

XPERIA acro



SO-02C

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.

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Document history

| Version | | |
|----------|------------------------|-----------|
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Sony Ericsson Developer World

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Product overview

Xperia™ acro – That's Entertainment

Get entertained through the Xperia™ acro. Snap those special moments, share them with your family and friends. Enjoy some time for yourself. Real life experience with wider than before images. Xperia™ acro is the most entertaining Smartphone to hit Japan.

Try Widescreen for a Change

Shoot cherry blossoms in natural colours in spring. Record those joyous moments in HD even in low light, which is beautifully enhanced by the technology, "Exmor R for mobile" and gaze in wonder when you replay it on the crystal clear multi-touch 4.2 inches Reality Display driven by Sony Mobile BRAVIA® Engine. The images are further enhanced by the clear black front panel wrapped in the classy form of the Xperia™ acro. If that is not enough, try the HDMI and connect to your TV for even bigger viewing.

The Japanese touch

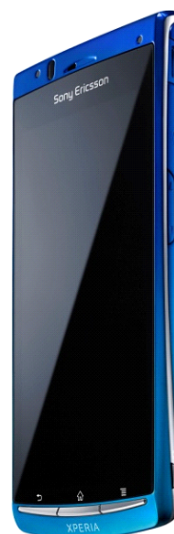
Stay tuned to the latest news or your favorite program even when you are away from home on the 1 seg TV. Share your personal information by IrDA with friends and use the convenient FeliCa application for all your financial transactions. Xperia™ acro will touch the life of every Japanese user.

Mind-Boggling applications

With the Android OS ver.2.3 on Xperia acro, you can enjoy many Google's services and applications. Download free and paid applications from over 100,000 apps from Android Market™. You can get whatever you want for whatever to make you smile.

High Speed Action

Sony Ericsson UX is classic. Timescape - a very convenient application which shows SNS conversation and if you have missed that call from your girl friend or boss. Get easy access to your favorite applications and widgets on the home screen. The HSDPA Cat 10 UMTS available on Xperia acro SO-02C enables high speed internet.



Facts – dimensions, weight, performance and networks

| | |
|--------------------------|--|
| Operating system | Google™ Android™ 2.3 (Gingerbread) |
| Processor | Processor - 1 GHz Qualcomm MSM8255 |
| GPU | Adreno 205 |
| Size | 127 x 63 x 11.8 mm |
| Weight | 135 grams |
| Available colours | Black White Aqua |
| Main screen | |
| Colours | 16,777,216 colour TFT |
| Resolution | 854 x 480 pixels |
| Size (diagonal) | 4.2 inches |
| Scratch-resistant | Shatter proof sheet on Scratch-resistant glass |
| Input mechanisms | |
| Text input | PO Box Touch (Japanese) |
| Touch screen | Capacitive (multi-touch) |
| Touch gesture | Yes, multi-touch |
| Memory | |
| Internal phone storage | 1 GB (up to 320 MB user free memory) |
| RAM | 512 MB |
| Expansion slot | microSD™, up to 32 GB |
| Camera | |
| Camera resolution | 8.1 megapixel |
| Smart zoom | Up to 2.00x |
| Photo flash | Yes, LED |
| Video recording | Yes, HD 720p |

| | |
|-----------------------------|--|
| Sensors | |
| Accelerometer | Yes |
| Proximity sensor | Yes |
| Ambient light sensor | Yes |
| Magnetometer | Yes |
| Networks | |
| SO-02C | HSPA 800(Band VI), 850 (Band V), 2100 (Band I) |
| Data transfer speeds | |
| GSM GPRS | Up to 86 kbps |
| GSM EDGE | Up to 237 kbps |
| UMTS HSPA cat 6 (upload) | Up to 5.7 Mbps |
| UMTS HSPA cat 10 (download) | Up to 14 Mbps |
| | |
| Talk time (GSM) | 6 hours 30 min |
| Standby time (GSM) | 260 hours |
| Talk time (UMTS) | 5 hours 50 min |
| Standby time (UMTS) | 400 hours |
| Battery | 1500 mAh |

**Talk time/Standby time(GSM/UMTS) is according to the operator condition for Battery Life Measurement.*

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

Application overview list

Sony Ericsson signature applications

Sony Ericsson Home application
Sony Ericsson Music Player
Sony Ericsson Timescape™

Sony Ericsson services

PlayNow™ service *
TrackID™ application
Sony Ericsson Local Connectivity

Open Handset Alliance™ applications

Alarm clock
Browser
Calculator
Calendar
Settings
Email
Google Mail™
Google Latitude™*
Google Voice™ Search*
Navigation
Google Places
Google Maps™ with Street View*
Android Market™**
Google Search
YouTube
Google Talk™*
Downloads
News & Weather
Telephony
Clock
Google Gallery 3D *

Other applications

Instruction Manual
sp-mode mail
docomo market
Bee TV
ToruCa
PhoneBookCopy
Evernote
Phonebook backup
i channel
G-guide TV program
Melodycall
Map navi service
Everstar
iD setting
BOOK store 2Dfacto
McDonald
Twonky

eco mode
Osaifu-Keitai
Rakuten auction
Twitter
Facebook™
Media Discovery
PC Companion
OfficeSuite
mora touch
FM Radio
Messaging
APPNAVI
Media Remote
International roaming
SE store
Campaign Navi
Media server
life.episode
LiveWare™ manager
**The service is not available in all markets.*

Full feature list

1. Signature features

Sony Ericsson Timescape™

The place to meet your friends

The Timescape™ application manages all your communication with one person in one place. Browse through your conversations the bright way to check out your Facebook™, MySpace™, Twitter™, photos, emails, and texts. Now they're all kept together so you don't have to open loads of different applications to see what's going on.

Infinite button

Everything you want – from everywhere

Find out all about your friends in a flash. Press the infinite button in the Timescape™ application and smart filter everything that's going on with each person.

Sony Ericsson Local connectivity

A great experience of transferring media files

Get a great experience of transferring media file. In Sony Ericsson Local connectivity, you can choose between USB mass-storage device class (MSC) mode and Media Transfer Protocol (MTP) mode. You may either choose MSC mode to have absolute control of the storage or you may choose MTP mode to focus on transferring media files without risk of data corruption. Experience more with MTP via USB cable.

Sony Ericsson Home screen application

Your home screen – just like home

Where's best for you? Email top right? Music player bottom left? You decide. Put your favourites in thumb's reach. Use the unique touchscreen interface to drag 'n drop the icons into the corners of your home screen. Messages. Calls. Web. Music. YouTube™**. Your favourite apps from Android Market™* or the PlayNow™ service**. What you want, where you want.

** Applications in the Android Market™ varies 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 are selected, is about 1 MB. This mean that on average, more than 100 applications can be downloaded and used without problems. With the ready availability of Android Market™ in the phone, it is also very easy to delete and later reinstall infrequently used applications.*




***The service is not available in all markets.*

2. Categorized features

| | | |
|--|---|--|
|  <p>Camera 8.1 megapixel camera 2.00x smart zoom Aperture f/2.4 Auto focus Face detection Flash / LED Geo tagging HD video recording (720p) Image stabiliser Red-eye reduction Scene recognition Self-timer Send to web Smile detection Sony Exmor R™ CMOS sensor Touch capture Touch focus Video light Video recording Video stabiliser</p> |  <p>Music Album art Bluetooth™ stereo (A2DP) Music tones (MP3/AAC) PlayNow™ service * Sony Ericsson Music Player TrackID™ music recognition application</p> |  <p>Internet Android Market™** Bookmarks Google™ search* Google Voice™ Search* Pan & zoom Web browser (WebKit)</p> |
|  <p>Entertainment 3D games Digital TV (1seg) Media browser Motion gaming Radio (FM radio with RDS) Video streaming YouTube™*</p> |  <p>Messaging Conversations Email Google Mail™* Instant messaging Predictive text input Sound recorder Text messaging(SMS)</p> |  <p>Design Auto rotate Keyboard (onscreen, QWERTY) Picture wallpaper Reality display with Sony Mobile BRAVIA® Engine Touchscreen Wallpaper animation</p> |

* The service is not available in all markets.

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| | | |
|---|---|---|
|  <p>Communication Call list Facebook™ application* Google Talk™* Noise suppression Polyphonic ringtones SIP Sony Ericsson Timescape™ Speakerphone Twitter™ (Timescape™ integration) Vibrating alert</p> |  <p>Organiser Alarm clock Calculator Calendar Document readers E-Manual FeliCa Flight mode Google Calendar™* Google Gallery 3D™* Infinite button OfficeSuite Pro Phone book Setup Wizard Widget manager</p> |  <p>Connectivity 3.5 mm audio jack aGPS Bluetooth™ technology DLNA Google Latitude™* Google Maps™ with Street View* HDMI support IrDA Media Transfer Protocol support Micro USB support Modem PC Companion Synchronisation via Facebook™ Synchronisation via Google Sync* Synchronisation: Exchange ActiveSync® USB mass storage USB High speed 2.0 support Wi-Fi™</p> |
|---|---|---|

*The service is not available in all markets.

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 v1.2 Audio/Video Remote Control Profile v1.0 Handsfree Profile v1.5 Headset Profile v1.1 Object Push Profile v1.1 Phonebook Access Profile v1.0 Serial Port Profile v1.1 |
| Core version and supported core features | 2.1+EDR |
| Connectable devices | Products supporting at least one of the profiles above. |

More information:

www.sonyericsson.com/developer

www.bluetooth.com

IrDA

| | |
|----------------------------|-----------------------------|
| Supported standards | IrReady |
| Data transfer rate | IrDA SIR : up to 115.2 kbps |
| Maximum transfer data size | Up to 2MB |

| Communication Data | |
|------------------------------|---|
| Send Data | Comment |
| Contacts (include MyProfile) | Contacts is supported one or all data transfer. |

| | |
|-------------------------------|--|
| Picture | Support format is followed Android standard. (vNote format is not supported.) |
| Movie | Support format is followed Android standard. (vNote format is not supported.) |
| Music | Support format is followed Android standard. (vNote format is not supported.) |
| Receive Data | Comment |
| All contents can be received. | vNote format is not supported. Contents with non supported format are stored in SD. |

FeliCa

| | |
|----------------------|-------------------------------------|
| Mobile FeliCa Client | Ver 2.0.0 |
| Card mode | Yes |
| R/W | Yes (Internal card / External card) |
| Ad-hoc | Yes |
| FALP | Yes |

Wi-Fi™

Wi-Fi™ is a popular wireless networking technology that uses radio waves to provide wireless high-speed Internet and network connections. Wi-Fi hotspots exist in an increasing number of locations e.g airports, hotels, cafés and bistros. Mobile phones that support Wi-Fi can facilitate high data transfer rates and lower calling costs.

| | |
|------------------------|--|
| Supported standards | IEEE 802.11b/g/n and Wi-Fi™. |
| Connectable devices | Wi-Fi™ access points |
| Frequency band | 2.4 GHz |
| Data transmission rate | 72 Mbit/s |
| Security | WEP WPA Personal and WPA2 Personal WPA Enterprise and WPA2 Enterprise EAP methods: EAP-TLS EAP-TTLS/MSCHAPv2 PEAPv0/EAP-MSCHAPv2 PEAPv1/EAP-GTC |
| Encryption | WEP 64bit, WEP 128bit, TKIP and AES (CCMP) |
| Power save | WMM-UAPSD QoS, WMM |

DLNA (Digital Living Network Alliance)

DLNA is a term used to describe an inter-device media transfer technology. Designed to allow an array of devices in the home to communicate and share content and experiences. DLNA devices can include Wi-Fi equipment, TVs and PCs.

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

Messaging

Email

| | |
|------------------|--|
| Bearer type (IP) | GPRS, EGPRS, UMTS |
| Character sets | BIG5 Traditional Chinese GB2312 Simplified Chinese ISO-2022-JP Japanese ISO-8859-1 ISO-8859-2 Eastern Europe ISO-8859-5 Cyrillic ISO-8859-7 Greek ISO-8859-9 Turkish KOI8-R Cyrillic Shift_JIS Japanese USASCII UTF-16 UTF-8 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 port methods (POPS/IMAPS) and START-TLS |
| 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® GPSOneXtra

Provisioning (OMA CP)

OMA CP version 1.1

Multimedia (audio, image and video)

| | | |
|------------------------------|--|--|
| Audio Playback | Decoder format Audio decoding MPEG-1/2/2.5, audio layer 3 AAC, AAC+, eAAC+ AMR-NB, AMR-WB Standard MIDI File Linear PCM 16bit Ogg vorbis | Supported in file format MP3 (.mp3) , 3GPP (.3gp); MP4 (.mp4, .m4a) 3GPP (.3gp) MP4 (.mp4) 3GPP (.3gp) MP4 (.mp4) SMF (.mid) WAV (.wav) Ogg vorbis (.ogg) |
| Audio Recording | Encoder format AMR-NB: mono, sample rate 8 kHz bit rate 4.75kbps-12.2kbps AMR-WB: mono, sample rate 16kHz bit rate 6.60 kbit/s to 23.85 AAC-LC: stereo, sample rate 48 kHz bit rate 128 kbps | Supported in file format 3GPP (.3gp) 3GPP (.3gp) 3GPP (.3gp), MP4(.mp4) |
| Image Playback | Decoder format 1, 4, 8, 16, 24 and 32 bpp and RLE encoded formats GIF87a, GIF89a Joint Photographic Experts Group Portable Network Graphics Bitmap mask support | Supported in file format BMP (.bmp) GIF (.gif) JPEG (.jpg) PNG (.png) |
| Image Capture | Encoder format Joint Photographic Experts Group | Supported in file format JPEG (.jpg) |
| Video Playback | Decoder format MPEG-4 Visual Simple Profile, Advanced Simple Profile Level 6 H.264 Baseline Profile, H.263 Profile 0, Profile 3 Level 70 | Supported in file format 3GPP (.3gp); MP4 (.mp4) 3GPP (.3gp); MP4 (.mp4) 3GPP (.3gp) |
| Video Recording | Encoder format - Video: H.264 Baseline Profile - Audio: AAC-LC stereo, sample rate 48 kHz bit rate 128 kbps | Supported in file format 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. *Separate delivery is not supported.* | OMA DRM 1.0 |

Digital TV (1seg)

| | |
|-----------------------|---|
| Data Broadcasting | Support |
| Caption | Support |
| Recording | Not support |
| Viewing reservation | Not support |
| Recording reservation | Not support |
| G-Guide application | Not support |
| Note | No audio output via Bluetooth A2DP profile, because the Bluetooth function does not support SCMS-T. |

**Separate delivery is not supported.*

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 | Pan & Zoom Landscape/portrait rendering Full page PC rendering Adobe™ Flash™ 10.1 |
| Search | Internet Search |
| Browser compliancy | HTML version. 4.0 HTML version. 5.0 XHTML Basic version 1.0 XHTML 1.1 CSS 2.0 CSS 2.1 CSS 3.0 JavaScript 1.7/ECMA-script 262 3rd edition DOM 2.0 DOM 3.0 |
| Supported Device API | Geo-location API |
| Protocol compliancy | HTTP/1.1 TLS 1.0 and SSL 3.0 Gzip |

Related information:

www.sonyericsson.com/developer

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