

23.8-inch Electronic Menu Digital Signage Specification

Model: Y238EM-A01

Version: V1.0

	Prepared by	Reviewed by	Approved by	Effective Date

Version	Description	Date	Fiction
V1.0	First Released	November 4, 2024	Chen Qingjie



Product functions

- The E-menu display is equipped with the all-core A133 (Cortex-A53) quad-core processor, featuring high performance and low power consumption, with a main frequency of up to 1.5GHz. The embedded GPU (Imagination GE8300) supports OpenGL ES 1.1/2.0/3.2, OpenCL 1.2, and Vulkan 1.1.
- This product runs on the Android 10 operating system.
- It integrates LVDS/EDP/MIPI display interfaces, capable of driving various TFT LCD displays. Along with expansion interfaces for Ethernet/Wi-Fi/BT/4G (4G support requires an external 4G module), it greatly simplifies the overall system design.
- It supports decoding for most currently popular video and image formats. Its high-performance VPU supports 4K @ 30fps H.265/H.264, 720P @ 30fps VP9, and 1080P @ 60fps MPEG-G video decoding, as well as 1080P @ 60fps H.264 video encoding.
- Boasting higher stability, it is widely used in various AI-related intelligent fields such as AI servers, facial payment devices, security, medical care, transportation, finance, industrial control, smart education, and smart retail.
- High Integration: It integrates LVDS or MIPI, and EDP display interfaces into one, supporting a maximum of 1080P display and greatly simplifying the overall system design.
- High Stability: In terms of hardware and software, it incorporates self-developed technologies to ensure product stability, enabling end products to achieve 24/7 unattended operation.
- Rich Expansion Interfaces: 5 USB interfaces (3 built-in pin headers and 2 standard external USB 2.0 ports), 2 expandable serial ports (both configurable as RS-232), and GPIO/KEY interfaces, which can meet the requirements of various peripheral devices on the market.
- High Definition: It supports a maximum of 3840×2160 decoding and various LCD displays with LVDS/EDP interfaces.
- Comprehensive Functions: Horizontal/vertical screen playback, video split-screen,

scrolling subtitles, scheduled on/off, USB data import, and other functions.

- Easy Management: Equipped with a user-friendly playlist backend management software, it facilitates the management and control of ad playback. Playback logs are available to help track playback status.

Product Features

- It supports functions such as horizontal/vertical screen playback, video split-screen, scrolling subtitles, scheduled on/off, and USB data import.
- It supports multiple upgrade methods such as remote upgrade, USB, and computer-based upgrade.
- Supports fully seamless switching (with no pause or black screen when switching between two videos).
- It supports playback of task programs with arbitrary screen aspect ratio partitioning and enables resumable download of task programs.
- The screen supports 90°, 180°, and 270° rotation.
- The board supports Ethernet and comes with a built-in WiFi module (802.11b/g/n).
- It supports switching between Simplified Chinese, Traditional Chinese, and English, and additional languages of different countries can be added based on customer requirements.
- It supports the automatic copy function via USB flash drive, facilitating program updates when there is no network.
- It supports video, images, and text in the main playback window, as well as mixed playback of images and text in the playback window, along with scrolling display of images and text.
- It supports the publishing system in configuring terminal information, setting scheduled on/off, scheduled playback, volume, terminal name, and network IP, as well as checking the software version information of terminal devices.
- It supports mainstream industry USB/serial port devices, such as printers, card readers, PIN pads, fingerprint scanners, cameras, ID card readers, and QR code scanners.

Product Specifications

Display Specifications

Item	Parameter	Note
Display Specifications	Screen Diagonal Size	23.8inch
	Maximum Resolution	1920x1080
	Effective Display Area (mm)	528.7(H)×298.2(V)
	Display Colors	16.7M
	Brightness	700 cd/m ²
	Contrast Ratio	2000:1
	Viewing Angle (H/V)	178 ° / 178°
	Response Time	8ms
	Display Mode	16:9

Android System Configuration

Item	Parameter	Note
Android System Configuration	CPU	Quad-Core Cortex-A53, with a maximum main frequency of 1.5 Ghz
	Memory	1G/2G/4G (Optional)
	Built-in Storage	EMMC 8G/ 32G / 64G (Optional)
	WiFi	Built-in WiFi or WiFi/BT module (select one option), 802.11b/g/n, Default: single WiFi module
	OS	Android 10
	Languages	Simplified Chinese, Traditional Chinese, English, French, German, Italian, Japanese, Korean, Russian, Spanish, Polish, Czech, and other languages
	Browser	Multiple browsers such as UCWeb and Google
	Online Entertainment	Supports online videos, TV programs, movies, music, and radio stations.
	Video Formats	Supports WMV, AVI, FLV, RM, RMVB, MPEG, TS, MP4, and other video formats.
	Video Decoding Resolution	Maximum Resolution: 1920*1080

	Audio Formats	Supports audio playback in formats including MP3, WMA, MP2, OGG, AAC, M4A, MA4, FLAC, APE, 3GP, and WAV, and features a Song List function.	
	Recording Function	Supports recording in MP3 and WMA formats	
	Image Formats	Supports browsing of various image formats including JPG, BMP, PNG, GIF, and others, as well as rotation and slideshow playback, with a maximum supported resolution of 1920*1080.	

Interfaces

	Item	Parameter	Note
Interfaces	Power Supply Interface	1*Built-in 2.54mm 4-Pin Power Input Interface and 1*DC Jack Interface (outer diameter 5.5mm, inner core 2.0mm)	
	LVDS Output (x1)	1* Single/Double-Channel 30-Pin Dupont Interface, supporting direct driving of LCD screens with multiple resolutions at 50/60Hz	
	MIPI Output (x1)	1*4-Lane MIPI Interface (40-Pin 0.5mm Pitch FPC Interface), supporting direct driving of 1*MIPI LCD screen	
	EDP Output	1*2-Lane EDP Interface (30-Pin 0.5mm Pitch FPC Interface), with a maximum supported output resolution of 1920*1080	
	CTP Interface	1*I2C Touchscreen Interface, supporting driving of I2C touchscreens	
	Remote Control and Indicator Lights	Supports Infrared (IR) Remote Control and device working status indicator lights	
	Serial Ports (x2)	2*Serial Port Sockets, supporting expansion of 2*TTL ports or 2*RS-232 ports	
	GPIO Ports	1*GPIO Socket, supporting expansion of 4*GPIO control ports	
	Speaker Output	1*Dual-Channel Speaker Output Interface (supporting left and right channel output with an 8Ω/5W power amplifier)	
	RTC (Real-Time Clock)	Supports scheduled power on/off	
	USB Interfaces	2*USB 2.0 Ports and 3*Built-in USB Sockets	
	System Upgrade Interface	Supports local USB upgrade, wireless upgrade, and computer-based upgrade	
	Network Interfaces (x2)	1. Supports 10/100M Adaptive Ethernet 2. Built-in WiFi and Bluetooth (WiFi supports hotspot sharing) 3. Supports 4G internet access expansion (requires an additional USB 4G module)	

Other Functions

Item		Parameter	Note
Other Functions	Other Input Devices	Supports USB keyboards, mice, and IR Remote Control (supporting remote hard power on/off function)	
	Video Functions	Supports USB cameras	
	Special System Functions	Low-level and High-level Hardware Watchdog, Scheduled Power On/Off, Remote Power On/Off, System Encryption, and Super STANDBY	

Environmental Conditions

- ◆ Operating Temperature: 0°C–40°C. Recommended 5°C–35°C
- ◆ Operating Humidity: 10%–90%, non-condensing
- ◆ Storage Temperature: –20°C–40°C. Recommended: Storage at room temperature
- ◆ Power Consumption: ≤30W

Structural dimension drawing

