QuickSpecs

Overview

Front Image

1. Speaker
2. Charging/Notification LED indicator
3. Bluetooth/Wi-Fi LED
4. Stylus
5. Power button
6. Color display
7. End call button
8. Mini-SD slot (side)
9. Right softkey
10. Alphanumeric keyboard with LED backlight
11. Reset button
12. 22-pin charge, sync connector
13. Microphone
14. Stereo headphone/mic jack
15. 5-way Navigation button
16. Left softkey
17. Infrared (IR) window (side)
18. Answer/Send button
19. Digital Camera button
20. Volume up/down slider (side)
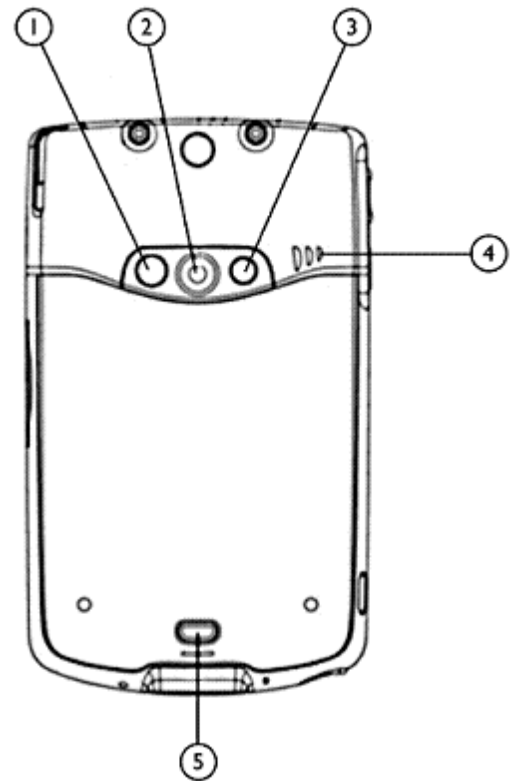
Back Image

1. Camera LED light (hw6945 only)
2. HP Digital Camera lens (hw6945 only)
3. Mirror (hw6945 only)
4. Speaker
5. Battery cover

QuickSpecs

Overview

At A Glance

- Integrated Antenna
- Integrated Quad band GSM/GPRS/EDGE wireless radio with automatic band transition[1,2,3,4]
- Integrated GPS Receiver[5]
- Integrated Wi-Fi (802.11b)
- Integrated Bluetooth® 1.2 wireless technology
- Intel® PXA270 Processor 416 MHz
- Integrated HP Photosmart 1.3 MP Camera (hw6945 only)
- Integrated alphanumeric keyboard
- Integrated miniSD slot (memory only)
- Integrated IrDA SIR
- Removable/rechargeable 1200 mAh 3.7 Volt, Lithium-ion battery, 1800 mAh extended battery available
- 3.0" transflective TFT with 64K color LED backlit display
- Microsoft® Windows Mobile™ 5.0 for Pocket PC, Phone Edition, with Messaging and Security Feature Pack
- Mobile versions of Microsoft Office software include (Word®, Excel®, PowerPoint® and Internet Explorer®)

NOTES:

[1] A standard GSM/GPRS/EDGE infrastructure, other Bluetooth-enabled devices, separately purchased equipment, and a service contract with a wireless airtime provider may be required for applicable wireless communication. GSM/GPRS/EDGE Wireless Internet access requires separately purchased Internet service contract. Check with service provider for availability and coverage in your area. Not all web content available. GPRS/EDGE may not be available in all networks. GPRS/EDGE data transmission speeds may vary based upon network capabilities and other conditions. Establishment and continuation of a GPRS/EDGE connection depends on network availability, provider support and signal strength.

[2] EDGE (Enhanced Data for Global Evolution) is a global standard for wireless wide-area data communication being rapidly deployed by GSM carriers worldwide. Actual download speeds may vary. Coverage is subject to transmission limitations and terrain, system, capacity and other limitations. Not all features and service options are available in all areas.

[3] Telephone service requires separately purchased contract with a telephone service provider with coverage in your service area. Additional fees may apply for some features, check with your service provider.

[4] Normal GSM Data Calls (CSD) are not basic GSM data services. These services may not be available via all operators, and may require separate subscription. Maximum connection speed is used in defining maximum speed. The GSM Operator may change the speed of connection and reduce time slots at its discretion if the network is congested. These actions may cause lower total data rate than the requested data rate.

[5] GPS Navigation software is included. Purchase of additional maps and/or software may be required to enable some features or allow navigation in certain areas. Availability of maps is limited. Map coverage may vary and is not guaranteed.

Standard Features

Models

HP iPAQ hw6945 Mobile Messenger – GSM/GPRS/EDGE, Wi-Fi, Bluetooth, GPS, w/ camera – service available from HP
FA745AA#ABA

HP iPAQ hw6940 Mobile Messenger – GSM/GPRS/EDGE, Wi-Fi, Bluetooth, GPS, w/o camera – service available from HP
FA743AA#ABA

Processor	Intel® PXA270 Processor 416 MHz	
	NOTE: Intel's processor numbering is not a measurement of higher performance.	
Memory	User Available Memory	45 MB available for persistent user storage
		64 MB SDRAM for running applications
Display	Type	Transflective TFT QVGA color with LED backlight with power save mode
	Number of Colors	64K color (65,536 colors) 16-bit
	Touch Screen	Yes
	Resolution (W x H)	240 x 240 pixels
	Dot Pitch	0.24 mm
	Viewable Image Size	3.0 in (75 mm) diagonal
System Unit	**Dimensions** (H x W x D)	4.65 x 2.8 x 0.71 in (118 x 71 x 18 mm)
		NOTE: Not including the additional 0.12 in (3 mm) in depth for the navigation button
	Weight	6.33 oz (179.45 g) with battery; 5.28 oz (149.69 g) without battery
	Operating Temperature	32° to 104° F (0° to 40° C)
	Storage Temperature	–4° to 140° F (–20° to 60° C)
	Operating Humidity	90% RH
	Regulatory Marks	Environmental: Wee logo
		All required regulatory marks for the intended markets

GPS Receiver[6]　　Integrated high sensitivity GPS receiver with HP iPAQ Quick GPS Connection technology. Quick GPS Connection technology is a software application residing on the device that enables a faster connection time for enhanced GPS performance. For some models, GPS Navigation software and maps must be purchased separately.

GPS Radio　　Global Locate solution

- High sensitivity GPS signal detection
- On-chip Dopplar measurement and navigation data decoding
- Companion software driver supports autonomous GPS and assisted GPS modes

Standard Features

HP Photosmart Camera (on select models)	Resolution	SXGA, 1.3 Mega pixels CMOS
	Image Quality	1280 x 1024 pixels
	File Format Supported	Still image formats – JPEG:

- SXGA – 1280 x 1024
- VGA – 640 x 480
- QVGA – 320 x 240
- QQVGA – 160 x 120

Video formats – 3GP

- CIF – 352 x 288
- QCIF – 176 x 144
- SQCIF – 128 x 96

High Quality F/2.8 Lens, with focus set to 120cm

Ability to assign GPS location to photos as they are taken

LED light

Self-portrait mirror

Hardware Buttons/ Reset Buttons

Power button with press and hold functionality, 1 reset button, 2 soft key buttons, 1 voice record/camera button (dual function), 1 two-way up/down volume control button, 1 phone answer/send button with green phone icon, 1 phone end button with red phone icon, 1 5-way navigation button, and built-in alphanumeric keyboard with LED backlight.

Stylus

One – Included in the box

Audio	Input	Voice recording, built-in speakerphone, microphone on bottom of unit, microphone input jack (combined with headphone jack)
	Output	Speaker designed for voice playback, built-in speakerphone on the back of the device, speaker on front of unit for handset earpiece audio, 2.5 mm headphone/microphone jack with stereo sound

The audio driver supports 8.0, 11.025, 16, 22.05 and 44.1 KHz playback sample rates.
Audio codecs: WMA, MP3, Simple MIDI, AMR, polyphonic MIDI

Standard Features

Indicators	LED 1 – Charge and Notify	Flashing Green LED – within GSM/GPRS/EDGE coverage area
		Flashing Amber LED – event notification / alarm
		Solid Red LED – AC in and battery or battery cover is absent
		Solid Amber LED – battery charging (Charger connected)
		Solid Green LED – battery fully charged (Charger connected)
		Flashing Red LED – low battery warning
	LED 2 – Bluetooth	Flashing Blue LED – Bluetooth ON
		Flashing Blue LED – WiFi ON
	Phone Notification	Vibrate
		Audible
		Visual message on the display

Cradle Interfaces	Connector	1 – 22-pin connector for synchronization and charging

Other Interfaces	IrDA (SIR)
	USB 1.1 Client – supported via HP standard 22-pin cradle interface
	Serial RS232 – supported via HP standard 22-pin cable interface (cable must be purchased separately)
	NOTE: Some HP authorized options may not be supported. See http://www.hp.com/go/ipaqaccessories.

Mini-SD Slot	Supports 4-bit mini-SD memory standard

Power	Battery	Removable/rechargeable 1200 mAh Lithium-ion (user replaceable). Optional extended 1800 mAh Lithium-ion battery available for purchase (http://www.hp.com/go/ipaqaccessories).
	Battery Performance	Talk time: up to 4 hours
		Standby time: up to 7 days

NOTE: Talk, standby, and usage times are approximate and depend on the network configuration, the usage pattern of an individual user and the configuration of the handheld. Use of internal wireless capabilities, GPS and backlight will significantly decrease battery run time.

AC Adapter	**Dimensions** (H x W x D)	3 x 1.9 x 1.8 in (76 x 48 x 44 mm – including prongs)	
	Cord Length (approx.)	6 ft (1.83 m)	
	Power Supply Ratings	Voltage Range	100 to 240 Vac
		Input Current	0.3 Aac max
		Input Frequency	50 to 60 Hz
		Output Voltage	5 VDC (typical)
		Output Current	2 Amp (typical)

QuickSpecs

Standard Features

Operating System

Microsoft® Windows Mobile™ 5.0 software for Pocket PC, Phone Edition with Messaging and Security Feature Pack

Mobile versions of Microsoft Office software include (Word®, Excel®, PowerPoint® and Internet Explorer)

Operating System Applications for Phone Edition

Powered by Microsoft® Windows Mobile™ 5.0 – Phone Edition: Calendar, Contacts, Tasks, Voice Recorder, Notes, Word Mobile, Excel Mobile, PowerPoint Mobile, Internet Explorer Mobile, Windows Media Player 10 Mobile, Calculator, Solitaire, Bubble Breaker, Messaging, File Explorer, Terminal Services Client, VPN Client, Infrared Beaming, Clock, Align Screen, and Memory.

In the box

HP iPAQ hw6940 or hw6945 Mobile Messenger, lithium-ion 1200 mAh removable/rechargeable battery, removable flip cover, wired stereo headphones with 2.5mm jack, AC adapter, USB/Serial synchronization cradle, stylus, holster, Product Information Guide, Getting Started CD, HP Navigation Maps and Software 60-day Trial

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Additional Software and Links

Microsoft ActiveSync 4.1 (Desktop device synchronization) and links to Microsoft websites for additional downloadable applications
NOTE: Some programs may require purchase of additional desktop software to utilize Pocket PC versions.

Service and Support

One-year parts and labor limited warranty; 90 days technical support for software. Support provided by HP.

HP Exclusive Applications

- HP Photosmart Camera Software – capture digital photos and video with the built-in 1.3 MP camera; attach a GPS location to photos as you capture them.
- HP Photosmart Mobile Software – view, organize and share photos, videos.
- iPAQ Wireless with Today Screen plug-in – manage and control your phone, Wi-Fi, Bluetooth, and GPS wireless connections.
- HP Profiles with Today Screen plug-in – group settings as a profile to be used at different times of the day; settings include ring type, volume, screen brightness, wireless settings, etc.
- Bluetooth Manager – manage your Bluetooth connections and settings.
- Today Panel Lite – one touch access from Today Screen to device status: battery, memory, and backlight settings.
- HP Help and Support – one location for all help, warranty, and support information.
- HP QuickStart Tour – provides information on how to use key features of the HP iPAQ.
- Modem Link – use the HP iPAQ as a modem to wirelessly connect a notebook PC to the Internet.
- SIM Manager – manage the Contacts on your SIM card
- Microsoft Pocket Streets 2006 – transforms your HP iPAQ into a personal guide to get you where you need to go.
- Java Virtual Machine
- OMA DRM 1.0 compliant

Standard Features

Companion CD from HP		**Full Versions**
	Applications	ActiveSync 4.1
		Windows Media Player 10 Desktop
		HP Protect tools secured by CREDANT Technologies
		HP Photosmart Premier Software
		HP Image Transfer
		HP Navigation Maps and Software – 60-day trial (NA only)
		HP iPAQ GPS Quick Connect Utility
		Funk Odyssey
		Real Player 10
		Phone Data Manager for PC
	CD Links	HP Web Registration
		HP Worldwide Phone Numbers
		HP Software Store
		Adobe Reader for PC
		Microsoft map download website (Microsoft Pocket Streets preinstalled, maps for use with applications)
		2006 – Voice Command for Windows Mobile
		Pocket MSN for Windows Mobile-based devices
		HP Navigation Maps and Software – to purchase (NA only)

Additional Documentation

Additional Product Information, and HP Important Safety Information

NOTE: Programs may vary based on model. Some programs are accessed through CD links to download web sites.

Regulatory Compliance	Certifications	UL, Industry Canada, CE, IDA, C-Tick, CCC, RTA, NAL, NZ DoC, NTC, IDA, DGT, SIRIM, PTA, GOST, SASO, SABS, PTD, JTB, WPC, DGPT, CIT, MoC, ICASA, Etisalat, TTA, etc.
		GCF 3.16
		PTCRB 3.2.1
		RoHS or WEE compliance
	Bluetooth	Bluetooth logo (FCC (47 CFR) Part 15C, Section 15.247&15.249 ETS 300 328, ETS 301 489-1/17 Low Voltage Directive IEC950 UL and CE Mark)
	Regulatory	Compliant with ETSI GSM Phase 2+ standard
	Wi-Fi Certification	Wi-Fi logo certification including WPA/TLS
	USB Compliance	USB 1.1 client (2.0 full speed)

Standard Features

GSM/GPRS/EDGE Specifications[1,2]	GPRS/GSM/EDGE Quad band	ENS, NACC, and Extended uplink TBF support
		Global voice and data wireless network
		Simultaneous operation with Wi-Fi & Bluetooth
	Technology[1,2,3,4]	**GSM** (Global System for Mobile Communications)
		GPRS (General Packet Radio Services)
		EDGE (Enhanced Data for Global Evolution)
		Global voice and data wireless network
	Operation	Quad band GSM/GPRS / EDGE (GSM 850/900/1800/1900 MHz)
	Power class	Class 4 (2W @ 850 MHz)
		Class 4 (2W @ 900 MHz)
		Class 1 (1W @ 1800/1900 MHz)
		GSM 850 8-PSK Class E2
		GSM 1900 8-PSK Class E2
		GSM 900 8-PSK Class E2
		GSM 1800 8-PSK Class
	EDGE features	EGPRS Class B
		Multi slot Class 10
		PBCCH
		Support for E-GPRS coding schemes MCS1 to MCS9 in both the uplink and downlink
	GPRS data features	Coding Schemes: CS1 to CS4
		Network Mode 1-3
	GSM voice features	Half Rate, Full Rate, Enhanced Full Rate and Adaptive Multi-Rate (HR,FR/EFR/AMR)
		Echo cancellation and noise reduction
		Full duplex hands free
	Circuit switched data[5]	Normal Single Slot GSM Circuit Switched Data @ 9.6 Kbps Transparent and Non-Transparent Data
	Supplementary services supported	Call forwarding, Call barring, Multiparty, Calling Line Identity
		Call Waiting and Call Holding
	Unstructured supplementary service data	USSD Phase 2 (MO & MT)
	Encryption	GEA1
	Authentication	Password Authentication Protocol (PAP) or
		Challenge Authentication Protocol (CHAP)
	Messaging services	SMS (Short Message Service) for GSM, both mobile-originated and mobile-terminated SMS
		MMS (Multimedia Message Service)
		Cell Broadcast
	SIM	1.8 / 3V SIM operation
		Security: Pin 1 & 2 Control
		SIM standards, Phase 1, 2, 2+, CPHS
		SIM Toolkit Release 96+
	Ring Tones file formats	Simple MIDI Type 0, WMA, WAV, MP3, polyphonic MIDI

Standard Features

Wi-Fi (802.11b) Specifications[1]		
	Technology	High-speed wireless access to the Internet, email and corporate data
	RF Network Standard	IEEE 802 Part 11b (802.11b)
	Frequency Band	2.4000 to 2.4835 GHz
		2.4465 to 2.4835 GHz (France)
		2.4000 to 2.497 GHz (Japan)
	Antenna Type	Embedded Antenna
	Security	WEP 64/128-bit compliant to IEEE 802.11 Compliant to 802.1X (EAP-TLS, PEAP) LEAP, WPA
	Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Points Required)
	Modulation Technique	Direct Sequence Spread Spectrum
	Modulation Schemes	DBPSK, DQPSK, CCK
	Receiver Sensitivity – Packet Error Rate (8E-2)	11 Mbps: <-80 dBm
		5.5 Mbps: <-82 dBm
		2 Mbps: <-86 dBm
		1 Mbps: <-89 dBm
	Maximum Receive Level	-10dBm (1/2/5.5/11 Mbps)
	Output Power	15 dBm
	Power Management	Radio On/Off control through iPAQ wireless
		Power Save mode available in Power Settings
	Power Consumption	Transfer mode: < 300 mA, average
		Receive mode: < 200 mA, average
	Power Saving Option	802.11 Compliant Power Saving, idle mode 20 mA
	Media Access Protocol	CSMA/CA (Collision Avoidance) with ACK
	Protocols Supported	TCP/IP IPX/SPX UDP
	Operating Distance	Up to 1000 ft (3048 m) – Open sight
	Certifications	All necessary regulatory approvals for countries we support including:
		WPA Wi-Fi approval
		FCC (47 CFR) Part 15C, Section 15.247&15.249
		ETS 300 328, ETS xxx 489-6
		Low Voltage Directive IEC950
		UL, CUL, and CE Mark

NOTES:
[1] A standard GSM/GPRS/EDGE infrastructure, Wi-Fi, other Bluetooth-enabled devices, separately purchased equipment, and a service contract with a wireless airtime provider may be required for applicable wireless communication. GSM/GPRS/EDGE Wireless Internet access requires separately purchased Internet service contract. Check with service provider for availability and coverage in your area. Not all web content available. GPRS/EDGE may not be available in all networks. GPRS/EDGE data transmission speeds may vary based upon network capabilities and other conditions. Establishment and continuation of a GPRS/EDGE connection depends on network availability, provider support and signal strength.

Standard Features

Bluetooth® Specifications[1]	Technology	High-speed, low-power, short-range wireless communication with other Bluetooth devices
		TI-6150 solution
		Single-Chip 0.13-um CMOS Bluetooth™ Solution
		UART/PCM interface, 0dBm transmit
		Support for Co-existence with TI WLAN chipset (TNETW1100b)
		Broadcomm stack and UI
		Class 2/3 support
		Compliance with Bluetooth Specification Version 1.2

- Adaptive Frequency Hopping including master and slave classification
- Faster connection
- Extended SCO-all new packet types
- Synchronization
- LMP improvements
- Quality OF Service improvements

Bluetooth transmit inactive (FAA requirement)

	Bluetooth® specifications	High-speed, low-power, short-range wireless communication with other Bluetooth devices. 1.2 compliant (2.4-GHz Industrial Scientific Medical Band)
	System interface	High-speed UART processor interface
	User interface	Bluetooth Manager
	Device type	Class II device; up to 4 dBm transmit, typical 10 meter range
	Power	3.3V 5% Peak current – typical TX current at approximately 30 mA
		– typical RX current at approximately 50 mA
	Profile Support	General Access Profile Service Discovery Application Profile Serial Port Profile Generic Object Exchange Profile File Transfer Profile Dial-Up Networking Server Profile LAN Access Profile Object Push Profile Personal Area Networking Profile Basic Printing Profile Headset Profile Handsfree Profile Advanced Audio Distribution Profile Audio/Visual Remote Control Profile

Standard Features

Usage Models

Service Discovery
Determine what Bluetooth devices are within range and support authorization

File Transfer
File and directory browsing and navigation on another Bluetooth device.

- File copying
- Object manipulation – including add, delete, create new folders etc.

Serial Port
Synchronization between PDAs and PCs using ActiveSync

LAN Access
Wireless link to Corporate LAN using Bluetooth and appropriate Bluetooth access point[1]

- Corporate email, network neighborhood, access to LAN applications, file transfer, ftp, Internet browsing, etc, using TCP/IP[1]
- Access the Internet by connecting to your desktop or notebook over Bluetooth and using its network connection[1]

Generic Object Exchange and Object Push
Exchange business cards, tasks, documents, appointments and more [1]

Personal Area Networking
Collaborate, chat, play games, exchange data[1]
Adhoc peer to peer networking[1]

Basic Printing Profile
Print to compatible Bluetooth printers without the need for cables or specific print drivers

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Options

Accessories available from HP	**NOTE:** Optional accessories are available at additional cost.	

Memory/Storage	128 MB mini SD Memory Card	FA602A#AC3
	256 MB mini SD Memory Card	FA603A#AC3
	512 MB mini SD Memory Card	FA604A#AC3

Power	1200 mAh Lithium Ion Standard Battery	FA404A#AC3
	1800 mAh Lithium Ion Extended Battery	FA405A#AC3
	Automobile Adapter	FA125A#AC3
	Charger Adapter	FA133A#AC3
	AC Adapter	FA372A#AC3
	AC Adapter (RoHS complaint)	FA372B#AC3

Synchronization	Desktop Cradle	FA260A#AC3
	AutoSync Cable (USB and Serial)	FA122A#AC3

Input Devices	Stylus Three-pack	FA261A#AC3
	Foldable Keyboard	FA118A#ABA
	iPAQ Bluetooth Folding keyboard	FA287A#AC3

Headphones	Bluetooth Stereo Headphones	FA303A#AC3

Cases	Leather Belt Case	FA160A#AC3
	Premier Leather Case	FA662A#AC3
	Premier Leather Belt Case	FA350A#AC3
	Nylon Slimline Case	FA161A#AC3
	Custom Cases: to view and order go to: http://www.casesonline.com.	

Options

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[3] Telephone service requires separately purchased contract with a telephone service provider with coverage in your service area. Additional fees may apply for some features, check with your service provider.
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[5] GPS Navigation software is included. Purchase of additional maps and/or software may be required to enable some features or allow navigation in certain areas. Availability of maps is limited. Map coverage may vary and is not guaranteed.
[6] While the GPS radio on your device is able to connect to the GPS satellites without enabling the Quick Connect for GPS feature, it may take a few minutes longer and even up to five minutes to locate the satellites without using the Quick Connect for GPS feature. User is required to enable Quick Connect fro GPS updates.

HP iPAQ Mobile Messenger is a Windows Mobile™-based Pocket PC

For more information on the HP iPAQ Mobile Messenger series, visit our website at http://www.hp.com/go/iPAQ.