# Palm OS® Cobalt

*palmsource™*

Palm OS® Cobalt provides the foundation for new and advanced multimedia and enterprise-class applications on Palm Powered devices. As a modern, frameworks based operating system, Palm OS Cobalt preserves the simplicity, flexibility, and compatibility that are standards of the Palm OS platform


**Launcher Screen**


**Phone Pad**

## Palm OS Cobalt Overview

Palm OS Cobalt is a modern operating system designed from the ground up to enable new classes of devices and applications but still maintain the legendary, "ease of use" that users expect.

This release provides the groundwork for next-generation smart mobile devices such as smartphones, communicators and rich multimedia and enterprise-class applications.

Palm OS Cobalt is available to PalmSource device licensees as a Product Development Kit (PDK). For Palm OS Ready Partners, it is available as a Silicon Porting Kit (SPK) and for third party developers, it is available as a new set of public OS APIs, tools and documentation in a Software Development Kit (SDK).

With its highly modular and scalable implementation, Palm OS Cobalt offers licensees and developers even greater flexibility for innovation and customization.

## Palm OS Cobalt Highlights:

32-bit Fully ARM™-native OS and Personal Information Management (PIM) applications

Scalable, modular, standards based architecture

Fully multithreading and multitasking OS

Unified, STREAMS-based communications architecture

Standard high-density display support for multiple screen configurations

Extensible multimedia framework to ease development of next-generation applications and handheld devices.

Improved synchronization architecture

An expanded set of development tools for ARM-native application development

Backwards compatibility with previous Palm OS versions

## Product Details

**Performance**

ARM v4T architecture support

PACE (Palm Application Compatibility Environment) to run 68K and PNO-based applications

Reference hardware: Intel Xscale DBPXA-250 development board

**Localization support**

The Palm OS, PIM applications and Palm OS Desktop support English, French, German, Italian, Spanish, and Japanese locales

## Display

High resolution (320x320 and 320x480) and 16-bit color support

Scalable Fonts (including TrueType Latin Fonts)

Dynamic Input Area support

Status Bar

- Dedicated, interactive screen area that can be customized to provide status on items such as signal strength, battery life and sound volume levels

## Memory requirement

- Minimum, EFIGSJ ROM: 16MB
- Maximum RAM support: Up to 256MB
- Minimum RAM required by OS: 16MB

## Applications

- System Applications: Launcher, Preference Panel, Welcome/Setup
- Core Platform Applications: Address Book, Date Book, To Do List, Memo Pad, Calculator
- Other applications: Media Player, Phone Pad, Puzzle, Language Picker, Giraffe, Card Info
- Messaging Applications: Mobile Mail (email), SMS Messenger

## Application Highlights:

- Enhanced PIM applications
- Tab-based UI
- 255 multiple categories, per record
- Schema-driven UI import/export feature to easily share records (Both 68K & ARM native)
- Microsoft Outlook compatible fields

## Input Methods

New Input Method framework

Licensees can develop and integrate custom solutions; Graffiti 2 character recognition, keyboard included

## Desktop software and Synchronization

New and improved Palm OS Desktop application (Microsoft Windows® only)

### New HotSync® Exchange feature

Drag and drop PC files in native format (JPEG, Word, Excel, etc.) into Install Tool

File gets transferred to application on device on next HotSync

## Communications and Networking

Pluggable, industry standard, STREAMS-based framework

Multiple communications tasks can run simultaneously

Secure I/O framework for driver installation

New connection application for easy setup and configuration of Internet application - connect to internet via GPRS, Bluetooth, serial modem etc

Drivers included:

- RS-232 serial
- IrDA
- USB and USB 1.1  Slave
- SD and MMC expansion card

Networking Protocols supported:

- TCP/UDP/IP
- IPv4, IPv6
- PPP
- OBEX
- Ethernet (for writing 802.11 drivers)

### Bluetooth

All major profiles supported

- Bluetooth application - Manages Bluetooth setup, discovery, pairing etc

### New Connection Manager

Improved, simplified user configurations plug-in framework for adding new communications services

## Multimedia

Extensible, programming framework for creating advanced multimedia applications, supports the following features:

- ADPCM/PCM (in WAV file), OGG Vorbis, MP3
- Audio playback of up to 16 streams, recording of single stream
- Audio record Mono/Stereo, 8/16-bit, arbitrary sample rates
- Sound manager for mixing sound sources
- Background playback
- Video playback – MPEG1, MPEG4 (MPEG4 only in AVI files, with MP3 audio)
- APIs for access to audio/video hardware

## Security Framework

Enhanced privacy and protection services through native encryption, certificate management, and authentication/authorization services

Cryptographic Provider Management (CPM)

- RC4 for encryption/decryption
- SHA-1 hashing
- Signature Verification using RSAVerify
- DES/MD5 provider with DES-ECB, DES-CBC, 3DES, MD5

SSL2, SSL3 (shared library available to all applications)

Certificate Management APIs

Support for X.509v3 Certificates