25MHz	
Frequency Stability	CDMA ±300 Hz	

Frequency Requirements

CDMA Channel Number	Transmitter Frequency [MHz]	Receiver Frequency [MHz]
1≤N≤777	0.030N + 825.0	0.030N + 870.0
1013≤N1023	0.030 (N-1023) +825.0	0.030 (N-1023) +870.0

RF Specifications

Transmitter specifications

Item	Specification	Remark
Freq. Range	824.70 ~848.31 MHz	
Freq. Accuracy/stability	±300Hz	
Frequency Bandwidth	1.25MHz	
Max. RF Output Power	0.264W ERP	Meet to Class 3
Waveform Quality	≥ 0.944	
ACPR @ Greater than 900kHz with $ \Delta f $ @ Greater than 1.98MHz with $ \Delta f $	-42dBc ~ -54dBc	$ \Delta f $: Center frequency offset

Receiver specifications

Item	Specification	Remark
Freq. Range	869.70 ~ 893.31 MHz	
Sensitivity	Less than -106dBm	
Single Tone Desensitization	Less than -101dBm	
Inter-modulation @ Tone power - 43dBm	Less than -101dBm	Less than -90 dBm Less than
32dBm	@ Tone power -	
21dBm	@ Tone power -	-79 dBm

Adaptor Specifications

Item	Specification								
Model	SFE1QM-004								
Type	SMPS(Switching Mode Power Supply)								
Input	<table border="1"> <tr> <td>Voltage</td> <td>220VAC(198VAC ~ 242VAC)</td> </tr> <tr> <td>Current</td> <td>0.3A Max. at 220VAC</td> </tr> <tr> <td>Frequency</td> <td>47Hz ~ 63Hz</td> </tr> <tr> <td>Protection</td> <td>Internal primary current fuse inrush limiting</td> </tr> </table>	Voltage	220VAC(198VAC ~ 242VAC)	Current	0.3A Max. at 220VAC	Frequency	47Hz ~ 63Hz	Protection	Internal primary current fuse inrush limiting
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Current	0.3A Max. at 220VAC								
Frequency	47Hz ~ 63Hz								
Protection	Internal primary current fuse inrush limiting								
Efficiency	60% minimum(excluding output cord)								
Output	<table border="1"> <tr> <td>Rated Output Voltage</td> <td>4.3V / 1.0A</td> </tr> <tr> <td>Combined line and load</td> <td>± 5%(4.085 ~ 4.515V)(including cord)</td> </tr> <tr> <td>Ripple</td> <td>100mVp-p Max</td> </tr> <tr> <td>Protection</td> <td>Foldback over current protection(2.0A ~ 3.9A)</td> </tr> </table>	Rated Output Voltage	4.3V / 1.0A	Combined line and load	± 5%(4.085 ~ 4.515V)(including cord)	Ripple	100mVp-p Max	Protection	Foldback over current protection(2.0A ~ 3.9A)
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Temperature	<table border="1"> <tr> <td>Operation Temperature</td> <td>0 °C to 50 °C with no derating</td> </tr> <tr> <td>Storage Temperature</td> <td>-30 °C to +85 °C</td> </tr> </table>	Operation Temperature	0 °C to 50 °C with no derating	Storage Temperature	-30 °C to +85 °C				
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Weight	115grams(excluding cords)								
Safety Approvals	Korea Standard, UL, CSA, CE								
EMI/EMC	Complies with EMC Directives(CISPR Pub22 Class B)								

Internal Battery Specifications

Item	Specification
Part Number	QBLI-800
Battery Type(Cell)	UF553048P
Battery classification	SANYO Lithium Ion Battery
Capacity	Nominal 650mAh
Charging Voltage	4.2V ± 0.03V
Nominal Voltage	3.7V
Protection	Over charge / Over discharge / Over discharge current protection
Weight	21grams Max.
Dimension(W x D x H)	30 x 48 x 6.5 mm