

PROSPECTRE

ADVANCED DISPLAY TECHNOLOGY

LSPCI HD SERIES

HD INTERACTIVE LARGE SCREEN COMPUTER SERIES

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LSPCI HD Series

INTERACTIVE LARGE SCREEN PERSONAL COMPUTER SERIES



ProSpectre Large Screen Personal Computer Interactive (LSPCI) HD series consists of 43", 49" and 55" display options with touch-enabled, LED backlit, LCD screens. Offering the highest quality, combined with extended product life, ProSpectre. LSPCI HD products provide a dynamic and engaging solution for both education and business environments. ProSpectre LSPCI encourages learning, advanced communication and information sharing through responsive, 10 point touch technology.

ProSpectre LSPCI products are designed for professional use across many vertical markets. With integrated large format display screens being touch enabled, it can be used as a user interface which replaces the mouse pointer. The interactive screen allows the user much more than just navigation but also the ability to annotate over presentations or record information on a digital whiteboard.

ProSpectre products are designed to be aesthetically pleasing. The design is aimed at a sleek, understated look in order to blend into any environment.



Computer

With a choice of on-board processing power, these ProSpectre LSPCI HD units are extremely versatile. Depending on the user's preference, whether it be Microsoft Windows, Android KitKat or Linux, a suitable processor is available.

With ample on-board memory and a 500GB HDD (hard disc drive) any preferred software application can be loaded including Microsoft Office Suite, Digital Signage Software or Interactive Wireless Collaboration Solutions such as Kramer VIAware.

With all the connections of a standard PC, ProSpectre Large Screen Computers can be connected to equipment such as external microphones or cameras. These accessories then add an array of functionality to the large screen computer. With Kramer VIAware software installed, the microphone and camera can operate in concert with programs such as Skype for Business. This solution will turn the ProSpectre LSPCI into a complete video conferencing solution with the capabilities of content sharing, wireless presentation or collaboration which is fully interactive because of the integrated touch overlay.



Connectivity

The ProSpectre LSPCI HD units have integrated Bluetooth, Wi-Fi and Ethernet Connectivity ports to allow for a variety of network connection options. These can be used for Internet connectivity or to connect to local networks.

Direct connectivity is also possible to independent devices such as printers or keyboard-and-mouse packages. External video connectors allow for additional monitor connection.

A range of video connectors are available to cater for a range of both analogue and digital video formats. The ProSpectre LSPCI unit offers control connections for bi-directional control protocol such as RS232 between 3rd party processors or serial controllable devices.



USB Autoplay

With the USB autoplay feature, a USB device can be plugged directly into the ProSpectre LSPCI product and the content will automatically be displayed. This feature is also useful as a failover. Preloaded content will automatically be displayed in the event of the normal streaming or video signal being interrupted. No more “blue screen” or “no signal” messages being displayed.



USB Locking

Because ProSpectre LSPCI HD units are used in various commercial applications, unsolicited tampering can result in system failure and downtime. To overcome the risk of tampering, ProSpectre LSPCI HD units are equipped with a USB Locking mechanism integrated into a screw-fixed back cover. The installed USB device will always remain in place and free from tampering or theft.



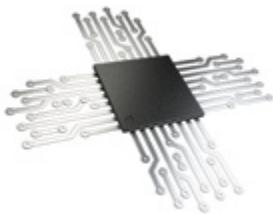
OPS Support

All ProSpectre LSPCI HD units are OPS (Open Pluggable Standard) compliant. OPS will empower the user experience with options of enhanced processing power and the ability to choose Windows or Android as a preferred Operating System in order to fit a specific application.



Suitable Design For Meeting Rooms

Prospectre LSPCI HD solutions can be used to bring the workforce together and utilised to share knowledge by means of interactive presentations, collaboration and training.



System-on-a-chip (SoC) Content Management

ProSpectre LSPCI HD Displays are manufactured with an embedded Quad Core System-on-a-Chip (SoC) to enable content streaming from remote sources, whether individually or enterprise wide. This SoC is embedded as part of the display electronic circuit and is therefore independent from the main processor. The display element of the ProSpectre LSPCI HD unit can thus be operated from the SoC without integration from the main processor.



Web page



Auto Launch

ProSpectre LSPCI HD units make it easy to link any HTML5 based applications to the embedded System-on-a-chip (SoC) software, this feature enables the content to launch automatically on start-up or after a power outage. This feature can be configured for either offline or online content. This ensures that your content receives maximum exposure and up-time.

High Resolution Performance (HD)

The ProSpectre LSPCI HD series offer a range of screens with a native pixel space of 1920 x 1080 which are capable of displaying true Full HD resolution. The user will be able to experience true Full HD content via USB, HDMI, DVI, Display Port and VGA in its native format from external sources. Content from the integrated OPS processor will also be displayed in Full HD resolution. Full HD is the most commonly used resolution.

Touch Support

ProSpectre LSPCI HD units are supplied with touch-enabled screens. InfraRed (IR) Touch technology is designed to equip the ProSpectre LSPCI HD models with multi-touch interactive functionality. Up to 10-touchpoints will be acknowledged at anytime, anywhere on the screen surface. This function turns the large screen computer into a touch-enabled smart display and allows any interactive application to be enjoyed by consumers.

Anti-Glare Surface

ProSpectre LSPCI HD display screens are manufactured with a specially designed low-gloss glass coating to minimise light reflection and provide a smooth touch experience with this antiglare technology.

Tempered Glass

Due to the nature of touch interaction, ProSpectre LSPCI HD units are equipped with a toughened glass panel to prevent any damage to the touch surface due to normal use.

Interactive White Board Application

Thanks to the native HD resolution and touch enabled display screen, the ProSpectre LSPCI HD can display content more clearly and thus accentuate on-screen detail. White board functionality with image overlay can be achieved through multiple software applications.

Advanced Connectivity

With wireless connectivity, the ProSpectre LSPCI HD series can be configured to perform screen-share via Miracast and allows the option to freely connect without any cabling. Third party wireless collaboration software can be installed to create a wireless collaboration environment without the need for external hardware.

Pixel Shifting

Image retention (or burn-in) occurs when a static image is displayed on an LCD display for an extended period. It results in the image being retained on the screen after the signal is removed. ProSpectre displays negate this effect by slowly and imperceptibly orbiting the whole image. This is known as pixel shifting and is particularly useful in digital signage applications.

Around The Clock Operation

One of the key requirements of Professional grade displays is the ability to operate for extended periods of time. Many commercial environments require screens to be on continuously for 24 hours, seven days a week. In order for a display to meet these extended hours of operation, it needs to regulate its own temperature and manage airflow. The ProSpectre LSPCI HD products are certified to operate 24 hours per day and are warranted to operate continuously for a minimum of 2 years. Warranty extensions are available for up to five years.

Daisy-Chain Functionality

Daisy-chain functionality is the built-in ability of ProSpectre displays to link two or more displays together in order to display the same content on multiple displays. This obviates the need for external video distribution amplifiers and associated cabling. It also reduces the number of potential points of failure in a system. ProSpectre displays also include video wall software which together with the daisy-chain functionality can split a single image over multiple displays.

High Brightness Options

Displays often have to be installed in high ambient lighting conditions. This tends to wash out the image and reduce readability. ProSpectre displays offer high brightness models for these conditions.

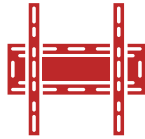
Components



Quick Start
Guide



Instruction Manual



Wall Mounting
Kit



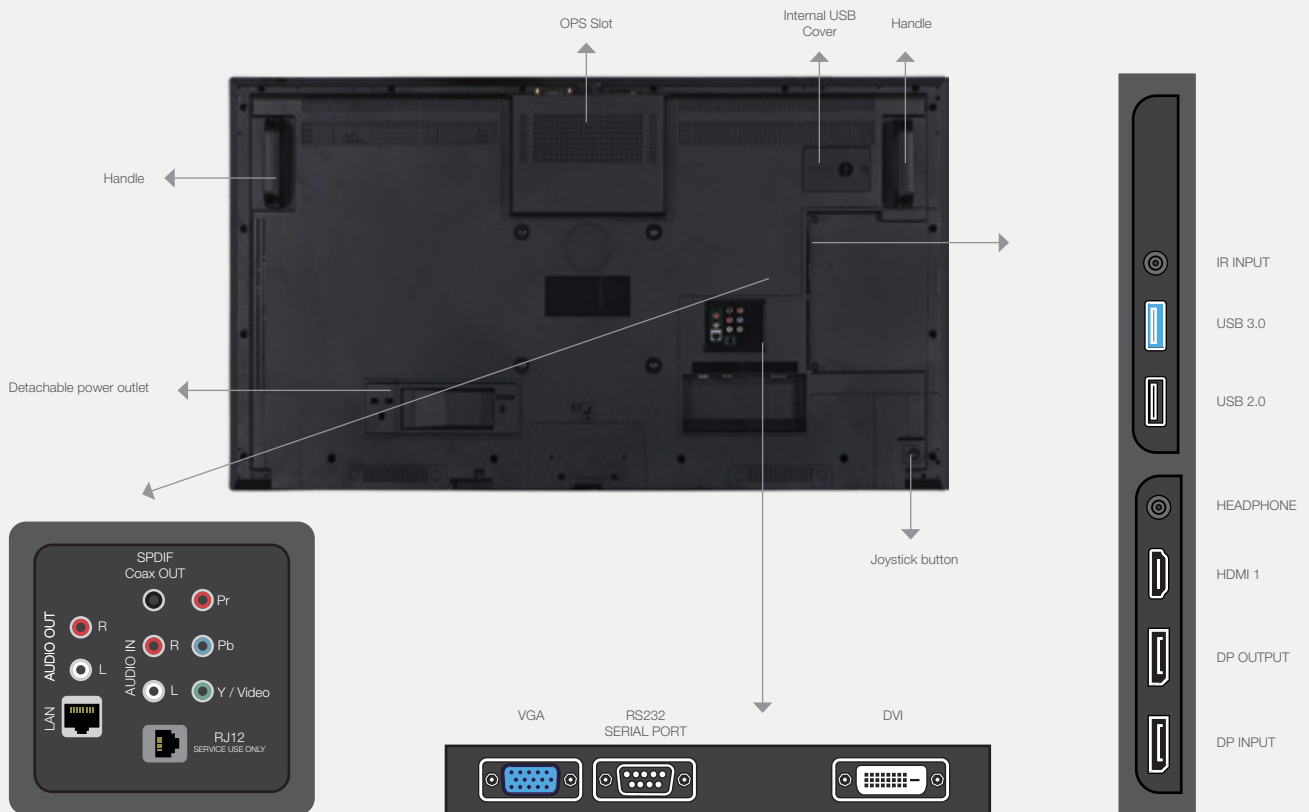
IR Extender



Batteries for
Remote Controllers



Remote
Control



Computer Options

Model Name	OPSRK150	OPSSL650
CPU	RockChip RK3188	Intel® Core™ i5-6200U, 2.4Ghz Dual Core, Skylake-U SoC
Chipset	N/A	N/A
Resolution Support	Full HD Max. 2560 x 1440 @60Hz	Ultra HD Max. 4096 x 2304 @24Hz
GPU	MALI-400 MP GPU up to 600 Mhz	Intel® HD Graphics 520
Memory	2 GB DDR3	2 x 4GB SO-DIMM DDR3L Up to 16GB
Network	LAN: 10/100 Mbps, WLAN: 802.11 a/g/n, Bluetooth 4.0	LAN: 10/100 Mbps, WLAN: 802.11 a/g/n, Bluetooth 4.0, 4G (optional)
Storage	Internal Storage: 8 GB Nand Flash, SD Card : Up to 32 GB	HDD 500 GB
I/O Ports	1 x RJ45 2 x USB2.0 1 x USB OTG 1 x Headphone 3.5 mm jack 1 x Microphone 3.5 mm jack 1 x WiFi antenna connector 1 x SD Card Slot	1 x RS232 3 x USB3.0 1 x USB2.0 1 x VGA 1 x Headphone 3.5 mm jack 1 x Microphone 3.5 mm jack 2 x WiFi antenna connector
Operating System	Android 4.4 Kitkat	Windows 10

Panel

	LSPCI43UG2	LSPCI49UG2	LSPCI55UG2
Mainboard Model	System-On-Chip Model: 18MB120DS	System-On-Chip Model: 17MB120DSRU-DSOPT5	System-On-Chip Model: 17MB120DSRU-DSOPT5
H-Freq	67.5 Khz	67.5 Khz	67.5 Khz
Max. Pixel Freq.	74.25 MHz	74.25 MHz	74.25 MHz
V-Freq	60 Hz	60 Hz	60 Hz
Size	43"	49"	55"
Backlight Type	DLED	DLED	DLED
Panel Technology	IPS	IPS	IPS
Panel Type	24/7 PID Panel	24/7 PID Panel	24/7 PID Panel
Front Type	IR Touch Bezel	IR Touch Bezel	IR Touch Bezel
Orientation	Horizontal & Vertical	Horizontal & Vertical	Horizontal & Vertical
Resolution	1920 x 1080 (16:9) - FHD	1920 x 1080 (16:9) - FHD	1920 x 1080 (16:9) - FHD
Active Area	941 mm(H) x 530 mm (V)	1073.8 mm (H) x 604 mm (V)	1210 mm (H) x 681 mm (V)
Brightness (Typ.)	400 cd/m2	400 cd/m2	400 cd/m2
Contrast Ratio (Typ.)	1200	1200	1200
Dynamic Contrast Ratio	1M:1	1M:1	1M:1
Panel life time (Min. / Typ.)	50000 Hr	50000 Hr	50000 Hr
Viewing Angle	178°	178°	178°
Response Time	8 ms	6 ms	9 ms
Color Value	8 Bit, 16.7 M Colors	8 Bit, 16.7 M Colors	8 Bit, 16.7 M Colors
Areas of Usage	Indoor	Indoor	Indoor

Monitor Connectivity

RGB Input	Dsub 15 PIN VGA CON., YPbPr	Dsub 15 PIN VGA CON., YPbPr	Dsub 15 PIN VGA CON., YPbPr
RGB Output	N/A	N/A	N/A
VIDEO Input	1xHDMI2.0, DP1.2a, 1xDVI, 1xUSB3.0, 1xUSB2.0	1xHDMI2.0, DP1.2a, 1xDVI, 1xUSB3.0, 1xUSB2.0, 1xUSB2.0 (Cover)	1xHDMI2.0, DP1.2a, 1xDVI, 1xUSB3.0, 1xUSB2.0, 1xUSB2.0 (Cover)
VIDEO Output	DP1.2a	DP1.2a	DP1.2a
AUDIO Input	LINE IN JACK	LINE IN JACK	LINE IN JACK
AUDIO Output	LINE OUT JACK	LINE OUT JACK	LINE OUT JACK
External Control	RS232(DSUB 9P), RJ12, Ethernet	RS232(DSUB 9P), RJ12, Ethernet	RS232(DSUB 9P), RJ12, Ethernet

	LSPCI43UG2	LSPCI49UG2	LSPCI55UG2
Mechanical Features			
Size	1010mm(L) x 598mm(H) x 127mm(D)	1238mm(L) x 712mm(H) x 125mm(D)	1280mm(L) x 751 mm(H) x 125mm(D)
Weight	19 kg	22.7 kg	28.85 kg
Shipping Sizes			
Please Note: Screen and Touch Overlay Shipped Separately			
Shipping Size - Screen	1050mm(L) x 718mm(H) x 178mm(D)	1215mm(L) x 775mm(H) x 165mm(D)	1369mm(L) x 874mm(H) x 165mm(D)
Shipping Size - Touch Overlay	1195mm(L) x 718mm(H) x 178mm(D)	1369mm(L) x 874mm(H) x 165mm(D)	1369mm(L) x 875mm(H) x 165mm(D)
Shipping Weight - Screen	14.5 kg	16.4 kg	21.20 kg
Shipping Weight - Touch Overlay	11.5 kg	13.5 kg	16.5 kg
Vesa Mounting Size	200mm(H) x 200mm(V)	200mm(H) x 200mm(V)	400mm(H) x 200mm(V)
Bezel Width(Bottom-Side-Top)	34 mm	34 mm	34 mm
Working Conditions			
Temperature Conditions	+40°C / 0°C	+40°C / 0°C	+40°C / 0°C
Humidity	90%	90%	90%
Touch Technology			
Type of Touch Technology	Infrared (IR) Technology	Infrared (IR) Technology	Infrared (IR) Technology
Supported Point	10 Points	10 Points	10 Points
Sensitivity	Any touch with finger, gloved hand or pointer	Any touch with finger, gloved hand or pointer	Any touch with finger, gloved hand or pointer
Connectivity	HID, TUIO, Flash	HID, TUIO, Flash	HID, TUIO, Flash
Supported OS and Applications	Windows®7, Windows®8, Windows®10, Vista, XP, Mac® OS, Linux, Android	Windows®7, Windows®8, Windows®10, Vista, XP, Mac® OS, Linux, Android	Windows®7, Windows®8, Windows®10, Vista, XP, Mac® OS, Linux, Android
Orientation	Portrait and landscape support	Portrait and landscape support	Portrait and landscape support
Features			
Main Features	Open Content Management Support, Scheduler, USB-Autoplay, Auto-Launch, HDMI-CEC, HDMI-Hotplug, Auto-switch on Failover, Panel Lock	Open Content Management Support, Scheduler, USB-Autoplay, Auto-Launch, HDMI-CEC, HDMI-Hotplug, Auto-switch on Failover, Panel Lock	Open Content Management Support, Scheduler, USB-Autoplay, Auto-Launch, HDMI-CEC, HDMI-Hotplug, Auto-switch on Failover, Panel Lock
Mechanical Features	Joystick, IR Extender Support, Rocker Switch, Detachable power cable, Carrying slots, Detachable logo positioning, Internal usb cover, Cable Holder	Joystick, IR Extender Support, Rocker Switch, Detachable power cable, Carrying slots, Detachable logo positioning, Internal usb cover, Cable Holder	Joystick, IR Extender Support, Rocker Switch, Detachable power cable, Carrying slots, Detachable logo positioning, Internal usb cover, Cable Holder
Optional Features	OPS Compliance, IR Overlay Touch Compliance	OPS Compliance, IR Overlay Touch Compliance	OPS Compliance, IR Overlay Touch Compliance
Speaker	2 x 8 W	2 x 8 W	2 x 8 W
Power			
Power Supply	110 VAC - 240 VAC	110 VAC - 240 VAC	110 VAC - 240 VAC
Power Consumption (On Full Load)	44 W	50 W	54 W
Power Consumption (Off)	≤0.5 W	≤0.5 W	≤0.5 W
Power Consumption (Active-StandBy)	14 W	14 W	14 W
Accessory			
Standard	Quick Start Guide, Warranty Card, Instruction Booklet, Power Cord, Remote Control, RC Battery, Mounting Kit, IR Extender Cable, Extension Brackets	Quick Start Guide, Warranty Card, Instruction Booklet, Power Cord, Remote Control, RC Battery, Mounting Kit, IR Extender Cable, Extension Brackets	Quick Start Guide, Warranty Card, Instruction Booklet, Power Cord, Remote Control, RC Battery, Mounting Kit, IR Extender Cable, Extension Brackets
Warranty			
Standard Warranty	2 Year	2 Year	2 Year
Extended Warranty Options	Up to 5 Years	Up to 5 Years	Up to 5 Years
Certification			
Safety Approval	✓	✓	✓
CB	✓	✓	✓
S-MARK	✓	✓	✓
EMC Approval	✓	✓	✓
CE	✓	✓	✓
Reliability Approval	✓	✓	✓

Supported Players

MediaCodec Specifications Video:

File Extension	Container	Video Codec	Specifications	Bit Rate	Profile	Remark	
dat, mpg, mpeg	MPG, MPEG	Mpeg1,2	1080p@ 30fps	50Mbit/sec	Main Profile	MP4: GMC is not supported	√
ts, trp, tp, m2ts	TS	MPEG2 ,H.264, VC1, AVS, MVC	H.264: 1080px2@25fps 1080p@ 50fps MVC: 1080p@ 24fps Other: 1080p@ 30fps	50Mbit/sec	H264: Main Profile and High Profile @Level 4.1 MPEG2: MP@ HL		√
vob	MPEG2 -PS	MPEG2	1080p@ 30fps	50Mbit/sec	MPEG2: MP@ HL		√
mp4	AVI, MP4	MPEG4 Divx 3.11, Divx 4.12, Divx 5.x, Divx 6, Xvid 1.00, Xvid 1.01, Xvid 1.02, Xvid 1.03, Xvid 1.10-beta1/2 H.264	H.264: 1080px2@25fps 1080p@ 30fps 1080p@ 50fps	50Mbit/sec	H264: Main Profile and High Profile @Level 4.1 MPEG4: Simple Profile and Advanced Simple Profile @ Level 5		√
rm, rmvb	RMVB, RM	rm codec	1080p@ 30fps	50Mbit/sec	RV8, RV9, RV10		√
mkv	MKV	H.264, MPEG1,2,4	H.264: 1080px2@25fps, 1080p@ 50fps, 1080p@ 30fps	50Mbit/sec	H264: Main Profile and High Profile @ Level 4.1 MPEG4: Simple Profile and Advanced Simple Profile @Level 5		
divx, avi	AVI(1.0, 2.0), DMF0,1,2	MPEG2, MPEG4 Divx 3.11, Divx 4.Divx 5, Divx 6, Xvid 1.00, Xvid 1.01, Xvid 1.02, Xvid 1.03, Xvid 1.10-beta1/2 H.264	H.264: 1080px2@25fps 1080p@ 50fps 1080p@ 30fps	50Mbit/sec	MPEG2: MP@ HL MPEG4: Simple Profile and Advanced Simple Profile @Level 5		
Motion JPEG	AVI, MOV	JPEG	640x480 @ 30fps	10Mbit/sec	-	MP4: GMC is not supported	√
asf, wmv	ASF (Revision 01.20.03)	VC1	1080p@ 30fps	50Mbit/sec	Advanced Profile @ Level 3 Simple Profile and Main Profile		√
3gp	3GPP	MPEG4, H.264	1920x1080 @ 30fps	20Mbit/sec	H264: Main Profile and High Profile @Level 4.0 MPEG4: Simple Profile and Advanced Simple Profile @Level 5		√
fla,flv	FLV	H.264, Sorenson H.263	H.264: 1080px2@25fps / 1080p@ 50fps 1080p@ 30fps	40Mbit/sec	H264: Main Profile and High Profile @ Level 4.1		√
m4v	M4V	-					

MediaCodec Specifications Audio:

Audio Codec	File Extension	Bit/Sampling Rate	Remark
MPEG1/2 Layer1	MP3	32Kbps ~ 448Kbps (Bit rate) 16KHz ~ 48KHz (Sampling rate)	-
MPEG1/2 Layer2	MP3	8Kbps ~ 384Kbps (Bit rate) 16KHz ~ 48KHz (Sampling rate)	-
MPEG1/2 Layer3	MP3	8Kbps ~ 320Kbps (Bit rate) 16KHz ~ 48KHz (Sampling rate)	-
AC3	N/A (work with video files only)	32Kbps ~ 6 Mbps 32KHz, 44.1KHz, 48KHz (Sampling rate)	-
EAC3	N/A (work with video files only)	32Kbps ~ 6 Mbps 32KHz, 44.1KHz, 48KHz (Sampling rate)	-
AAC, HEAAC	M4A/AAC	Free Format (Bit rate) 8KHz ~ 48KHz (Sampling rate)	-
WMA	WMA/ASF	128bps ~ 320Kbps (Bit rate) 8KHz ~ 48KHz (Sampling rate)	WMA 7, WMA 8, WMA 9 Standard
WMA Pro	WMA/ASF	< 768kbps (Bit rate) ~ 96KHz (Sampling rate)	WMA9 Pro (upto5.1 channels,96kHz)
OGG	OGG	Free Format (Bit rate) ~ 48KHz (Sampling rate)	*Only support stereo decoding
DTS (DMP)	N/A (work with video files only)	< 1.5Mbps (Bit rate) ~ 48KHz (Sampling rate)	-
LPCM	N/A (work with video files only)	64Kbps ~ 1.5Mbps (Bit rate) 8KHz ~ 48KHz (Sampling rate)	-
IMA-ADPCM/MS-AD-PCM	N/A (work with video files only)	384Kbps (Bit rate) 8KHz ~ 48KHz (Sampling rate)	-
G711 A/mu-law	N/A (work with video files only)	64~128Kbps (Bit rate) 8KHz (Sampling rate)	-
LBR (cook)	N/A (work with video files only)	6Kbps ~ 96Kbps (Bit rate) 8KHz ~ 48KHz (Sampling rate)	-
PCM	PCM	8Kbps ~ 320Kbps (Bit rate) 16KHz ~ 48KHz (Sampling rate)	-
LPCM	WAV	-	-

MediaCodec Spec. Photo:

Image	Photo	Resolution (Mstar suggest)	Required DRAM size (Mbytes)	Remark	width	height	bytes
JPEG	Base-line	15360x8704 (1920x8 x 1088x8)	3,96	Depends on RAM size	15360	8640	4147200
	Progressive	1024x768	6,00		1024	768	6291456
PNG	non-interlace	9600x6400	3,66		9600	6400	3840000
	interlace	1200x800			1200	800	3840000
BMP		9600x6400	3,66		9600	6400	3840000

- 1) Resolution is kind of reference design, not hardware limitation. Because it is bounded by DRAM size and performance
2) More large resolution, more DRAM size
3) More large resolution, less performance (more time to show a picture)
4) Jpeg decoder is hardware decoder. Limitation of max resolution is 16360x16360
5) PNG/BMP decoder is software decoder (running on co-processor). Limitation of max resolution is depend on DRAM size



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