

28 February 2006

Vodafone K.K. unveils first 3G mobile handset with VGA display

Vodafone 904SH supports new chat and multiplayer game services based on Bluetooth®

Vodafone K.K. today announces the Vodafone 904SH by Sharp, the first mobile handset*¹ to feature a VGA*² liquid crystal display (LCD). The 904SH is scheduled to go on sale in late April 2006 as a new 3G handset.

The 904SH's VGA LCD has four times the resolution of current QVGA*³ LCDs, making it possible to reproduce visuals and render small characters with more vividness and clarity than before.

The 904SH is a new flagship model that supports a full range of new services and features. By using Bluetooth®, friends and acquaintances can enjoy new communication services like instant messaging or multiplayer games within a 10-metre radius free of charge. The 904SH is also the first handset to feature a new Motion Control Sensor, which is capable of measuring handset posture in all directions in 3D. Customers will be able to enjoy a host of new applications that fully take advantage of the new sensor's enhanced accuracy. The 904SH also has Vodafone K.K.'s first Face Recognition feature for enhanced security and privacy protection.

The main features of the 904SH are as follows:

- First mobile handset*¹ with VGA LCD and leading-edge specs: 3.2 megapixel autofocus 2x optical zoom camera and stereo speakers that support 3D surround sound
- Supports new services and features: Bluetooth communication, applications for newly-developed Motion Control Sensor, Vodafone K.K.'s first Face Recognition
- Flagship model that fully supports existing 3G services like Vodafone live! FeliCa for e-money and e-ticketing and Vodafone live! NAVI for GPS navigation

For more information on the Vodafone 904SH, please see the attached appendix.

*1: As of 28 February 2006 (according to Vodafone K.K.).

*2 Video Graphics Array: 480 x 640 pixels

*3 Quarter Video Graphics Array: 240 x 320 pixels

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- As of 28 February 2006 voice roaming is available on GSM networks in 140 countries and regions, with Vodafone live! internet roaming in 58 of them. In addition, 3G (W-CDMA) voice roaming is available on networks in 23 countries and regions abroad, with Vodafone live! roaming in 22 and video call roaming available in 9 of them.

- Bluetooth® functions are not guaranteed to wirelessly communicate with all Bluetooth® devices.

- Bluetooth® word mark is owned by the Bluetooth SIG, Inc. and any use of such mark by Vodafone K.K. is under license.

- FeliCa is the contactless IC card technology developed by Sony Corporation.

- FeliCa is a registered trademark of Sony Corporation.

- Vodafone, Vodafone live! and the speech mark symbol are registered trademarks or trademarks of Vodafone Group Plc.

About Vodafone K.K.

Vodafone K.K. is a leading mobile operator in Japan with over 15 million customers and a subsidiary of Vodafone Group Plc, the world's largest mobile community. The Tokyo-based company offers a wide range of sophisticated mobile voice and data services including Vodafone live!, which provides mail and internet access to 85% of its customers, and pioneered the picture messaging service called Sha-mail first introduced in November 2000. In December 2002, Vodafone K.K. launched the world's first commercial 3G W-CDMA service based on 3GPP international standards. Vodafone K.K.'s 3G service offers its customers rich content and roaming in 137 countries and regions on 188 networks. For more information, please visit www.vodafone.jp *Above data is current as of 31 January 2006.

Vodafone 904SH by Sharp

1. Main features

- First mobile handset* to feature ultra-high resolution VGA LCD
The 904SH features an ultra-high resolution 2.4-inch VGA (Video Graphics Array: 480 x 640 pixel) LCD. VGA LCDs have four times the resolution of current QVGA (Quarter Video Graphics Array: 240 x 320 pixel) LCDs, making it possible to reproduce visuals and render large fonts and small characters with more vividness and clarity than before. Game and video content that takes full advantage of the VGA display is also currently under development.

*As of 28 February 2006 (according to Vodafone K.K.)

Screen image comparisons



QQVGA (120 x 160 pixels)

QVGA (240 x 320 pixels)

VGA (480 x 640 pixels)

- Full specifications: 3.2 megapixel autofocus camera with 2x optical zoom, 3D surround sound compatible stereo speakers

The 904SH has a full range of leading-edge mobile handset hardware features housed in its elegant and colourful design. In addition to the 2.4-inch VGA LCD, the 904SH has a 3.2 megapixel autofocus camera with 2x optical zoom. The handset also features stereo speakers that support 3D surround sound for realistic audio playback of Chaku-Uta Full[®] music downloads and tracks ripped from CDs and transferred to memory cards (sold separately).

- New concept communication services that use Bluetooth[®]

The 904SH supports new concept communication services that enable nearby instant messaging and multiplayer games free of charge by using Bluetooth[®] technology. The 904SH has a total of 5 pre-installed Bluetooth[®] applications. "Near Chat"^{*} allows friends and acquaintances to enjoy instant messaging within a 10-metre radius. 4 trial version multiplayer games allow customers to enjoy, such as block breaking and puzzle game face offs.

*Due to the characteristics of Bluetooth[®], unsolicited requests may come from other parties when using this application. Concerned guardians may use a PIN lock function to prevent usage by minors.

- First handset to feature new Motion Control Sensor

The 904SH is Vodafone K.K.'s first handset to feature a newly-developed Motion Control Sensor, which is capable of measuring handset posture in all directions in 3D. The new sensor can measure the acceleration speeds of up and down movements with even greater accuracy than before. By using the Motion Control Sensor with supported content for Vodafone live! NAVI, a GPS navigation service, maps can be viewed according to the direction a customer is facing.

*The Motion Control Sensor senses magnetism and acceleration and therefore may not function properly in environments where magnetic fields are affected by nearby magnets or metal objects with magnetic properties, or in places such as trains, buildings, and underground.

- Face Recognition that recognises an owner's facial features
The 904SH is Vodafone K.K.'s first handset to offer Face Recognition, which can authenticate an owner's facial features. When the clamshell handset is opened, the sub-camera by the main display automatically activates to authenticate customers by sensing their eye and mouth facial features within one second. This makes it possible prevent unauthorized usage by a third party in cases of handset loss to ensure security and privacy.
- Flagship model fully supports 3G services like Vodafone live! FeliCa for e-money and e-ticketing and Vodafone live! NAVI for GPS navigation
The 904SH is a flagship model that fully supports current 3G services such as Vodafone live! FeliCa, Vodafone live! NAVI, Vodafone live! BB and brand new ones like Vodafone Address Book, which lets customers back up their handset address book to a network server, Vodafone live! CAST, which delivers mobile magazines overnight, and Deru Moji 3D Pictogram Display, which displays 3D animations in received mails.
*Vodafone Address Book, Vodafone live! CAST, and Deru Moji 3D Pictogram Display planned for mid-March 2006.
- Digital Comic Viewer with faster rendering and improved ease-of-use
The 904SH comes with a digital comic viewer, "ComicSurfing for Vodafone", with improved rendering speeds compared to previous Vodafone K.K. 3G handsets, a function that searches for the next part once a story is finished, and an organizing function for easy sorting of large volumes of digital comics. The 904SH also has a dedicated book folder for saving digital comics that have been downloaded from Vodafone live! to handset memory. Previously customers had to download digital comics individually to view them, but with this enhancement they can now enjoy their digital comics whenever they like by saving multiple comics to handset memory*.
*Number of comics that can be saved depends on file sizes.
- Wireless software upgrades
The 904SH is Vodafone K.K.'s first handset to support wireless software upgrades. This service enables customers to quickly download upgrade files over the network to overwrite software when necessary, thereby eliminating the need to visit a Vodafone shop to upgrade handset software.

Reference: Pre-installed applications

Content/service name	Category (main)	Category (sub)
Near Chat	Bluetooth [®]	Instant messaging
Arkanoid -LINK- (trial version)	Bluetooth [®]	Game
VS Reversi (trial version)	Bluetooth [®]	Game
Piposaru Academia -Univer-saru Wars- (trial version)	Bluetooth [®]	Game
Meteos Mobile (trial version)	Bluetooth [®]	Game
Bass Tsuru ni Iko (trial version)	Motion Control Sensor	Game
Furuoto (trial version)	Motion Control Sensor	Game
Seiza o Sagaso (trial version)	Motion Control Sensor	-
Aen no Hakobune (trial version)	Rich Sound/Novels	Game
Inagawa Junji no Kaiidan (trial version)	Rich Sound/Novels	Game
Electronic money "Edy"	Vodafone live! FeliCa	-
ZENRIN Its-mo NAVI*	Vodafone live! NAVI	-
ComicSurfing for Vodafone	Digital comics	-
Keitai Karaoke V-kara	Karaoke	-

-Trial version V-applis can be used without information charges, but communication charges may apply. Communication and information charges apply when using product version V-applis (no information charge for Seiza o Sagaso).

-Trial version V-applis may have function, usage number, and other restrictions.

*Application can be used without information charges (charges apply for navigation services that refer to traffic congestion information) for 15 days following initial usage. Communication charges will apply.

2. Main Specifications

Network	Japan	W-CDMA	
	Abroad	W-CDMA, GSM (900/1800/1900 MHz)	
Size (Width x Height x Thickness)		Approx. 50 x 104 x 28mm (when folded)	
Weight		Approx. 151 g	
Continuous talktime/ standby time	W-CDMA	Approx. 180 min. / approx. 360 hrs.	
	GSM	Approx. 280 min. / approx. 350 hrs.	
Display	Main	2.4-inch (480 x 640 pixels), Mobile ASV LCD (max. 260,000 colours)	
	Sub	1 line, 6 characters (12 x 72 pixels) monochrome LCD	
Mobile camera	Pixels /Type	Main	3.20 million effective pixels/CCD
		Sub	110,000 effective pixels/CMOS
	Zoom		2x optical zoom, max. approx. 50x digital zoom
	Max. photo size		1,536 x 2,048 pixels
Full-screen character display (full size characters when displaying received mails)		60 characters (7.5 characters x 8 lines) / 95 characters (9.5 characters x 10 lines) / 138 characters (11.5 characters x 12 lines: standard size) / 217.5 characters (14.5 characters x 15 lines) / 380 characters (19 characters x 20 lines)	
Max. mail (received/sent)		1,000 / 500*	
Max. photo capacity (no. of photos)		Max. approx. 20MB, shared (max. approx. 2,520)*	
External memory		miniSD™ Memory Card (not included)	
Polyphonic ring tone voices		128	
Other main functions		V-appli (Mega Appli), Video call, Mail Art, PC link, USB connectivity, Keitai Karaoke V-kara, IrDA, Macromedia® Flash™, Video output, Custom Screens, Bilingual menus, QR Code reading/composition, Large font mode, Predictive text entry (Keitai Shoin 4)	
Colour variations		Violet (pictured), Black, Blue	

*Saving capacity depends on file sizes.

3. Retail Price (standard set): open price

Standard set includes mobile handset, battery pack, rapid charger, and utility software (CD-ROM)

4. Availability

From late April 2006

- Bluetooth® functions are not guaranteed to wirelessly communicate with all Bluetooth® devices.
- Chaku-Uta Full® is a registered trademark of Sony Music Entertainment Inc.
- Edy is a prepaid-type electronic money service brand managed by bitWallet.
- ComicSurfing is a trademark or registered trademark of CELSYS, Inc.
- V-applis are Java™ compatible applications.
- Powered by JBlend™, ©1997-2006 Aplix Corporation. All rights reserved..
- Java and Java-based trademarks and logos are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and other countries.
- JBlend and all JBlend-based trademarks and logos are trademarks or registered trademarks of Aplix Corporation in Japan and other countries.
- The Vodafone 904SH is powered by JBlend™, developed by Aplix Corporation, to speed up the execution of Java™ applications.
- miniSD is a trademark of the SD Association.
- QR Code is a registered trademark of Denso Wave Incorporated.
- Macromedia® Flash™ is a trademark or registered trademark of Adobe Systems, Inc. in the U.S. and other countries.
- V-appli, Near Chat, Mega Appli and Keitai Karaoke V-kara are registered trademarks or trademarks of Vodafone K.K.

Vodafone 904SH

Violet

(Manufactured by Sharp)

