



**smarterphone**

features

## Introduction

This is the brief version of the Smarterphone product specification. The following lists outline the components and features currently supported, and pre-integrated, into the Smarterphone framework and application suites. The list contains applications, pre-integrated 3rd-party applications/components, and a brief overview of the Smarterphone rendering engine.

All components are ported to run on the Smarterphone hardware abstraction layer (HAL). In practice, this means that once Smarterphone is ported to your target platform/OS, the components will run with no additional changes to their code. Furthermore, all applications and components use the Smarterphone SX scripting language for the UI, which means that their look and feel, and even deep structural navigation changes, can be changed with a minimum of effort.

## Version

This document contains information about Smarterphone version 3.0

## Applications and services

PIN entry, PIN/PUK management

- 3GPP compliant call control
- Video Call
- Main menu/submenu component
  - Generalized and easily extensible menu system component
  - Grid view/list view/carousel view
- Messaging client
  - Composer
  - Message viewer
  - Support for MMS, SMS, Email, and Instant Messaging (XMPP)
  - Conversation mode (threaded)
- Address book (with groups, speed dial, sorting, searching)
- Social networking (Twitter and Facebook)
- Application manager
- FM Radio (tune/presets)
- Multi-tasking
- Java
- Browser
  - Bookmarks, enter URL, history, download manager, saved pages
- Widget-enabled idle screen (applets/docklets/widgets)
  - Media player control
  - Weather applet service
  - Calendar interface
  - Clock (analog/digital)
  - RSS applet
  - FM Radio control

- Image viewer applet
- Tasks/todo
- Calendar
  - Appointments, holidays, birthdays, anniversaries, etc.
  - Notification alerts
- Calculator
- Stopwatch/lap timer
- World clock
- Image viewer/image gallery
  - Zoom
  - Pan
  - Grid and list view
  - Organization of photos into albums
- Countdown timer
- RSS Reader
  - Any number of channel subscriptions
  - Any syndication format, including RSS 1.0, 2.0, Atom
- Currency converter
  - Any number of currencies supported
  - User can add new currencies
- Unit converter
  - Distance, volume, area, temperature, and time
- Camera application
  - Zoom
  - Brightness
  - Full camera settings user interface
- Media player (supports both video/audio)
- Video recorder
  - Play list management
  - History
  - Next, previous, stop, pause
  - Categorization according to ID3 tags (artists, albums, tracks)
- Call log
  - Incoming, outgoing, and missed calls
- Event log
  - Unified viewer for incoming messages, calls, appointments, etc.
- File manager
  - Internal and external storage
  - Manipulate files (browse, sort, list, grid, delete, move)
- Notepad
- Bluetooth discovery and authentication (passed BQB certification)
  - BT profiles depend on chipset and low-level software support
  - Specification version 2.0
  - PBAP (Phonebook Access Profile)
  - Service Discovery Application Profile (SDAP)

- Advanced Audio Distribution Profile (A2DP) and underlying profile Generic Audio-Video Distribution Profile (GAVDP). Uses Audio/Video Control Transport Protocol (AVCTP).
- Audio/Video Remote Control Profile (AVRCP). Uses Audio/Video Control Transport Protocol (AVCTP).
- Hands-Free Profile (HFP)
- Headset Profile (HSP)
- Object Push Profile (OPP) and underlying Generic Object Exchange Profile (GOEP)
- File Transfer Profile (FTP)
- Dial-Up Network Profile (DUN)
- Voice recorder
- Alarm application
  - Repeat, snooze
  - Multiple alarms
- Sim Application Toolkit (SATK)
- WLAN
  - WLAN browser/scanner
  - Network attach/configuration
  - WEP, WPA, WPA2
- Games
  - Chomp ("PacMan")
  - Helicopter
  - 15
  - Reversi
  - Blocks ("Tetris")
  - 5-in-a-row
- Popup/alert subsystem
  - Controls message alerts/notification
  - Ensures display of priority messages
- Dialog display subsystem
- Audio manager
  - Controls playback of sound effects
  - Ensures playback of priority sound
- Volume control
- Backlight control
- On-screen keypad for touch-screen
- Freespace management (both flash and memory cards)
  - Ensures space is available for new messages, and database entries (contacts, calendar, etc.)
- Idle screen user configurable 'My menu' shortcuts
- Profile support (silent, meetings, etc.)
- SyncML (OMA DS) integrated with contact, tasks, and calendar applications
- Settings
  - Profile management and configuration
  - Network settings

- Time/date settings
- Key lock
- Call-related settings
- Security settings, including contact lock
- Adaptable generalized settings component (anything can be added)
- Browser settings
- Sounds and alerts
- Display settings
  - Themes (any number of themes supported)
  - Background
  - Dialog dismiss timeout
  - Backlight control
  - Language settings, generalized translation system (any language available on request)

## **Native protocol/parser support**

- XML
- SyncML (OMA DS) v2
- RSS parser (V0.9x/V1.0/V2.0/Atom)
- OMA DM (Device Management) settings configuration
- ID3, version 2 tag reader
- vCard, version 2.1/3.0
- vCalendar, version 1.0/2.0
- USSD according to GSM 11.14 v 8.2.0.
- Emergency calls (3GPP TS 22.101)
- HTTP v1.1
- SSL 3.0, TLS 1.0
- OMA CP 1.1 (Client Provisioning)

## **Messaging**

- SMS
- MMS version 1.3
- POP3—email
- IMAP4—email
- SMTP—Simple Mail Transfer Protocol
- XMPP—eXtensible Messaging and Presence Protocol
- Conversation mode

## Obigo Q7 browser

- OMA Browsing version 2.3 including:
  - XHTML Mobile Profile version 1.2
  - WML version 1.3 (text and binary formats)
  - ECMAScript Mobile Profile 1.0 (ECMA Script 262 1st Edition is supported)
  - WMLScript/WMLScript libraries (binary)
  - WCSS version 1.1
  - HTTP State management (local cookie)
  - Caching model (HTTP 1.1 caching)
- Public WTA as specified by WAP 2.0: Make call, Send DTMF and Add phonebook entry
- Pictograms as specified by WAP 2.0
- WBXML binary encoding as specified by WAP 2.0
- World Wide Web Consortium (W3C)
  - HTML 4.01
  - CSS 2.1
  - XHTML1.1
  - XML 1.0
  - DOM2 Core
  - DOM2 Events
  - DOM2 HTML
  - DOM Stylesheet
  - SVG-Tiny version 1.1
- Other standards
  - ECMA 262 3rd Edition
  - OMA DRM version 1.0
- OMA Browser protocol stack, version 2.1 including:
  - WSP
  - WTP
  - WDP
  - W-HTTP
- OMA WPKI version 1.0 including:
  - WTLS protocol handling
  - TLS protocol handling
- OMA User Agent Profile (UAProf) version 2.0 including
  - Profile resource (URI)
  - Profile diff

## **Input**

- Touch screen
- QWERTY keypad
- Numeric keypad (any configuration)
- Normal predictive for languages based on Latin alphabet
- Chinese Pinyin (both traditional and simplified)
- Chinese BoPoMoFo (Zhuyin) (traditional)
- Chinese handwriting / strokes (both traditional and simplified)
- Can be integrated with any predictive input engine in the market (different prices apply)

## **Java**

- AMS (Application Management System)
- MIDP 2.1
- JSR-75 (File/PIM)
- JSR-82 (Bluetooth)
- JSR-118 (MIDP)
- JSR-120 (SMS)
- JSR-135 (Mobile media)
- JSR-139 (CLDC 1.1)
- JSR-172 (Web Services)
- JSR-177 (Security and Trust Services)
- JSR-179 (GPS)
- JSR 185 (JTWI)
- JSR-205 (Messaging)
- JSR-211 (Content Handler)
- JSR-226 (Vector Graphics)

## **Touch screen**

Smarterphone has user interfaces for both touch screen, and phones centered around a keypad. The touch screen version includes advanced filtering algorithms for motion prediction, and several filter types (Kalman filter, low-pass filter, weighted sum, among others) for optimal usability responsiveness.

## **Graphics rendering engine supporting**

- Alpha blend modes
- Renderer
- Pixel canvas
  - Drawing library (for Java/Browser—lines, circles, fill, etc.)
- Sprites (movable graphics elements)
  - Text sprites
  - Image sprites
  - Clipping sprites

- Animation support
  - Frame based
  - Physics effects (for example, bounce/spring/dampening)
- Screen transitions
  - Fade in/out
  - Wipe (slide any direction)
  - Peel (like turning a magazine page)
  - Any type can be added easily
- Text input (with editing, mark, copy, and paste)
- OpenGL ES 1.x/2.x
- OpenGL UI effects
- OpenGL enabled for all applications
- Smooth scrolling
- Dynamic real time layout system
  - Runtime switching of resolution and orientation (horizontal/vertical)
- Scales up/down to any screen resolution

## **Graphics widgets – building blocks for user interfaces**

- Button
- Menu widget
- Choice group
- Containers (grid, horizontal, vertical, custom layout)
- Date/time input
- Forms (multi-input)
- Image widget
- Option list
- Multimedia widget
- Progress bar
- Scrollbar
- Tabs
- Status bar
- Text input
- Toolbar
- Month view
- Week view
- Applet/docklet widget



## **PC Tool**

- Administration of handset contact list
- Editing/sending of SMS messages
- Dial-up networking via handset
- For WindowsXP, Vista, Windows7
- Requires chipset dependent driver (not included)

## **PC Simulator**

The PC simulator is used when developing the user interface, and for testing of applications in a non-cellular network.

- Send/receive SMS (text or PDU)
- Call control (in/out)
- Multi-party calling
- Record/playback key sequences
- SIM control
- Network status
- Signal strength
- Network selection
- Power control and battery
- Debug stream control
- Any operating system