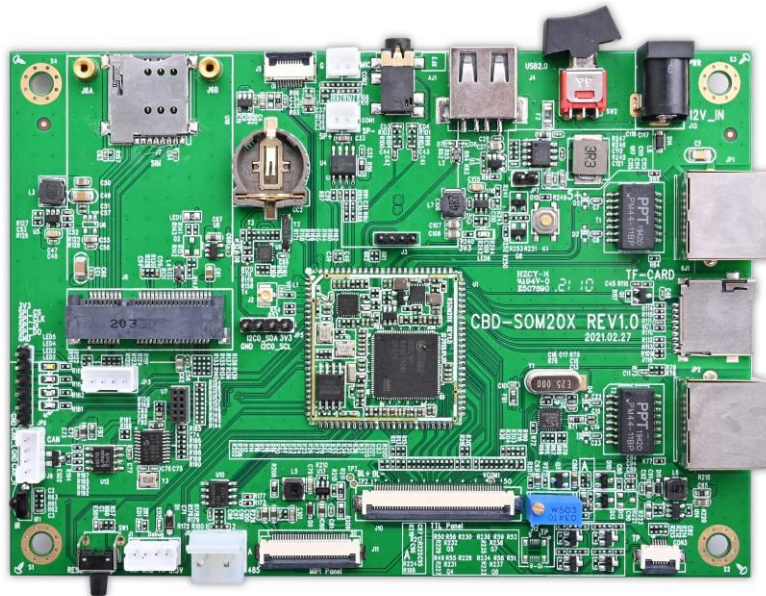


# Developer Boards

## DB 20X



SSD20X is a highly integrated SoC chip from Sigmastar. It based on arm architecture (A7 dual core 1.2 GHz, integrates hardware h. 264 / h. 265 video decoder, built-in DDR, built-in 2 d graphics engine, support for TTL/mipi display driver interface, built-in Ethernet MAC and PHY, etc., mainly used in intelligent building indoor machine, smart home control, small gateway, elevator floor indicator, the speech recognition application of household appliances, VOIP, coffee machine and so on many scenes with screen display.

### Excellent Audio features

Support stereo input and output  
Support 8K/16K/48KHz sampling rate recording  
ADC boost gain supports -6dB~15dB or 0dB~21dB with interval 3dB

ADC digital gain supports -63.5dB~33dB with interval 0.5dB, can be muted to zero

SNR of DR A-Weighted ADC > 90dB(@gain=0dB)

### Excellent video features

H.264/AVC Decoder  
H.265/HEVC Encoder  
JPEGDecoder

### Rich peripheral interfaces

Universal peripheral interface and bus  
GPIO,UART,SPI,CAN,PWM,I2C,IR etc.

### Display Subsystem

Built-in contrast, brightness, sharpness and saturation control

TTL output HD 60fps,

Support: RGB56/RGB666/RGB888 format

Mipi TX DSI 4-channel with a maximum speed of 1.5Gbps and a maximum of 60 frames per second

Support: ARGB1555 / ARGB444 / ARGB8888, RGB565, and YUV422 format

### Security engine

Support AES/DES/3DES/RSA/SHA-I/SHA/256

Support for safe startup

Added hardware encryption IC

### Enterprise service

Provide complete customization, technical support and mass production services

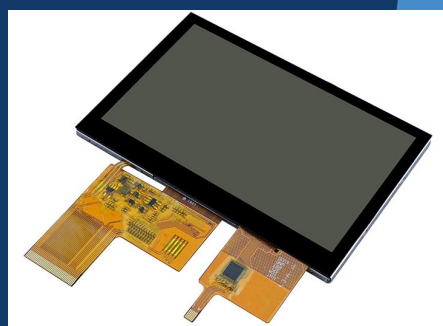
## Specifications

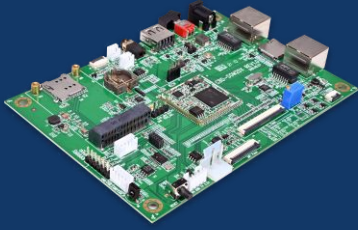


Processor	Sigmastar SSD201/SSD202D ARM® Cortex-A7 dual core, up to 1.2GHz Neon and FPU
Video Processor	<b>Decoder:</b> H.264/AVC,H.265/HEVC,I/P/B Max FHD(1920x1080)/60FPS <b>Encoder:</b> JPEG/MJPEG,YUV422,YUV420 Max FHD(1920x1080)/15FPS
Audio Processor	Support stereo input and output Support 8K/16K/48KHz sampling rate recording Gain adjustable
2D Graphics Engine	JPG,JPEG,PNG
RAM	Build-in 64MB DDR2-1333(SSD201) <b>Build-in 128MB DDR3-1600(SSD202D)</b>
ROM	128MB(256MB Optional,up to 2GB) SPI Nor Flash SPI Nand Flash(Default)
Encryption IC	Support
RTC(Real Time Clock) WDT	Build-in(ultra-low power)
OS	Linux kernel 4.9.84 + UI engine

### Main functions and interfaces

Ethernet	2*10/100M
4G LTE/3G/2G	Support:US/EU/AU/CA MiniPCIe Interface
Wi-Fi	2.4GHz/ WiFi 4
Bluetooth	BT4.0(Optional)
USB 2.0	Type A
HeadPhone	3.5mm Interface(Mic)
Speaker	Supports stereo sound
Display	RGB screen (with touch) TTL screen (with touch)





TF Storage	Support(SDIO 2.0)
IR	Support
CAN	Support
RS485	Support
UART	Debug

GT-IoT	<p><b>*The interface of the Internet of Things as defined by GTC</b>          UART*1,SPI*1,GPIO*1</p> <p><b>*Compatible with GTC product modules</b></p> <ol style="list-style-type: none"> <li>1.ZigBee3.0 Module</li> <li>2.BLE5.0 Module</li> <li>3.Z-Wave Module(Nod)</li> <li>4.LoRa Module(Nod)</li> </ol>
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#### Mechanical properties

Power Supply	DC12V
Operating temperature range	-20°C~85°C
Relative humidity	10% ~ 90%
Size (mm)	144*115