

SONY

White paper

December 2018

Version 3

Xperia™ (TBD)

I3123

Purpose of this document

Sony product white paper are intended to give an overview of a product and provide details in relevant areas of technology.

Document history

October 2018	Version 1
October 2018	Version 2
December 2018	Version 3

This White paper is published by: Sony Mobile Communications Inc.,
4-12-3 Higashi-Shinagawa, Shinagawa-ku,
Tokyo, 140-0002 Japan www.sonymobile.com
© Sony Mobile Communications Inc., 2017. 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.

This document is published by Sony Mobile Communications Inc., 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 Mobile Communications Inc. 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 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.

This White paper is published by: Sony Mobile Communications Inc.,
4-12-3 Higashi-Shinagawa, Shinagawa-ku,
Tokyo, 140-0002 Japan www.sonymobile.com
© Sony Mobile Communications Inc., 2017. 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.

This document is published by Sony Mobile Communications Inc., 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 Mobile Communications Inc. 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 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.

Facts

Operating system	Android™ 9 (P)
Processor	Qualcomm SDM630, 8x ARM Cortex A53, 64-bit (2.2 GHz x 4 + 1.8 GHz x4)
GPU	Adreno 508
Size	156 x 68 x 8.4 mm
Weight	162 grams
Available colours	Black, Silver, Navy, Pink
SIM card	nanoSIM
Main screen	
Size (diagonal)	6.0 inches
Colours	16.7M
Resolution	FHD++ (2520 x 1080)
Pixel density	457ppi
Cover glass	Corning® Gorilla® Glass 5
Type of display	LTPS
Brightness	TYP 500 cd/m2
Input mechanisms	
Text input	On-screen QWERTY keyboard
Touch screen	Capacitive
Touch gesture	Up to 10 fingers
Memory	
RAM	3GB DDR4X
Flash memory	64GB
Internal storage for user *	42GB
Expansion slot **	microSD™ card, microSDHC, microSDXC
Max capacity of external slot	Up to 512GB
Camera	
Main Camera	
Effective pixels	13MP 5MP
Aperture	Main F2.0 Sub F2.4
Focus distance	13M: 100mm ~ Inf 5M: 600mm (Depth: 350mm ~ 2240mm)
Optical zoom	No
OIS	No
Auto focus	Yes
Flash	Yes
ISO	12800
Video Recording	4K
Front Camera	
Effective pixels	8MP
Aperture	F2.0
Focus distance	8M: 400mm (Depth:312mm ~ 557mm)
Optical zoom	No
OIS	No
Auto focus	No
Flash	Yes (Display Flash)
ISO	3200
Video Recording	Full HD

Sensors	
Accelerometer	Yes
Ambient light sensor	Yes
Barometer sensor	No
eCompass™	Yes
Game rotation vector	No
Geomagnetic rotation vector	Yes
Gyroscope	No
Magnetometer	Yes
Step counter	Yes
Step detector	Yes
Significant motion detector	Yes
Proximity sensor	Yes
Networks	
I3123	UMTS HSPA+ 2100(Band 1), 1900(Band 2), 1700(Band 4), 850(Band 5), 900(Band 8) MHz GSM GPRS/EDGE 850, 900, 1800, 1900 MHz LTE (Bands 1,2,3,4,5,7,8,12,13,17,25,28,29,66,) Wi-Fi® 2.4 GHz/5 GHz
Data transfer speeds	
GSM GPRS	Up to 107 kbps
GSM EDGE	Up to 296 kbps
HSUPA (upload)	Category 6, Up to 5.76Mbps
HSDPA (download)	Category 24, Up to 42.2Mbps
LTE (4G) ***	3CA: DL: Up to 600M bps(Cat.12) UL: Up to 150Mbps(Cat.13)
Battery performance	
Talk time (GSM) ****	Up to 30 hrs
Standby time (GSM) ****	Up to 728 hrs
Talk time (UMTS) ****	Up to 24 hrs
Standby time (UMTS) ****	Up to 817 hrs
Talk time (LTE) ****	Up to 31 hrs
Standby time (LTE) ****	Up to 760 hrs
Talk time (Wi-Fi) ****	Up to 22 hrs
MP3 Music Playback w/ headset ****	Up to 22 hrs
Full HD Video playback (H.264) ****	Up to 15 hrs
Battery (Embedded)	TYP 2870 mAh
Battery Cell Type	Li-Polymer
Wireless charging	No
Charge to other phone	Yes

* Internal storage for user depends on the size of firmware, firmware update, preloaded contents and variant.

** Flash memory performance is dependent on the application and task being performed on the device. If you would like to know about your memory card, refer to the technical specifications that came with the card.

*** This service is not available in all variants or markets.

**** Values are according to GSM Association Battery Life Measurement Technique as performed in controlled laboratory conditions. Actual time may vary.

NOTE: The battery performance may vary depending on network conditions and configurations, external environment and device usage.

NOTE: The performance metrics are all measured under laboratory conditions.

Categorised feature list

Call Noise suppression	Yes	Organiser ActiveSync® Airplane mode	Yes Yes	Hardware Fingerprint sensor 3.5 mm audio jack (CTIA 4 pole) FM Radio	Yes Yes Yes
Camera Geo tagging Self-timer(Photo) Touch capture	Yes Yes Yes	Text Input Gesture input On-screen QWERTY keyboard SwiftKey™ Predictive text input	Yes Yes Yes Yes	Connectivity aGNSS Bluetooth® Core version HDCP Media Transfer Protocol NFC Quick Charger USB Power Delivery USB charging USB version USB Host Wi-Fi® Wi-Fi® Hotspot functionality Wi-Fi CERTIFIED Miracast™ Screen Mirroring Cast DLNA support DLNA version	Yes BT 5.0 Yes Yes Yes No Rev. 2.0 Ver. 1.3 Yes High speed 2.0 Yes Yes Yes No Yes Yes No N/A
Display Screenshot capturing		Yes			

These services are not available in all markets.

Technologies in detail

The information presented in this section is a general overview of the technology incorporated into the product. However, hardware and software levels of compliance to standards and specifications vary between products and markets. For more information, contact the relevant Sony representative.

Accessibility

Hearing Aid Compatibility (HAC)*	Yes
Teletypewriter (TTY)**	Yes
Volume key shortcut	Yes
Screen readers	
Select-to-Speak	Yes
TalkBack	Yes
Text-to-speech output	Yes
Display	
Font size	Yes
Display size	Yes
Magnification	Yes
Colour correction	Yes
Colour inversion	Yes
Large mouse cursor	Yes
Remove animations	Yes
Interaction controls	
Accessibility Menu	Yes
Switch Access	Yes
Click after mouse pointer stops moving	Yes
Power button ends call	Yes
Auto-rotate screen	Yes
Touch & hold delay	Yes
Vibration	Yes
Audio & on-screen text	
Mono audio	Yes
Captions	Yes
Experimental	
High-contrast text	Yes

NOTE: The information listed above contains Android features and they are subject to change in future releases of Google™ Android™.

* Available in specific regions.

** The TTY feature is for deaf or hearing-impaired users.

Device-to-device communications (local)

Bluetooth® wireless technology

Bluetooth® profiles supported	Advanced Audio Distribution Profile	v1.3
	Audio/Video Control Transport Protocol Profiles	v1.4
	Audio/Visual Distribution Profiles	v1.3
	Audio/Video Remote Control Profile	v1.6
	Bluetooth Network Encapsulation Protocol	v1.0
	Device ID Profile	v1.3
	Generic Access Profile	-
	General Audio/video Distribution Profile	v1.3
	Hands-Free Profile	v1.7
	Human Interface Device Profile	v1.0
	Headset Profile	v1.2
	Message Access Profile	v1.2
	Multi-Channel Adaptation Protocol	-
	Object Push Profile	v1.2
	Personal Area Networking Profile	v1.0
	PhoneBook Access Profile	v1.2
RFCOMM with TS 07.10	v1.1	
Serial Port Profile	v1.2	
HID over GATT Profile	v1.0	
Core version and supported core features	Version BT 5.0 Bluetooth Low Energy	
Other supported features	aptX®, aptX® HD, LDAC	

More information can be seen in following site (when officially announced):

www.sonymobile.com/

www.bluetooth.com

Wi-Fi®

Supported standards	IEEE802.11	a/b/g/n/ac
	MIMO	No
	Wi-Fi®	Yes
	Wi-Fi Direct®	Yes
	Wi-Fi Protected Setup™	No
	Wi-Fi CERTIFIED Passpoint™	Yes
Connectable devices	Wi-Fi® compatible devices	Yes
	Wi-Fi® access points	Yes
	Wi-Fi Direct® compatible devices	Yes
Frequency band	2.4 GHz	Yes
	5 GHz	Yes
Data transfer rate		Up to 433.3 Mbps
Security	Open Authentication	Yes
	Shared Authentication	Yes
	WPA™ Personal and WPA2™ Personal	Yes
	WPA™ Enterprise and WPA2™ Enterprise / 802.1x	Yes
Authentication method	EAP-SIM	Yes
	EAP-AKA	Yes
	EAP-AKA'	Yes
	EAP-TLS	Yes
	EAP-TTLS/MSCHAPv2	Yes
	PEAPv0/EAP-MSCHAPv2	Yes
	PEAPv1/EAP-GTC	Yes
Encryption	WEP 64 bit	Yes
	WEP 128 bit	Yes
	TKIP	Yes
	AES	Yes
Power save	WMM®-UAPSD	Yes
QoS	WMM®, WMM® Power Save	Yes

Messaging

MMS (Multimedia Messaging Service)

According to OMA Multimedia Messaging Service v1.0 + SMIL

Email

Character sets	BIG5 Traditional Chinese	Yes
	GB18030	Yes
	GB2312 Simplified Chinese	Yes
	ISO-2022-JP Japanese	Yes
	ISO-8859-1	Yes
	ISO-8859-2 Eastern Europe	Yes
	ISO-8859-5 Cyrillic	Yes
	ISO-8859-7 Greek	Yes
	ISO-8859-9 Turkish	Yes
	ISO 8859-11	Yes
	KOI8-R Cyrillic	Yes
	Shift_JIS Japanese	Yes
	USASCII	Yes
	UTF-16	Yes
	UTF-8	Yes
	Windows® 874	Yes
	Windows® 1251 Cyrillic	Yes
Windows® 1252	Yes	
Windows® 1254 Turkish	Yes	
Windows® 1258 Vietnamese	Yes	
Protocols	POP3 and IMAP4	Yes
Push email	Microsoft® Exchange ActiveSync® (EAS) IMAP4 IDLE (RFC2177)	Yes
Secure email	SSL/TLS, both port methods (POPS/IMAPS) and STARTTLS	Yes
HTML mail		Yes (read only)

Positioning – location based services

Supported standards	OMA Secure User Plane Location (SUPL) version	2.0
	3GPP™ Control Plane location (incl. Emergency location)	Yes
Supported satellite systems	GPS	Yes
	GLONASS	Yes
	BeiDou*	No
	Galileo*	No
	QZSS*	No

NOTE1: When needed, the device automatically uses a combination of all available satellite system to accurately provide location information

* BeiDou, Galileo and QZSS satellites are not used for providing location information in U.S. territory.

Provisioning (OMA CP)

OMA CP version 1.1

Multimedia (audio, image and video)

Audio Playback	Decoder format	Supported in file format
	AAC-LC	MP4(.mp4), M4V(.m4v), 3GPP(.3gp, .3gpp), 3GPP2(.3g2, .3gpp2), MPEG-2 TS(.ts), ADTS(.aac), M4A(.m4a)
	AAC+	MP4(.mp4), 3GPP(.3gp, .3gpp), 3GPP2(.3g2, .3gpp2), MPEG-2 TS(.ts), ADTS(.aac)
	eAAC+	MP4(.mp4), 3GPP(.3gp, .3gpp), 3GPP2(.3g2, .3gpp2), MPEG-2 TS(.ts), ADTS(.aac)
	AAC-ELD	MP4(.mp4), 3GPP(.3gp, .3gpp), 3GPP2(.3g2, .3gpp2)
	ALAC	M4A(.m4a)
	AMR-NB	3GPP(.3gp, .3gpp), 3GPP2(.3g2, .3gpp2), AMR(.amr)
	AMR-WB	3GPP(.3gp, .3gpp), 3GPP2(.3g2, .3gpp2), AWB(.awb)
	DSD	DSF(.dsf), DSDIFF(.dff)
	FLAC	FLAC(.flac)
	MIDI	SMF(.mid, .midi, .smf), XMF(.xmf), Mobile XMF(.mxmf), RTTTL(.rtttl), RTX(.rtx), OTA(.ota), iMelody(.imy)
	MP3	AVI(.avi), MP3(.mp3)
	PCM	WAVE(.wav), AIFF(.aiff, .aif, .aifc)
	Opus	Matroska(.mkv), WebM(.webm), MatroskaAudio(.mka), Ogg(.ogg)
	Vorbis	Matroska(.mkv), WebM(.webm), MatroskaAudio(.mka), Ogg(.ogg)
	WMA	Not supported
Audio Recording	Encoder format	Supported in file format
	AAC-LC	MP4(.mp4), ADTS(.aac)
	AAC+	MP4(.mp4)
	AAC-ELD	MP4(.mp4)
	AMR-NB	3GPP(.3gp), AMR(.amr)
	AMR-WB	3GPP(.3gp), AWB(.awb)
Image Playback	Decoder format	Supported in file format
	ARW	Not supported
	BMP	BMP(.bmp)
	CR2	Not supported
	DNG	Not supported
	GIF	GIF(.gif)
	JPEG	JPEG(.jpg, .jpeg)
	NEF	Not supported
	NRW	Not supported
	ORF	Not supported
	PEF	Not supported
	PNG	PNG(.png)
	RAF	Not supported
	RW2	Not supported
	SRW	Not supported
	WBMP	WBMP(.wbmp)
	WebP	WebP(.webp)

Image Capture	Encoder format	Supported in file format
	JPEG	JPEG (.jpg)
	PNG	PNG (.png)
	WebP	WebP (.webp)
Video Playback	Decoder format	Supported in file format
	MPEG-4 Video	MP4(.mp4), M4V(.m4v), 3GPP(.3gp, .3gpp), 3GPP2(.3g2, .3gpp2), AVI(.avi)
	H.263	MP4(.mp4), 3GPP(.3gp, .3gpp), 3GPP2(.3g2, .3gpp2)
	H.264	MP4(.mp4), M4V(.m4v), 3GPP(.3gp, .3gpp), 3GPP2(.3g2, .3gpp2), MPEG-2 TS(.ts), AVI(.avi), Matroska(.mkv)
	H.265	MP4(.mp4), Matroska(.mkv)
	VP8	Matroska(.mkv), WebM(.webm)
	VP9	Matroska(.mkv), WebM(.webm)
	Video Recording	Encoder format
MPEG-4 Video		MP4 (.mp4), 3GPP (.3gp)
H.263		MP4 (.mp4), 3GPP (.3gp)
H.264		MP4 (.mp4), 3GPP (.3gp)
H.265		MP4 (.mp4)
VP8		WebM (.webm)
Audio/Video Streaming	Streaming transport	HLS HTTP progressive streaming RTSP