

XPERIA™ neo V



MT11i, MT11a

Purpose of this document

Sony Ericsson product White papers are intended to give an overview of a product and provide details in relevant areas of technology.

Document history

Version

| | | |
|-------------|-------------------------|-----------|
| August 2011 | Second released version | Version 2 |
|-------------|-------------------------|-----------|

Sony Ericsson Developer World

For the latest Sony Ericsson technical documentation and development tools, go to www.sonyericsson.com/developer.

This White paper is published by:

Sony Ericsson Mobile Communications AB,
SE-221 88 Lund, Sweden

www.sonyericsson.com

© Sony Ericsson Mobile Communications AB, 2009-2011. All rights reserved. You are hereby granted a license to download and/or print a copy of this document. Any rights not expressly granted herein are reserved.

Second released version (August 2011)
Publication number: 1253-9709.1

This document is published by Sony Ericsson Mobile Communications AB, without any warranty*. Improvements and changes to this text necessitated by typographical errors, inaccuracies of current information or improvements to programs and/or equipment may be made by Sony Ericsson Mobile Communications AB at any time and without notice. Such changes will, however, be incorporated into new editions of this document. Printed versions are to be regarded as temporary reference copies only.

*All implied warranties, including without limitation the implied warranties of merchantability or fitness for a particular purpose, are excluded. In no event shall Sony Ericsson or its licensors be liable for incidental or consequential damages of any nature, including but not limited to lost profits or commercial loss, arising out of the use of the information in this document.

Table of Contents

| | |
|------------------------------------------------------------|----------|
| Product overview | 2 |
| Xperia™ neo V – Catch more than the moment | 2 |
| Sony Ericsson signature features | 3 |
| Facts – dimensions, weight, performance and networks | 4 |
| Categorised features | 6 |
| Technologies in detail | 8 |
| Device-to-device communications (local) | 8 |
| Bluetooth wireless technology | 8 |
| Wi-Fi® | 9 |
| DLNA Certified™ (Digital Living Home Alliance) | 10 |
| Messaging | 11 |
| MMS (Multimedia Messaging Service)..... | 11 |
| Email | 11 |
| Positioning – location based services | 12 |
| Provisioning (OMA CP) | 12 |
| Multimedia (audio, image and video) | 13 |
| Synchronisation (OMA DS, EAS, Google Sync™) | 15 |
| Web browser | 15 |
| Trademarks and acknowledgements | 16 |

Product overview

Xperia™ neo V – Catch more than the moment

Love brilliance? Awake people's feelings. Share emotions. Shoot everything in HD with Xperia™ neo V. Then show it all. In true colours on the Reality Display with Mobile BRAVIA® Engine. Or in full-screen, full size, full colour. On your HD TV via HDMI. Want to really show off? Make that beautiful scenery come to life on your TV in stunning 3D*.

Chat with your mates. On video

Time to walk the talk. For real. Xperia™ neo V has a front facing camera. And with Google Talk™ inside, you can see what your mates are up to on the video call. Or sweep the music festival with your phone so they feel like they're there with you. Prefer Skype™** or another video chat service? Download it from Android Market™*** and chat away with your mates face-to-face.

Facebook lives inside Xperia™.

Sharing your entertainment doesn't get any faster

Add zoom to your social life. Use Facebook inside Xperia™ to see, share, like and comment on tracks and photos straight from your music player or gallery. Why not share and recommend the apps you like, and like the music you love directly from FM radio. Or check out what your friends like and recommend on Facebook™ with the Music & Videos app.

The fun starts here

With Xperia™ neo V you can enjoy the whole world of Android™. More than 200,000 apps for you to choose from – and share it if you want. All this. And so much more. From a smart, sharp phone that fits so beautifully in your hand.

* 3D TV is needed to show 3D panorama.

** Skype™ for Android is available for free from Android market.

*** Applications from the Android Market™ vary widely in size, from less than 100 KB for small utilities to 3-4 MB for full games, music player applications, or other major offerings. The average size, if a representative selection of useful and fun applications is selected, is about 1 MB. This means that, on average, more than 100 applications can be downloaded and used on your device without negatively impacting performance. With the ready availability of the Android Market™ application in the phone, it is also very easy to delete and later reinstall infrequently used applications.

Sony Ericsson signature features

Xperia™ neo V comes with a range of Sony Ericsson features as standard. Below is a summary of the key signature features.

Sony Ericsson Timescape™

The place to meet your friends

The Timescape™ application manages all your communication with one person in one place. You can effortlessly browse by category your Facebook™*, Twitter™*, email and text communications, as well as view your photos. Now everything is all together and in chronological order, so you don't have to open different applications to see what's going on.

Sony Ericsson infinite button

Everything you want from everywhere

Tap the infinite button in the Timescape™ application and smart filter each category of communication by person. For example, when viewing a text message from a friend in Timescape™, tap the infinite button to view a list of all chat messages with that friend.

Sony Ericsson Sync

Your mobile life on the web

Synchronise your phone data using Sony Ericsson Sync so that you always have a backup. While you're at it, match your phone contacts with your Facebook™ contacts. All your synchronised phone data is right at your fingertips and in your account on www.sonyericsson.com.

Sony Ericsson Local connectivity

More control over your media

Using Sony Ericsson Local connectivity, you can exercise more control over how media files get transferred and stored. For example, you can select MTP mode to transfer files if you want to limit the risk of data corruption or select MSC mode if you want to have more control over the data storage.

Sony Ericsson Home screen application

The place you call Home

Customise your Home screen with widgets, shortcuts, folders, themes, wallpaper and other items. Where's best for you? Email top right? Music player bottom left? You decide. With four extensions to your Home screen, you've got plenty of space to put things where you want. Just remember to flick left or right to find them.

* This service is not available in all markets.



Facts – dimensions, weight, performance and networks







| | |
|--------------------------------------|--------------------------------------------|
| Operating system | Google™ Android™ 2.3.4 (Gingerbread) |
| Processor | 1 GHz Qualcomm Snapdragon MSM8255 |
| Size | 116 x 57 x 13 mm |
| Weight | 126 grams |
| Available colours | White, Silver, Blue Gradient |
| Main screen | |
| Colours | 16,777,216 colour TFT |
| Resolution | 854x480 pixels |
| Size (diagonal) | 3.7 inches |
| Scratch resistant | Yes |
| Input mechanisms | |
| Text input | On-screen QWERTY keyboard |
| Touch screen | Capacitive (multi-touch) |
| Touch gesture | Yes – multi-touch |
| Memory | |
| Internal phone storage | 1 GB (up to 320 MB user-accessible memory) |
| RAM | 512 MB |
| Expansion slot | microSD™, up to 32 GB |
| Camera | |
| Camera resolution | 5 megapixel |
| Front facing camera | VGA |
| Digital zoom | 16x |
| Video zoom | 16x |
| Photo flash | Yes – LED |
| Video recording | Yes – HD 720p |
| Video call camera (dedicated camera) | Yes |




| Sensors | |
|--------------------------------------|---------------------------------------------------------------------------------------------|
| Accelerometer | Yes |
| Proximity sensor | Yes |
| Ambient light sensor | Yes |
| Magnetometer | Yes |
| Networks | |
| MT11i | UMTS HSPA 900 (Band VIII), 2100 (Band I) GSM GPRS/EDGE 850, 900, 1800, 1900 |
| MT11a | UMTS HSPA 850 (Band V), 1900 (Band II), 2100 (Band I) GSM GPRS/EDGE 850, 900, 1800, 1900 |
| Data transfer speeds | |
| GSM GPRS | GSM GPRS: Up to 86 kbps |
| GSM EDGE | GSM EDGE: Up to 237 kbps |
| UMTS HSPA cat 6 (upload) 6 QPSK | Up to 5.76 Mbps |
| UMTS HSPA cat 8 (download) 8 QPSK | Up to 7.2 Mbps |
| Talk time (GSM) | Up to 6 hours 55 min* |
| Standby time (GSM) | Up to 430 hours* |
| Talk time (UMTS) | Up to 7 hours* |
| Standby time (UMTS) | Up to 400 hours* |
| Music listening time | Up to 31 hours |
| Video playback time | Up to 7 hours 25 min |
| Battery | 1500 mAh |

* Values are according to GSM Association Battery Life Measurement Technique.

NOTE: Battery performance may vary depending on network conditions and configurations, and phone usage.

Categorised feature list

| | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>Camera 3D sweep panorama 5 megapixel camera 16x digital zoom Auto focus Face detection Flash/LED Front-facing camera (VGA) Geo tagging HD video recording (720p) Image stabiliser Red-eye reduction Scene detection Self-timer Send to web Smile detection Sweep panorama Touch capture Touch focus Video light Video recording Video stabiliser</p> |  <p>Music Album art Bluetooth™ stereo (A2DP) Media player Music tones (MP3/AAC) PlayNow™ service* Sony Ericsson Music player TrackID™ music recognition* xLOUD™</p> |  <p>Internet Android Market™** Bookmarks Google™ search* Google Voice™ Search* Pan & zoom Web browser (WebKit)</p> |
|  <p>Communication Call list Conference calls Facebook™ application* Facebook inside Xperia™ 2.0 Google Talk™ video chat* Noise Shield Polyphonic ringtones Sony Ericsson Timescape™ Speakerphone Twitter™ (Timescape™ integration)* Vibrating alert Video chat ready</p> |  <p>Messaging Conversations Email Google Mail™* Instant messaging Multimedia messaging (MMS) Predictive text input Sound recorder Text messaging (SMS)</p> |  <p>Design Auto rotation Keyboard (on-screen, QWERTY) Live wallpaper Picture wallpaper Reality Display with Mobile BRAVIA® Engine Screenshot capturing Swipe to write Touch screen</p> |

| | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>Entertainment 3D games Accelerated Adobe Flash Video Media browser Motion gaming Radio (FM radio with RDS) Sony Entertainment Networks* Video streaming YouTube™*</p> |  <p>Organiser Alarm clock Calculator Calendar Document readers E-Manual Flight mode Google Calendar™* Google Gallery 3D* Infinite button Phonebook Setup guide Widget manager</p> |  <p>Connectivity 3.5 mm audio jack aGPS* Bluetooth™ technology DLNA Certified™ Google Latitude™* Google Maps™ for Mobile Google Maps™ with Street View* HDMI™ support Media Transfer Protocol support Micro USB support Modem Native USB tethering Synchronisation via Facebook™* Synchronisation via Google Sync™* Synchronisation via Sony Ericsson Sync Synchronisation via Microsoft® Exchange ActiveSync® TV Out USB mass storage USB High speed 2.0 support USB OTG Wi-Fi® Wi-Fi® Hotspot functionality Wisepilot™ turn-by-turn navigation*</p> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

* This service is not available in all markets.

** Applications from the Android Market™ vary widely in size, from less than 100 KB for small utilities to 3-4 MB for full games, music player applications, or other major offerings. The average size, if a representative selection of useful and fun applications is selected, is about 1 MB. This means that, on average, more than 100 applications can be downloaded and used on your device without negatively impacting performance. With the ready availability of the Android Market™ application in the phone, it is also very easy to delete and later reinstall infrequently used applications.

Technologies in detail

NOTE: The information outlined below is general and levels of compliance to standards and specifications may vary between products and markets. For more information, contact Sony Ericsson Developer World or your Sony Ericsson contact person where applicable.

Device-to-device communications (local)

Bluetooth™ wireless technology

| | |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bluetooth™ profiles supported | Advanced Audio Distribution Profile v.1.2 Audio/Video Remote Control Profile v.1.0 Handsfree Profile v.1.5 Headset Profile v.1.1 Object Push Profile v.1.1 Phonebook Access Profile v.1.0 |
| Core version and supported core features | Advanced Audio 2.1 + EDR |
| Connectable devices | All products supporting Bluetooth™ spec. 2.1 and at least one of the profiles above. |

More information:

www.sonyericsson.com/developer

www.bluetooth.com

Wi-Fi®

| | |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supported standards | IEEE 802.11b/g/n and Wi-Fi |
| Connectable devices | Wi-Fi access points |
| Frequency band | 2.4 GHz |
| Data transfer rate | Up to 72 Mbps |
| Security | CCMP (AES) EAP-TLS EAP-TTLS/MSCHAPv2 Open Authentication Shared Authentication PEAPv0/EAP-MSCHAPv2 PEAPv1/EAP-GTC TKIP WEP 64 bit WEP 128 bit WPA Personal and WPA2 Personal WPA Enterprise and WPA2 Enterprise |
| Encryption | WEP, TKIP and AES |
| Power save | WMM-UAPSD QoS, WMM |

DLNA Certified™ (Digital Living Home Alliance)

| | |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supported Device Classes | M-DMS – Mobile Digital Media Server Media Types: Images Summary: The digital media server exposes the media files in your phone to a Wi-Fi® network. The files can then be accessed from other DLNA Certified™ clients. |
| Supported Bearers | Wi-Fi® |
| DRM Support | The Sony Ericsson DLNA Certified™ implementation does not support DRM-protected content. |

Messaging

MMS (Multimedia Messaging Service)

According to OMA Multimedia Messaging Service v1.0 + SMIL

Email

| | |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bearer type (IP) | GPRS, EGPRS, UMTS |
| Character sets | BIG5 Traditional Chinese GB18030 ISO-2022-JP Japanese ISO-8859-1 ISO-8859-2 Eastern Europe ISO-8859-5 Cyrillic ISO-8859-7 Greek ISO-8859-9 Turkish ISO 8859-11 KOI8-R Cyrillic Shift_JIS Japanese USASCII UTF-8 UTF-16 Windows® 874 Windows® 1251 Cyrillic Windows® 1252 Windows® 1254 Turkish Windows® 1258 Vietnamese |
| Protocols | POP3 and IMAP4 |
| Push email | Microsoft® Exchange ActiveSync® (EAS) |
| Secure email | SSL/TLS, both (POPS/IMAPS) and STARTTLS port methods |
| HTML mail | Yes (read only) |

More information:

www.sonyericsson.com/developer

www.openmobilealliance.org

Positioning – location based services

Supported standards:

- OMA Secure User Plane Location (SUPL) v1.0
- 3GPP™ Control Plane location (incl. Emergency location)
- Qualcomm® GPSTOneXtra™

Supported satellite systems:

GPS

GLONASS*

** **NOTE:** GPS and GLONASS are used together to calculate the position. With both systems active, the accuracy and robustness of the positioning is better in most conditions. The usage of GLONASS as an additional system is transparent both to users and developers, and the benefits are automatically available to applications currently using the Satellite Positioning API (“GPS Provider” in Android terminology).*

Provisioning (OMA CP)

OMA CP version 1.1

Multimedia (audio, image and video)

| | | |
|------------------------|-------------------------------------------------------------------------------|-------------------------------------------|
| Audio Playback | Decoder format | Supported in file format |
| | Audio decoding MPEG-1/2/2.5, audio layer 3 | MP3 (.mp3), 3GPP (.3gp), MP4 (.mp4, .m4a) |
| | AAC, AAC+, eAAC+ | 3GPP (.3gp), MP4 (.mp4) |
| | AMR-NB, AMR-WB | 3GPP (.3gp), MP4 (.mp4) |
| | General MIDI (GM) | SMF (.mid) |
| | Linear PCM 16bit | WAV (.wav) |
| | OTA | OTA (.ota) |
| | Ogg vorbis | Ogg vorbis (.ogg) |
| Audio Recording | Encoder format | Supported in file format |
| | AMR-NB, AMR-WB | 3GPP (.3gp), MP4 (.mp4), AMR (.amr) |
| | AMR-NB, AMR-WB, AAC-LC stereo, sample rate 48 kHz bit rate 128 kbps | 3GPP (.3gp), MP4 (.mp4) |
| Image Playback | Decoder format | Supported in file format |
| | 1, 4, 8, 16, 24 and 32 bpp and RLE encoded formats | BMP (.bmp) |
| | Single and multi-frame, bitmap mask support (GIF87a format and GIF89a format) | GIF (.gif) |
| | Joint Photographic Experts Group | JPEG (.jpg) |
| | Portable Network Graphics Bitmap mask support | PNG (.png) |
| | Wireless Bitmap | WBMP (.wbmp) |
| Image Capture | Encoder format | Supported in file format |
| | Joint Photographic Experts Group | JPEG (.jpg) |
| Video Playback | Decoder format | Supported in file format |
| | MPEG-4 Visual Simple Profile, Advanced Simple Profile Level 6 | 3GPP (.3gp), MP4 (.mp4) |
| | H.264 High Profile Level 3.1 | 3GPP (.3gp), MP4 (.mp4) |
| | H.263 Profile 0, Profile 3 Level 70 | 3GPP (.3gp) |

| Video Recording | Encoder format | Supported in file format |
|------------------------------|---------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| | Video H.263 Profile 0, H.264 Baseline Profile Audio: AAC-LC stereo, sample rate 48 kHz bit rate 128 kbps, AMR-NB | 3GPP (.3gp), MP4 (.mp4) |
| Audio/Video Streaming | Streaming transport | RTSP according to 3GPP™ HTTP streaming |
| DRM | DRM (Digital Rights Management) – features the rights and copy protection of downloaded content | OMA DRM 1.0 |

Synchronisation (OMA DS, EAS, Google Sync™)

OMA Data Synchronisation protocol versions 1.1.2 and 1.2

OMA Data Formats: vCard 2.1, vCalendar 1.0

Microsoft® Exchange ActiveSync® protocol version 2.5

Microsoft® Exchange ActiveSync® protocol version 12

Google Sync™

Related information:

www.sonyericsson.com/developer

Web browser

| | |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Browser version | Android 2.3 Browser (Based on WebKit) |
| Navigation/rendering | Adobe™ Flash™ 10.3* Full page PC rendering Landscape/portrait rendering Pan & Zoom |
| Search | Internet Search |
| Browser compliancy | CSS 2.0 CSS 2.1 CSS 3.0 DOM 2.0 DOM 3.0 HTML version. 4.0 HTML version. 5.0 JavaScript 1.7/ECMA-script 262 3rd edition WebGL 1.0 XHTML Basic version 1.0 XHTML 1.1 |
| Supported Device API | Geo-location API |
| Protocol compliancy | Gzip HTTP/1.1 OMA Download 1.0 TLS 1.0 and SSL 3.0 |

* Updates are distributed via Android market™.

Related information:

www.sonyericsson.com/developer

Trademarks and acknowledgements

The Liquid Identity and Liquid Energy logos, PlayNow, TrackID, Xperia and Timescape are trademarks or registered trademarks of Sony Ericsson Mobile Communications AB. MEGA BASS, Memory Stick Micro, M2, Mobile BRAVIA Engine, Sony and "make.believe" are trademarks or registered trademarks of Sony Corporation. Ericsson is a trademark of Telefonaktiebolaget LM Ericsson.

The Bluetooth word mark and logos are owned by the Bluetooth SIG, Inc. and any use of such marks by Sony Ericsson is under licence. TrackID is powered by Gracenote Mobile MusicID. Gracenote and Gracenote Mobile MusicID are trademarks or registered trademarks of Gracenote, Inc.

Google, Google Latitude, Google Maps, Google Talk, Google Calendar, Google Sync, Gmail, YouTube, Google Voice, Android and Android Market are trademarks or registered trademarks of Google, Inc. Facebook is a trademark or registered trademark of Facebook, Inc. Twitter is a trademark or a registered trademark of Twitter, Inc. MySpace is a trademark or a registered trademark of MySpace, Inc.

Wi-Fi is a trademark or registered trademark of the Wi-Fi Alliance. DLNA and DLNA Certified are trademarks or registered trademarks of the Digital Living Network Alliance. microSD and Transflash are trademarks or registered trademarks of SanDisk Corporation. XHTML is a registered trademark of the W3C.

Microsoft, Windows, Internet Explorer, Outlook and ActiveSync are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

Adobe Flash is a trademark or registered trademark of Adobe Systems Incorporated in the United States and/or other countries. 3GPP™ is a trademark of ETSI. SyncML is a trademark or registered trademark of Open Mobile Alliance Ltd.

Qualcomm and GPSOneXTRA are trademarks or registered trademarks of Qualcomm, inc.

Skype is a trademark or registered trademark of Skype Ltd.

All other trademarks and copyrights are the property of their respective owners.

Some features described herein require supporting services. Usage charges may apply for such services.