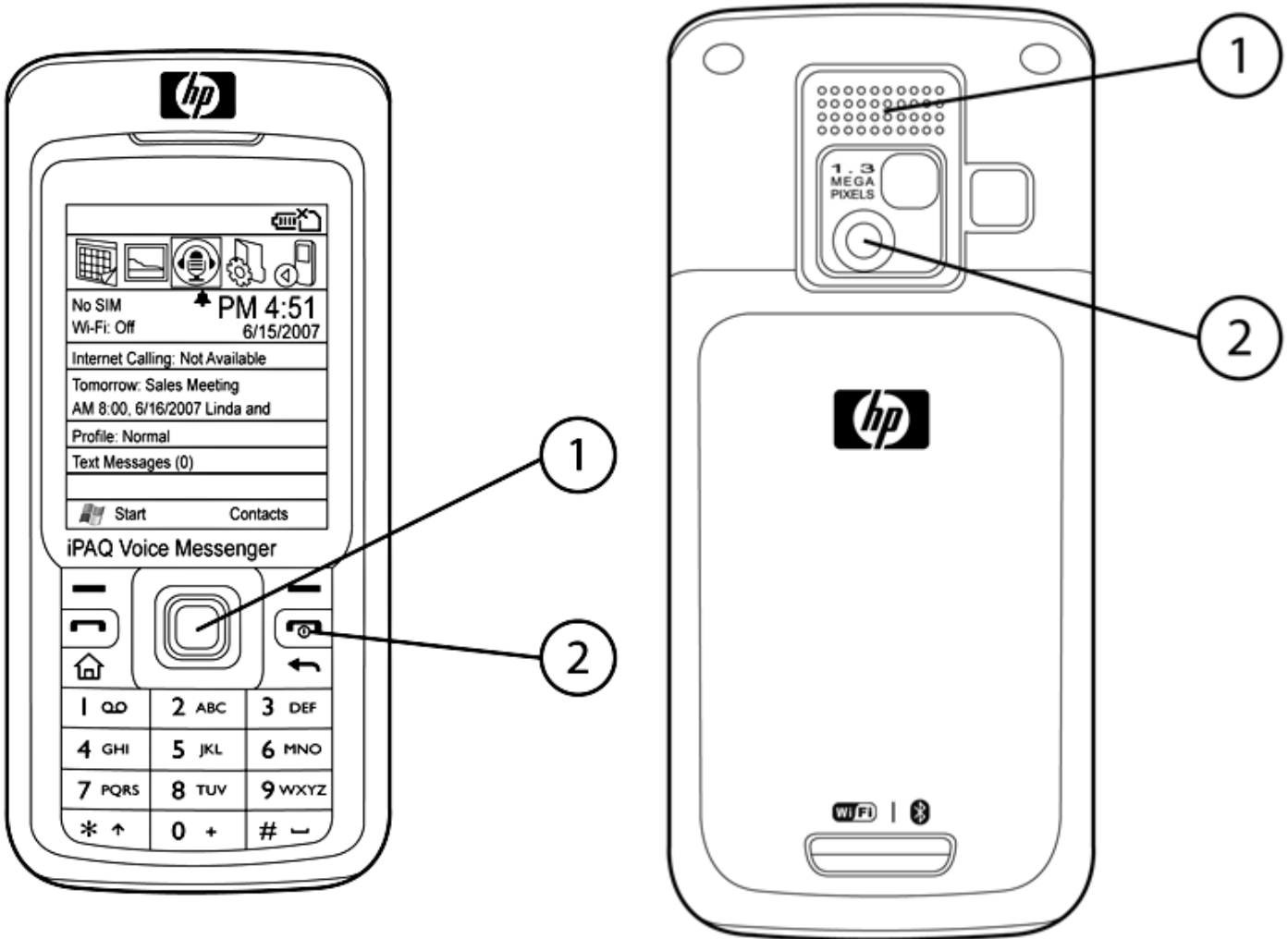


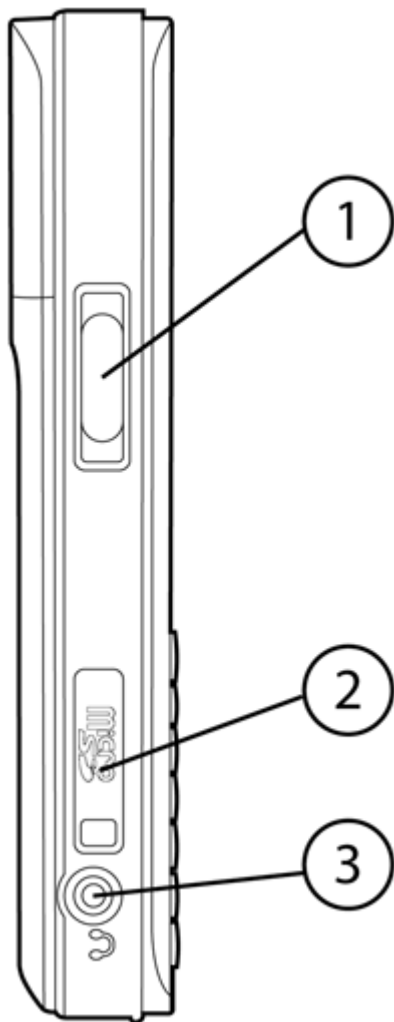
Overview



1. Center select/Action button
2. End key and Power On/Off

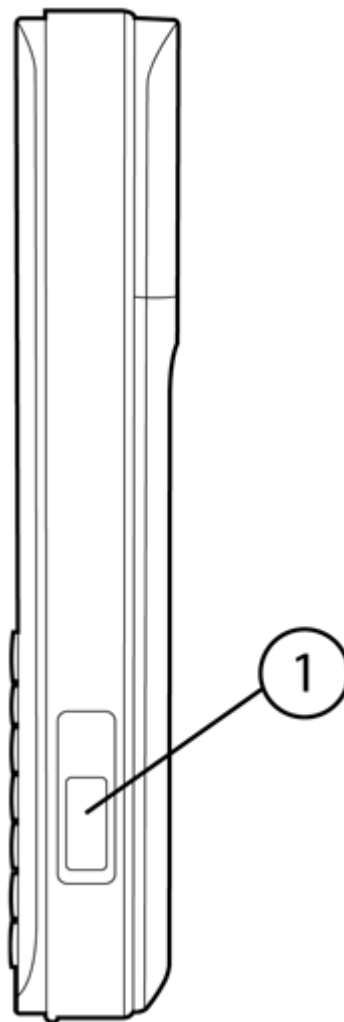
1. Speaker
2. 1.3 MP camera

Overview



Left Side

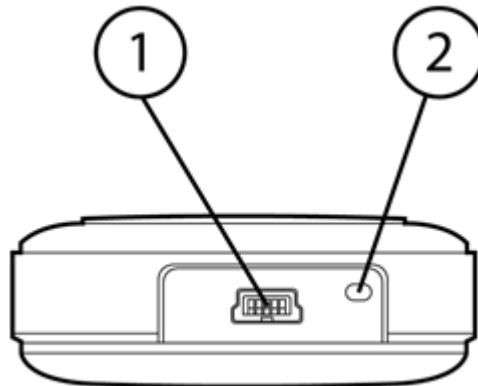
1. Volume Up/Down
2. Micro SD
3. Headset



Right Side

1. Voice Commander

Overview



Bottom

1. Mini USB/Charger
2. Microphone

At A Glance

- Smartphone with 12-function keys
- Integrated Antenna
- Integrated Quad band GSM/GPRS/EDGE wireless radio with automatic band transition^{1,2,3,4}
- Integrated WiFi – 802.11 b/g with WPA2 security¹
- Integrated Bluetooth® v1.2 wireless technology
- TI OMAP 850 Processor 200 MHz
- Integrated Micro-SD slot (memory only)
- Integrated 1.3 MP camera
- Removable/rechargeable Li-ion 1100 mAh battery
- 2.0" micro-reflective TFT 176x220 with 64K color LED backlight display
- Windows Mobile® 6 Standard
- Microsoft® Outlook™ Mobile

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.

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.

Standard Features

Models

HP iPAQ 510 Voice Messenger – 128 MB ROM, 64 MB SDRAM, GSM/GPRS/EDGE, Bluetooth, WiFi, camera

FA887AA#ABA – Generic Commercial – English

FA911AA#ABA – Generic Retail – English

Processor	TI OMAP 850 200 MHz processor
	NOTE: Processor numbering is not a measurement of higher performance.

Memory	User Available Memory	64 MB SDRAM main memory for running application 128 MB flash ROM
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Display	Type	Micro-reflective TFT 176x220pixel color with LED backlight
	Number of Colors	262k color (262,144 colors) 18-bit NOTE: OS support up to 16-bit (65,536) colors only
	Touch Screen	No
	Resolution (W x H)	176 x 220 pixels
	Dot Pitch	0.18 mm
	Viewable Image Size	2.0 in diagonal

Camera	Resolution	1.3 Mega pixels CMOS
	Image Quality	QCIF (176x144), CIF (352x288), QVGA (320x240), VGA (640x480), SXGA (1280x1024)
	File Format Supported	GIF, JPEG, BMP, PNG

Camcorder	View Finder Size	160 x 120
	Video Size	QCIF 176 x 144

Hardware Buttons/ Reset Buttons	Five-way navigation key, 2 soft keys (both are programmable keys), send/end, home, return, volume control, voice command, and 12-key numeric keyboard with LED backlit keys.	
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Audio	Integrated microphone, receiver, speaker and one 2.5 mm stereo headphone jack, stereo (through headphone jack)	
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Cradle Interfaces	Connector	USB1.1 client for synchronization and charging
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SD Slot	Micro SD	
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Standard Features

Power Supply	Battery	Removable/rechargeable 1100 mAh Lithium-Ion (user changeable)
	Battery Performance	Talk time: up to 6.5 hours Standby time: up to 7.8 days (188 hours)
	NOTE: All talk and standby 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 and backlight will significantly decrease battery run time.	
	AC Power	AC Input: 100~240 Vac, 50/60 Hz, AC Input current: 0.2 Aac max Output Voltage: 5Vdc (typical), Output Current: 1A (typical)
	NOTE: Battery run time varies based on the usage pattern of an individual user and the configuration of the handheld. Use of internal wireless capabilities 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), (may vary by model)		
	Cord Length (approx.)	6 ft (1.83 m) USB cable length only		
	Power Supply Ratings	Voltage Range	100 to 240 Vac	
		Input Current	0.2Aac	
		Input Frequency	50 to 60 Hz	
		Output Voltage	5 VDC (typical)	
		Output Current	1 Amp (typical)	

System Unit	Dimensions (H x W x D)	4.21 x 1.91 x 0.64 in (107 x 48.6 x 16.3 mm)	
	Weight	3.6 oz (102 g)	
	Operating Temperature	32° to 104° F (0° to 40° C)	
	Storage Temperature	-4° to 140° F (-20° to 60° C)	
	Operating Humidity	85% RH	
	Regulatory Marks	Electrical	FCC Class B, UL or CSA NRTL, CE
	Safety	C-UL, NOM	

Design Features	Numeric keypad, send, end, home, return, 2 soft key, and 5-way navigation, voice command button, volume key, microphone and speaker		
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Operating System	Windows Mobile® 6 Standard		
	Pocket versions of Microsoft software are included (Outlook Mobile, Office Mobile and Internet Explorer for Smartphone)		

Operating System Applications for Phone Edition	Powered by Windows Mobile® 6 Standard; Calendar, Contacts, Tasks, Voice Recorder, Notes, Pocket Internet Explorer, Windows Media Player 10 (MP3, audio and video streaming), Calculator, Solitaire, Bubble Breaker, Inbox (with Spell Checker for email), File Explorer, VoIP client, Bluetooth Manager, VPN Client, Clock, Memory, Volume control. Word, Excel and Power Point, Microsoft DRM, SIM Toolkit		
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Standard Features

In the box HP iPAQ 510 Voice Messenger, lithium-Ion 1100 mAh removable/rechargeable battery, USB desktop synchronization cable, AC adapter, stereo earbud style headset with 2.5mm jack, charger adapter, Getting Started Guide, How Do I...? Guide and HP iPAQ Companion CD.

Additional Software and Links Microsoft ActiveSync 4.5 (Desktop device synchronization) and links to Microsoft websites for additional downloadable applications
NOTE: Some programs may require purchase of additional desktop software to utilize Smartphone versions.

Service and Support One-year parts and labor in most regions; 90 days technical support for software in most regions. Additional offers may vary by region.

HP Exclusive Applications

- HP iPAQ DataConnect – to automatically configure your device for operator network settings
- HP iPAQ Help and Support
- HP iPAQ QuickStart Guide
- HP iPAQ Tips
- HP iPAQ Setup Assistant
- Certificate Enroller
- Asset viewer
- HP iPAQ Shortcuts
- VoiceReply to emails
- Cyberon Voice Command
- MMS Composer
- JVM (MIDP 2.0, CLDC 1.1)

Companion CD from HP

Full Versions

Applications	ActiveSync
CD Links	Handango Microsoft Games AvantGo

Additional Documentation

Safety and Comfort Guide on PDF, and User Guide on PDF

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

GSM/GPRS/EDGE Specifications^{1,2,3,4}

Technology	EDGE (Enhanced Data for Global Evolution) Global voice and data wireless network (GSM – Global System for Mobile Communications / GPRS – General Packet Radio Services)
Operation	Quad band GSM/GPRS / EDGE (GSM 850, E-GSM900, DCS1800, PCS1900 MHz)

Standard Features

Power class	GSM Phase 2+, Release 99 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
EDGE features	EDGE Class 10 Support for E-GPRS coding schemes MCS1 to MCS9 in both the uplink and downlink
GPRS data features	Class B GPRS Multi slot Class 10 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 data⁴	Normal Single Slot GSM Circuit Switched Data @ 9.6 Kbps Transparent and Non-Transparent Data High Speed Circuit Switched Data (HSCSD) multi-slot GSM data calls of maximum uplink / downlink speeds of 43.2Kbps / 14.4Kbps or 28.8Kbps / 28.8Kbps
Supplementary services supported	Call forwarding, Call barring Multiparty, Calling Line Identity Call Waiting and Call Hold
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	1.8V/3.0V SIM standards, Phase 1, 2, 2+, CPHS SIM Toolkit
Ring Tones file formats	MIDI Type 0, WMA, WAV, MP3
Regulatory	Compliant with ETSI GSM Phase 2+ standard
Carrier certification	See http://www.hp.com (search for iPAQ 510 Voice Messenger certifications)
Agency certification	UL, FCC, Industry Canada, CE, IDA, C-Tick

Standard Features

Wireless LAN (802.11b/g) Specifications^{1,2}	Technology	High-speed wireless access to the Internet, email and corporate data
	RF Network Standard	IEEE 802 Part 11b/g (802.11b/g)
	Frequency Band	2.4000 to 2.4835 GHz
	Antenna Type	Embedded Antenna
	Security	WEP 64/128-bit compliant to IEEE 802.11 Compliant to 802.1X (EAP-TLS, PEAP) WPA
	Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Points Required)
	Modulation Technique	Direct Sequence Spread Spectrum
	Modulation Schemes	DBPSK, DQPSK, CCK, OFDM
	Receiver Sensitivity – Packet Error Rate (8E-2)	54 Mbps: <-60 dBm, PER < 8%, typical 11 Mbps: <-80 dBm, PER < 8%, typical 6 Mbps: <-80 dBm, PER < 8%, typical 1 Mbps: <-85 dBm, PER < 8%, typical
	Transmit Output Power	12.5 dBm (typical 802.11g) 15 dBm (typical 802.11b)
	Power Consumption	Transmit mode: 1.33 Watts, typical Receive mode: 1.235 Watts, typical
	Media Access Protocol Protocols Supported	CSMA/CA (Collision Avoidance) with ACK TCP/IP IPX/SPX UDP
	Operating Distance	Up to 1000 feet – Open sight
	Certifications	All necessary regulatory approvals for countries we support

Bluetooth® Specifications	Technology	High-speed, low-power, short-range wireless communication with other Bluetooth devices
	Bluetooth specifications	v1.2 compliant (2.4-GHz Industrial Scientific Medical Band)
	System interface	High-speed UART and PCM processor interface
	User interface	Bluetooth Manager
	Device type	Class II device; up to 4 dBm transmit, typical 10 meter range
	Power	3.6V 5% Peak current – typical TX current at approximately 30 mA – typical RX current at approximately 50 mA
	Profile Support	Service Discovery Application Profile Serial Port Profile Generic Object Exchange Profile File Transfer Profile Object Push Profile Personal Area Networking Profile Headset Profile Handsfree Profile Advanced Audio Distribution Profile Human Interface Device Profile Audio/Video 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

Generic Object Exchange and Object Push

Exchange business cards, tasks, documents, appointments and more¹

Personal Area Networking

Collaborate, chat, play games, exchange data¹

Adhoc peer to peer networking¹

Regulatory standards

R&TT#-EN 300 328 and EN 300 826, UL 1950, CB Safety Scheme inclusive of EN 60950 and IEC 950, FCC Part 15 subpart C, Canadian, CE

Certifications

All necessary regulatory approvals for countries supported including: 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)

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Options

NOTE: Optional accessories are available at additional cost.

Memory/Storage	256 MB MicroSD Memory Card	FA874AA#AC3
	512 MB MicroSD Memory Card	FA875AA#AC3
	1 GB MicroSD Memory Card	FA876AA#AC3
	2 GB MicroSD Memory Card	FA877AA#AC3
Power	1100 mAh Lithium Ion Standard Battery	FA889AA#AC3
	Automobile Adapter	FA765AA#AC3
	AC Adapter	FA762AA#AC3
	HP iPAQ Travel Kit (AC adapter, car charger with USB to miniUSB cable)	FA804AA#AC3
	HP iPAQ 500 Series Hands-Free Car Kit	FA890AA#AC3
Synchronization	HP iPAQ Sync Cable – mini-USB	FA801AA#AC3
Headphones	Bluetooth Stereo Headphones	FA303AA#AC3
Cases	HP iPAQ Leather Case	FA888AA#AC3
	Custom Cases: to view and order go to: http://www.casesonline.com .	

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

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