Preliminary Datasheet for 21.5 Inch Android Kit

Description

XMP-M001A-F215#RK3568 integrates multiple I/O, and Ethernet, Wi-Fi 6, Bluetooth 5.4, and 4G expansion (requires an additional 4G module), simplifying overall system design. In addition, it supports decoding of popular video and image formats. The high-performance VPU supports 4K 60fps H.265/H.264/VP9 video decoding and 1080P 60fps H.265/H.264 video encoding, with support for 8M ISP and HDR.

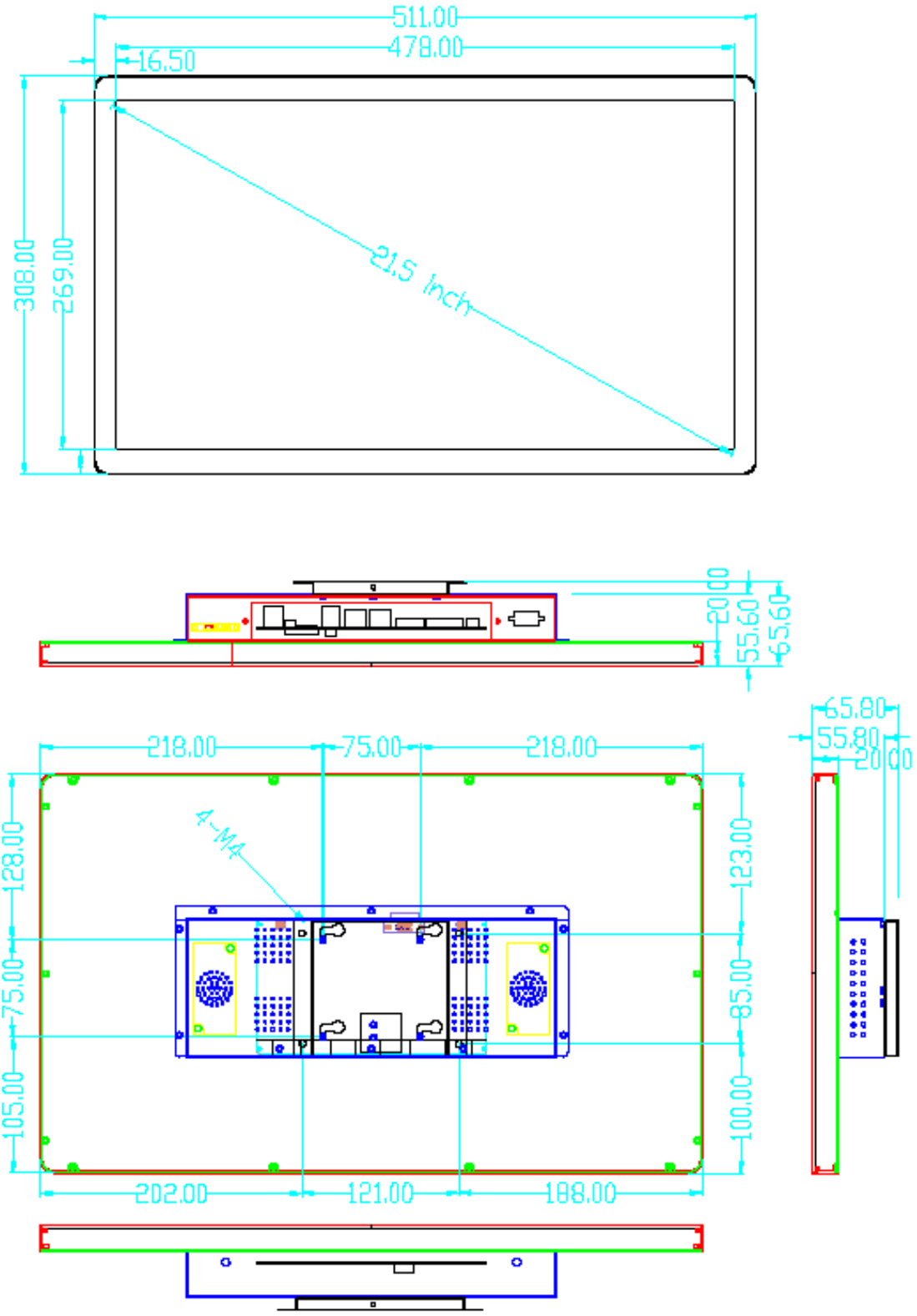
It can drive various TFT LCD displays with enhanced stability and is widely applied in AI servers, facial recognition payment devices, security, medical, transportation, finance, industrial control, smart education, smart retail, and other AI-powered intelligent fields.

Specifications

CPU	Quad-core 64-bit Cortex-A55, up to 2.0 GHz
GPU	ARM G52 2EE, supports OpenGL ES 1.1/2.0/3.2, OpenCL 2.0, Vulkan 1.1
NPU	Computing power up to 1 TOPS
Memory	2G/ 4G/8G (optional)
Built-in Storage	EMMC 16G / 32G /64G/128G/256G (optional)
Operating System	Android 11
Playback Modes	Supports loop playback, scheduled playback, and interrupt playback
Supported Video Formats	WMV, AVI, FLV, RM, RMVB, MPEG, TS, MP4, etc.
Supported Image Formats	BMP、JPEG、PNG、GIF
Power Input I/F	1 × internal 2.54mm 6Pin power connector 1 × external DC jack (outer diameter 5.5mm / inner pin 2.0mm) Supports 9~36V power input
HDMI Output	1 × Type-A HDMI port Supports 1080P, 2K, 4K output (VGA optional; HDMI and VGA are mutually exclusive)
TF Card Expansion	Supports 16GB / 32GB / 64GB / 128GB Compatible with SD3.0, MMC v4.51 protocol Theoretically can supports larger capacity
Infrared Remote	Supports infrared remote control

Control & Status Indicator	Includes device status indicator LED
Serial Ports & Expansion Interfaces	- TTL serial ports (configurable as RS232 or RS485) -12 × GPIO (can be expanded with optocoupler to 4 inputs & 4 outputs) -Expandable with ADC/DAC chip for 4 × ADC + 4 × DAC -Expandable with CNA chip for 2 × CNA I/F
Audio/Video Output	1 × headphone jack 1 × dual-channel speaker output (supports 8Ω / 5W per channel amplifier)
Gravity Sensor	Supported (default not soldered)
RTC Real-Time Clock	Supported with scheduled power on/off function
USB I/F	1 × Type-C USB 2.0 4 × standard USB 2.0
System Upgrade Methods	Supports USB upgrade, Wi-Fi wireless upgrade, and PC connection upgrade
Network Support	1. Dual 10/100/1000Mbps auto-switching Ethernet ports 2. Built-in Wi-Fi 6 and Bluetooth 5.4, Wi-Fi supports hotspot sharing 3. Optional 4G networking (via external USB 4G module)
Industrial-grade Chip (Optional)	RK3568J

Drawing



21.5 inch