Digital Signage Integration Solutions with Amlogic T982 Quad-Core CPU
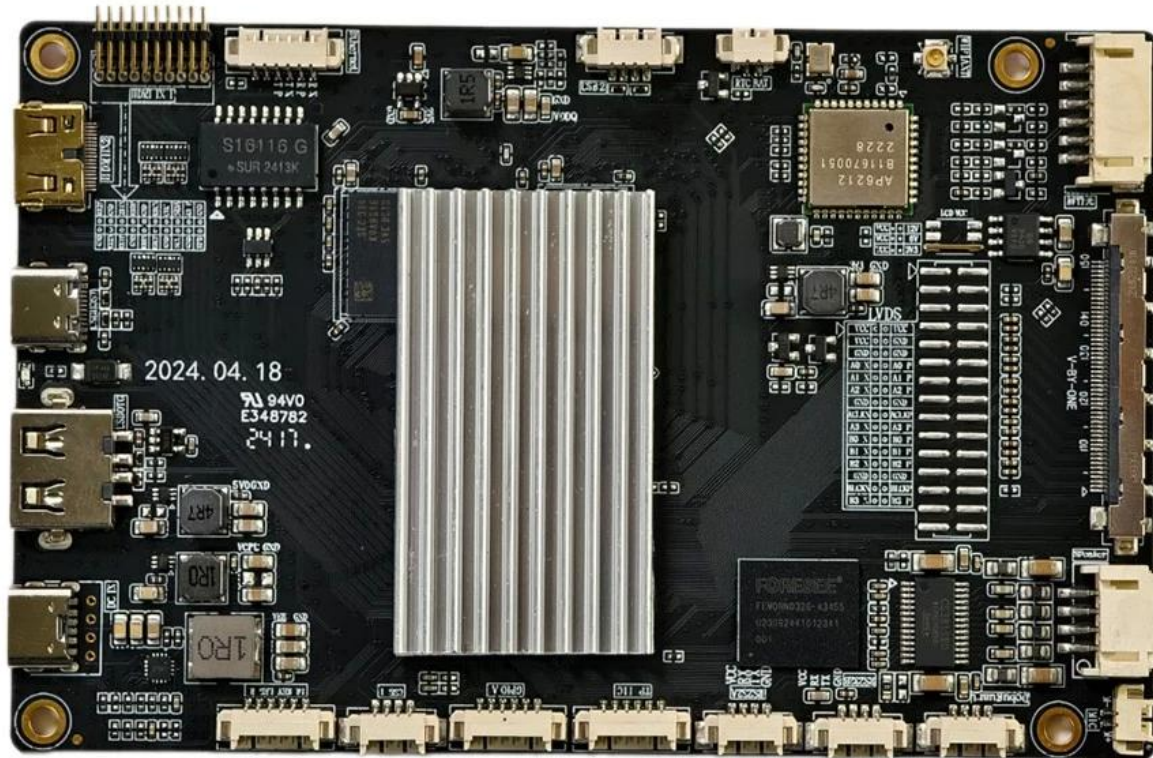
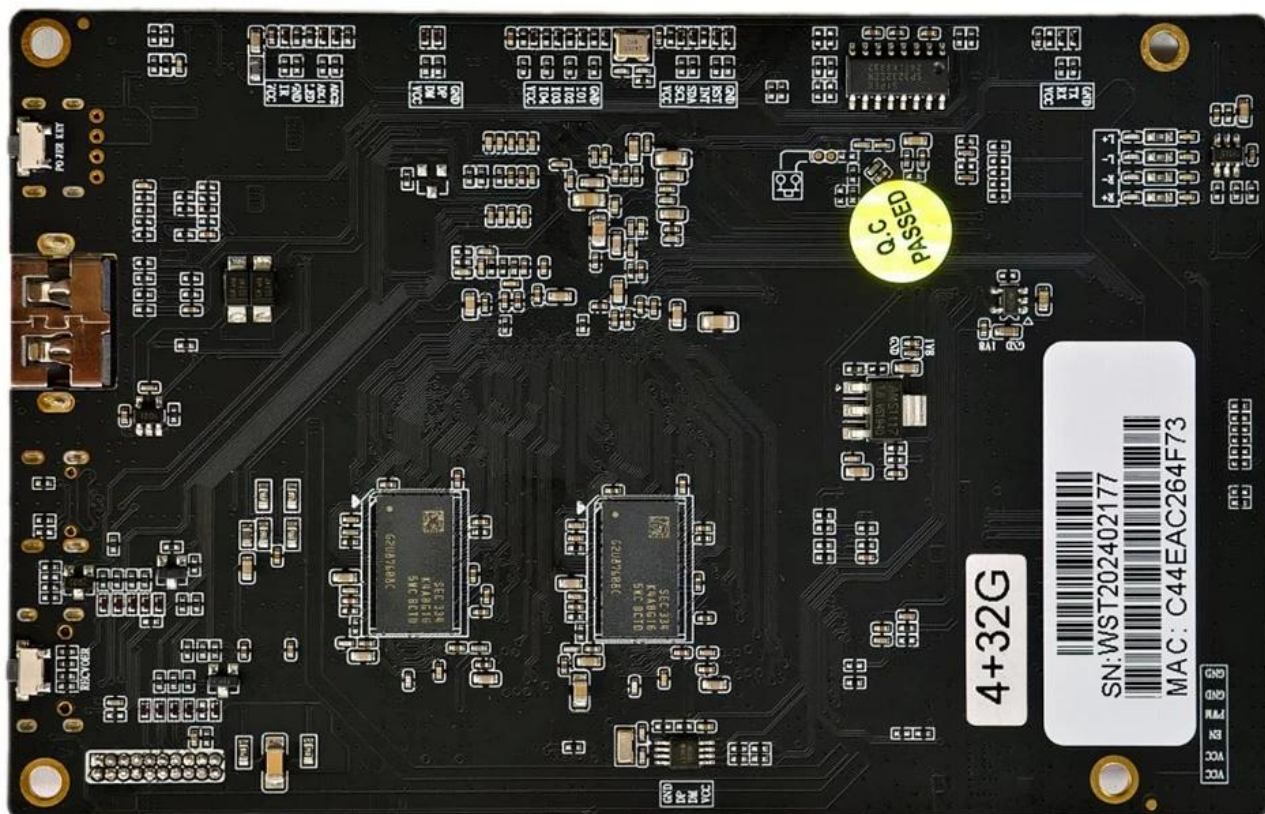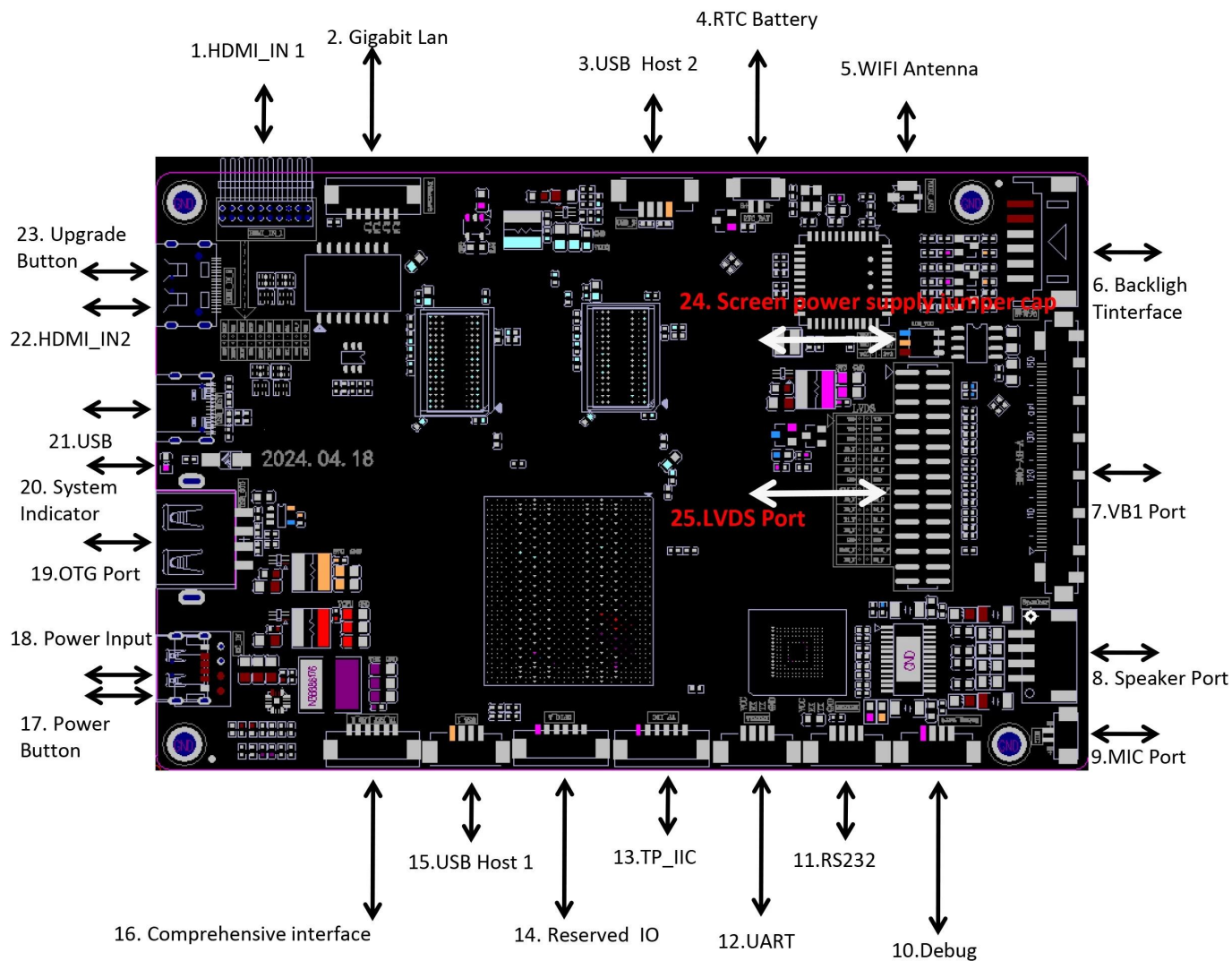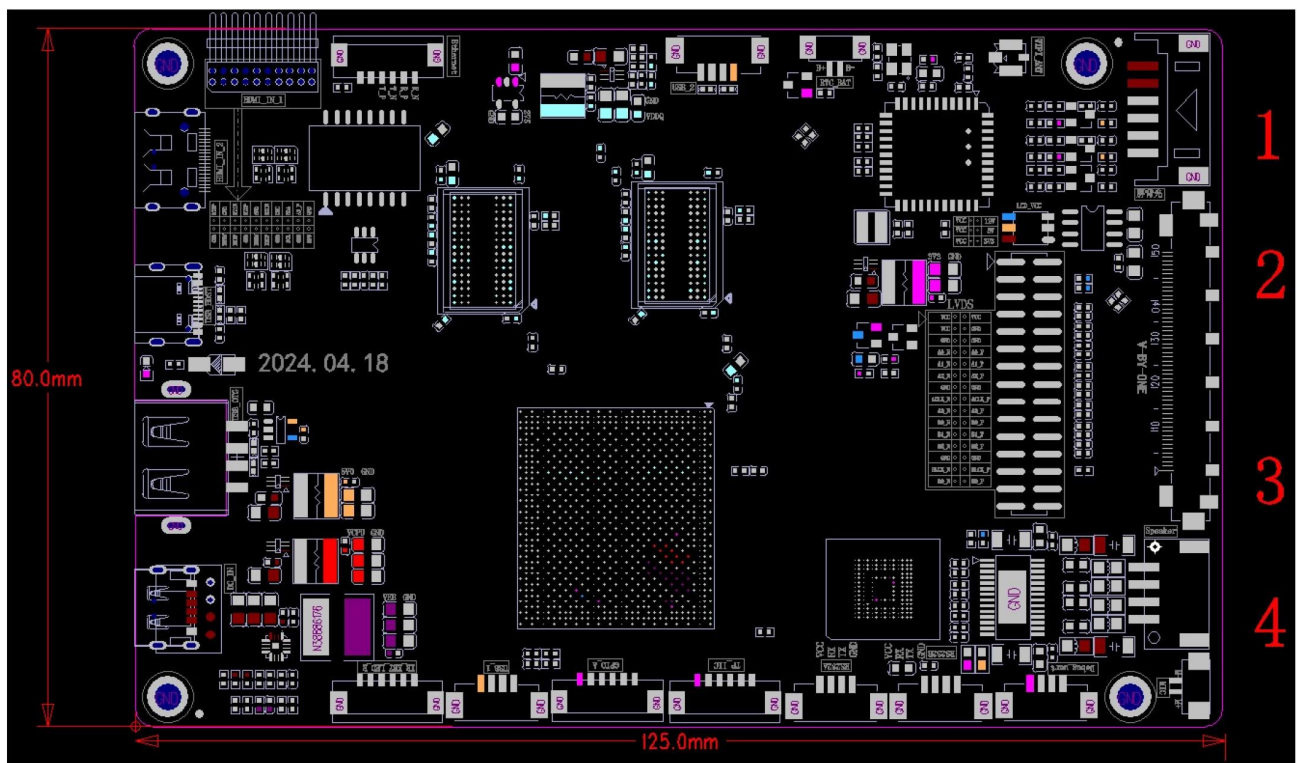| Specifications	
Model No.	Amlogic T982 Digital Signage Integration Solutions
CPU	Amlogic T982 Quad-Core ARM Cortex-A55 Processor up to 1.9GHz
GPU	ARM Mali-G52 MP2 OpenGL ES 3.2, Vulkan 1.1 and OpenCL 2.0
RAM	2GB
ROM	8GB (8GB/32GB/64GB Optional)
OS	Android 13
Wi-Fi / BT	2.4Ghz (2.4G/5G Optional); BT4.2
I/O Port	
LVDS Output V-BY-ONE Out	1 Single/Dual Channel, Drive 50/60Hz LCD Screen 4K*2K@60Hz
Standard Screen Backlight Control Interface	12V, Enable, PWM Dimmer;
USB2.0	1*USB OTG, 1*USB2.0 A
Serial Port	1*RS232 1*TTL
Other Expansion Interfaces	Multipath IO interface, ADC and Button interface
Ethernet	10/100M Fast Ethernet RJ45 Port
RTC	Timer Switch
Upgrade	Support Local USB And OTA Upgrade
Size	125mm*80mm

1.HDMI_IN 1

2. Gigabit Lan

3.USB Host 2

4.RTC Battery

5.WIFI Antenna

23. Upgrade Button

22.HDMI_IN2

21.USB

20. System Indicator

19.OTG Port

18. Power Input

17. Power Button

24. Screen power supply jumper cap

25.LVDS Port

6. Backligh Tinterface

7.VB1 Port

8. Speaker Port

9.MIC Port

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16. Comprehensive interface

15.USB Host 1

14. Reserved IO

13.TP_IIC

12.UART

11.RS232

10.Debug

PCB: 4-Layer Board
Size: 80mm*125mm, Plate thickness 1.2mm
Screw hole specifications: Φ3.0mm x 4

Amlogic T982 Digital Signage is an Android smart motherboard designed primarily for supporting cut-to-size screens in various dimensions and resolutions. It is ideal for applications such as smart shelves, storefront advertising, and commercial displays, and it also serves well in smart display terminals, video-based terminal products, and industrial automation terminals. Suitable use cases include ultra-thin advertising machines, smart self-service terminals, and intelligent retail terminals.

Powered by the Amlogic T982 chipset, this device features a quad-core Cortex-A55 processor with a peak frequency of 1.9 GHz and a Mali-G52 GPU. It includes an integrated NPU delivering 2.6 TOPS processing power, supports 4K resolution and H.265 hardware decoding, and runs on the Android 13 operating system. It offers multi-channel video output and input, along with a rich selection of peripheral interfaces for extensive device expansion. With ultra-low power consumption and robust performance, it is an optimal choice for commercial displays, self-service applications, and new retail solutions.

- **Built-in V-By-One / LVDS Output and MINI HDMI Input.**
- **Network Support:** Wired and WiFi connectivity.
- **Comprehensive Expansion Interfaces:** The motherboard includes four USB ports—two standard USB ports (one OTG USB port and one USB 2.0 port) and two internal expansion USB ports—along with one RS232 serial port, one TTL serial port (supports wake-up), one TP_IIC, multiple GPIOs, and ADC interfaces, meeting a wide range of peripheral connectivity requirements.
- **High Resolution:** Supports up to 8K*4K@30fps decoding and various LCD displays, including LVDS/V-By-One and cut-to-size screens.
- **Android OS Customization:** Provides system API reference code, offering seamless support for upper-layer application development.
- **Touchscreen Compatibility:** Fully compatible with infrared, optical, capacitive, resistive,

and touch film-based touchscreens.
- **User-Friendly Operation:** Easy to operate, with simple and convenient maintenance.

The [Digital Signage](#) Integration Solution with Amlogic T982 Quad-Core CPU is a high-performance, reliable platform tailored to meet the demanding requirements of commercial digital signage applications. Powered by the advanced Amlogic T982 chipset, this solution offers a robust quad-core processor that efficiently handles multimedia content, ensuring smooth playback and responsive operation for dynamic 4K displays. Ideal for a wide range of environments, from retail stores and hotel lobbies to transportation hubs and interactive kiosks, this signage solution provides the flexibility and visual clarity needed to engage audiences effectively.

With support for 4K Ultra HD resolution, the T982-based signage solution ensures every visual element is displayed in sharp, vibrant detail, creating an immersive viewing experience that captures attention. The powerful graphics capability makes it ideal for showcasing high-resolution images, videos, and animations, helping businesses enhance brand appeal and communicate effectively with customers. The integration of an LCD driver further streamlines the setup process, allowing direct connection to LCD panels, reducing latency, and improving display stability.

This solution operates on the Android OS, offering access to a vast ecosystem of digital signage apps and tools that make content management easier and more intuitive. The familiar Android interface allows content creators and administrators to develop, schedule, and update content quickly, providing a user-friendly environment that minimizes the learning curve. The Android platform's versatility also ensures compatibility with various media formats and interactive applications, allowing for a range of signage experiences from simple promotional displays to interactive, touch-based interfaces.

The Amlogic T982 signage solution comes equipped with extensive connectivity options, including HDMI, USB, Ethernet, and Wi-Fi, which facilitate seamless integration with other devices and networks. Its multiple I/O ports make it easy to add peripheral devices, such as cameras, touchscreens, and sensors, which enable more interactive and responsive signage displays. Network connectivity also supports remote content updates, making it easier to manage displays across different locations from a central control point.

Energy efficiency is a key feature of this solution. The Amlogic T982's low-power design allows the signage board to operate continuously without excessive heat buildup, which is essential for digital signage that runs 24/7. This efficiency reduces operational costs and extends component longevity, making it a sustainable option for long-term installations.

In summary, the Digital Signage Integration Solution with Amlogic T982 Quad-Core CPU is an optimal choice for businesses looking to deploy reliable, high-performance digital signage systems. With its 4K support, Android compatibility, integrated LCD driver, and flexible connectivity, this solution is ideal for creating impactful digital displays that captivate audiences. Whether in retail, hospitality, corporate environments, or public spaces, this solution empowers businesses to deliver memorable visual experiences that enhance customer engagement and brand communication.