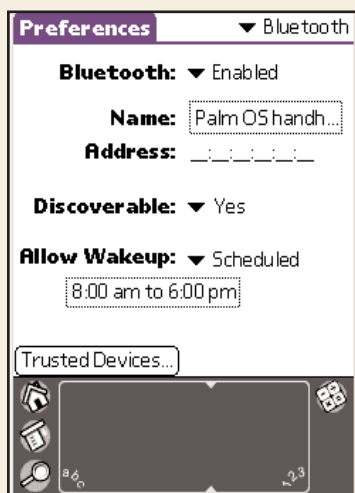


# Palm OS® Garnet



Palm OS® Garnet expands the solid foundation of Palm OS 5 by providing unique features such as support for a broad range of screen resolutions including QVGA, dynamic input area, improved network communication and Bluetooth. Palm OS Garnet solidifies the success of the current class of devices and enhances the capability to reach new markets and revolutionize the way people use mobile devices.



## Product Overview

Palm OS Garnet incorporates standard support for a broad range of screen resolutions and expanded support for wireless connections including Bluetooth. It also includes enhanced multimedia capabilities, a suite of robust security options, and support for a broad set of languages.

Palm OS Garnet also offers flexibility for licensees to customize the software to build devices for different market segments such as phone, multimedia, educational or enterprise.

Palm OS Garnet is delivered to Palm OS licensees as part of the Product Development Kit (PDK). A Software Development Kit (SDK), that allows Palm OS developers to create applications or test their compatibility with Palm OS Garnet, is also available on the PalmSource developer web site.

## Product Details

### Performance

Native 32-bit, ARM™ 4T based architecture, 16-bit ARM™ Thumb support, ARM™ 7TDMI based microprocessors.

- PACE (Palm Application Compatibility Environment) is built-in for 68k applications

- Reference hardware: Intel Xscale PXA-250 board – Motorola MXL board

### Display Support

- Support for Low density: 160x160\*, 160x220\*\*, 176x220\*\* (with padding)
- High density: 320x320\*, QVGA\* (240x320) and HVGA\*\* (320x480)
- Minimum configuration supporting at least 160x160 grayscale LCD
- 16bit color
- User selectable and customizable color themes
- High-Density features backward compatible with low density applications
- Languages supported: (EFIGS), Japanese (J) and Simplified Chinese (SC)
- Low and high density system fonts, customizable and substitutable by licensees

- Extended country coverage in formatting preferences and time zone lists

\*Silk screen -

\*\*Dynamic input area (DIA)

### Memory requirement

ROM size

- Minimum requirement of 4MB Flash ROM

- 8MB ROM recommended for EFIGS-J and Simplified Chinese

#### RAM size

- Small minimum RAM requirement: less than 300KB is needed by the Palm OS
- Up to 128 MB RAM
- Minimum of 1MB SDRAM

#### Native Applications

- 68k applications support through PACE environment
- ARM library support
- Launcher\*
- Address Book\*
- Date Book\*
- Memo Pad\*
- To Do\*
- HotSync® synchronization client
- Security Application
- Preferences
- Expansion card info
- Calculator
- SMS application

\* Supports DIA

#### Input Methods

- Graffiti® 2 character recognition
- Pinyin input method (Simplified Chinese)
- Handwriting Recognition Kit
  - Offers flexibility to allow licensees to develop and integrate third party handwriting solutions
- Chinese-English dictionary is integrated with PIM and third-party applications

#### Desktop software and Synchronization solution

- Manage personal information: Add, edit, and delete addresses, appointments, to do items and memos using a desktop computer
- Data and application on the device can be synchronized and backed up with Palm Desktop using HotSync® operation
- Palm OS-based applications can also be installed to the handheld using the Palm OS Install Tool

#### Communication

- Serial communication (one minimum serial port required)
  - RS232 serial
  - IrDA
  - USB
  - Bluetooth
- Drivers for SD and MMC cards
- New network library with Ethernet Support for 802.11 drivers
- Integration of communication protocols and applications for object exchange (Exchange Manager)

#### Networking support

- TCP/IP network library
  - PPP stack
  - OBEX
- Telephony and SMS APIs

#### Security

Cryptographic Provider Management (CPM) with default crypto provider

- RC4 symmetric encryption
- SHA1 hashing
- RSA verify algorithm

FIPS provider with the following crypto algorithms\*:

- AES-CBC, AES-ECB, AES-CFB (128, 192 and 256 bit)

- 3DES-CBC, 3DES-ECB, 3DES-CFB8, 3DES-CFB64, 3DES-OFB (2 key and 3 key)

- SHA-1, SHA-2 (not covered by FIPS)
- HMAC-SHA-1

\*To be released as option to licensees. Certification pending as of Q1 2004

#### Authentication

- PAP, CHAP, MS-CHAPv1 & MS-CHAP v2 for authentication over PPP (includes authentication to RADIUS servers)

#### Secure communication

- SSL v.2 & v.3

#### Sound

- Sampled Sound APIs (data processing, generation and GUI not included)
- Sound resource format, backward compatible with previous sound APIs
- APIs for controlling audio stream
- Playback of up to 15 streams\* at a time, recording of a single stream in native format
- Audio format support for PCM raw and IMA ADPCM compressed data, 1 or 2 channels, any sampling rate
- HAL APIs for access to audio hardware and mixer
- Square wave generator emulation for devices that do not have a hardware square wave generator
- Streams can be: Mono/Stereo, 8/16-bit, arbitrary sample rates.



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