RK3568

High

A high [illegible] quad-core application processor



Features

CPU

Quad- -A55 processor

GPU

ARM G52-2EE

OpenGL ES1.1/2.0/3.0/3.1/3.2, Vulkan 1.1,

OpenCL 2.1

NPU

1TOPs@INT8

Support INT8/INT16/FP16/BFP16

Support deep learning frameworks:

TensorFlow, Caffe, Tflite, Pytorch, Onnx,

Android NN, etc

Memory

32bit DDR4/3/3L/LPDDR4/4X/3

DRR4 and DDR3 support ECC

Display

Multiple display engine, max 3 screen support

HDMI2.0

eDP 1.3

Dual MIPI-DSI, combo with single LVDS

24bit RGB/BT1120

EBC interface

Multi-Media

4K H.265/H.264/VP9 video decoder

1080p@60fps H.264/H.265 video encoder

Video Input

8M Pixel ISP with HDR&3DNR

[illegible] lanes MIPI CSI V2.0/1.2 and DVP

interface

Audio Interface

I2S0/I2S1 with 8 channels

I2S2/I2S3 with 2 channels

SPDIF0

PDM0 with 8 channels

TDM0 with 8 channels

VAD (Voice Activity Detection)

High S

Share three serial lanes

Dual USB 2.0 host

Dual RGMII interface

Security

Secure Video Path

Secure JTAG to debug

Secure boot

OTP

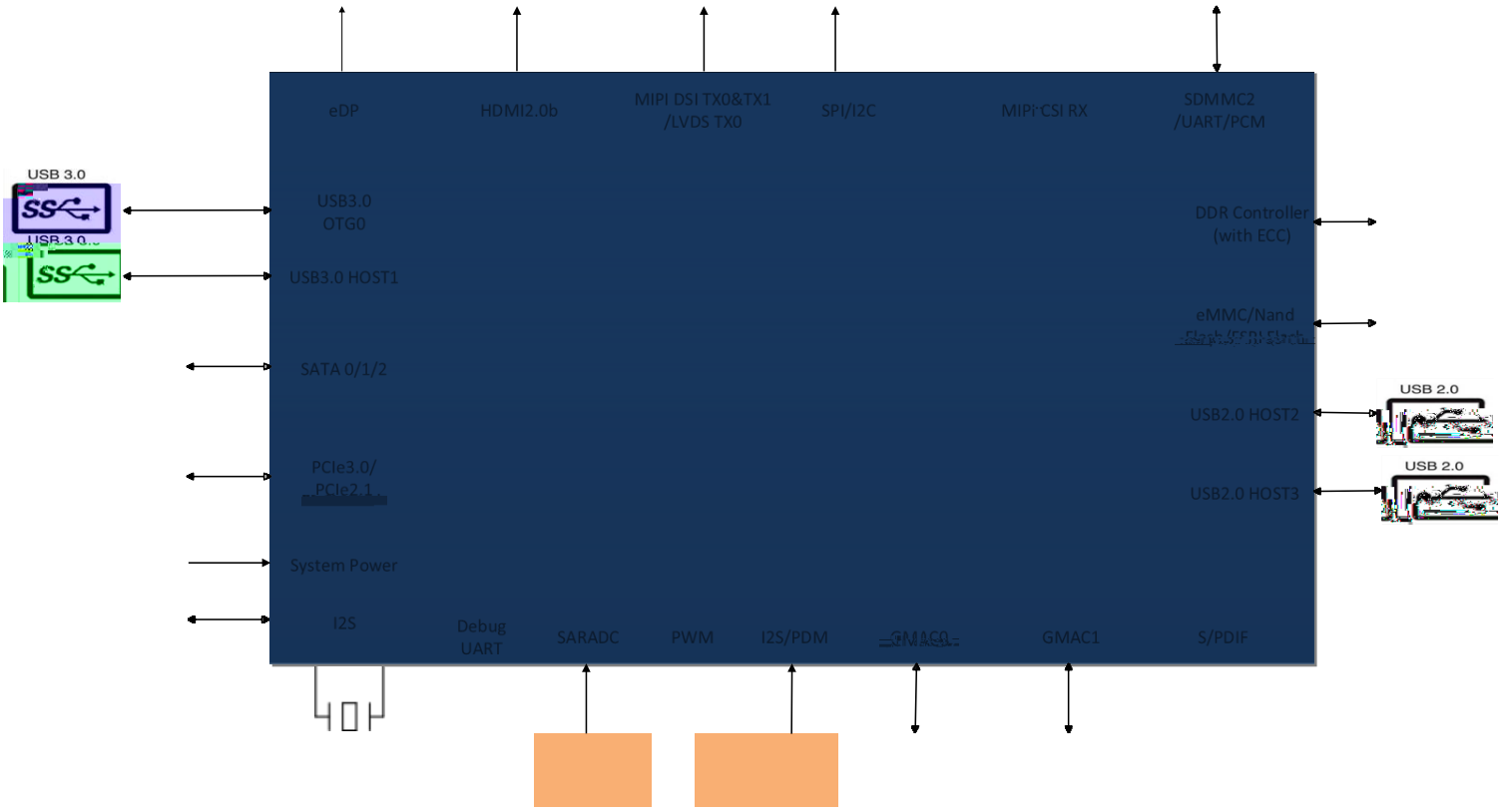
Crypto (AES/TDES/SM4/SM3/SHA256/SHA512 /RSA)

Android11 & 12

Device Information

FCBGA630L & FCCSBG36L

Ball pitch: 0.65mm


eDP
HDMI2.0b
MIPI DSI TX0&TX1
/LVDS TX0
SPI/I2C
MIPI CSI RX
SDMMC2
/UART/PCM
USB 3.0
USB3.0
OTG0
USB3.0 HOST1
DDR Controller
(with ECC)
eMMC/Nand
SATA 0/1/2
USB 2.0
USB2.0 HOST2
PCIe3.0/
PCIe2.1
USB 2.0
USB2.0 HOST3
System Power
I2S
Debug
UART
SARADC
PWM
I2S/PDM
GMAC0
GMAC1
S/PDIF