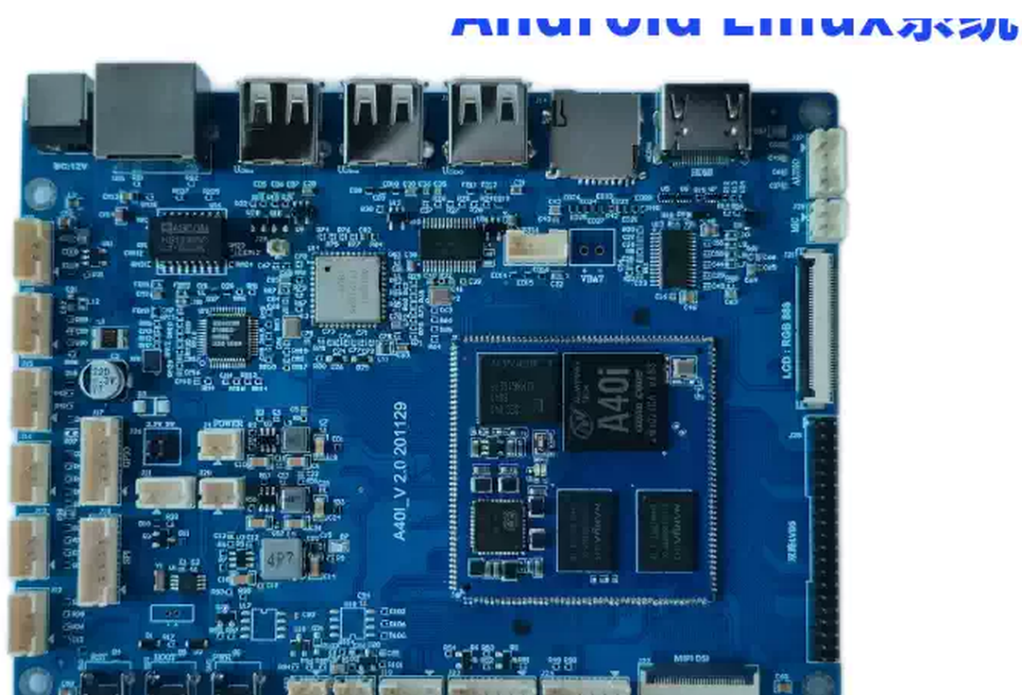


A40i Industrial SBC

Allwinner quad-core Cortex-A7 · Android / Linux · -40 to +85 C

English specification extracted from the original product package



1.2 GHz A7

Mali-400 MP2 GPU

1 GB / 8 GB

RAM + eMMC

-40 to +85 C

Industrial range

1080p

HDMI / LVDS / MIPI

Product overview

The A40i full-function board is an industrial single-board computer around Allwinner's A40i. A quad-core Cortex-A7 (to 1.2 GHz) and Mali-400 MP2 GPU target intelligent control, 3D UI, and HD video. The platform is specified from -40 C to +85 C, runs Android 7.1 and Linux, and follows a 10-year-class industrial supply plan. An on-board PMIC accepts 12 V DC, USB, or a 3.7 V pack with charge-path management. Dual LVDS, dual 24-bit RGB, MIPI-DSI, HDMI and CVBS reach 1920 x 1080. CAN, RS-485, UART, I2C, SPI, Ethernet, Wi-Fi/BT and CSI cover typical industrial and signage I/O.

A40i full-function single-board computer

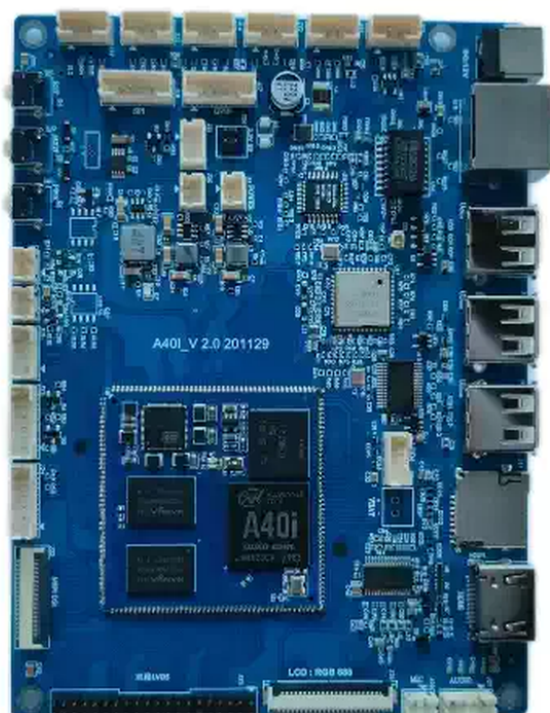
A40i is Allwinner's industrial application processor for intelligent control. A low-power quad-core ARM Cortex-A7 runs up to 1.2 GHz across -40 C to +85 C, with Android and Linux and a 10-year-class supply window. Mali-400 MP2 graphics and multiple video outputs make it a strong fit for 3D UI, signage, and industrial HMI.

The on-board PMIC accepts 12 V DC, USB, or a 3.7 V Li-ion pack, with power-path selection and charge/discharge management so a finished terminal needs less external power design.

Display: dual LVDS, dual 24-bit RGB, MIPI-DSI, HDMI, TV/CVBS, up to 1920 x 1080.
I/O: Ethernet, audio, SDIO, UART, USB, SATA, VGA, TV-IN/OUT, IR, CSI, CAN, RS-485, I2C, SPI.
Ships with Android 7.1. Typical uses: media playback, digital signage, interactive advertising, large LCD, comms terminals, medical instruments, industrial and traffic control, information kiosks, finance, and automotive terminals.

SBC and A40i-H core module

Full-function carrier (left) and compact SOM (right) share the same A40i platform.



A40i full-function SBC

ALLWINNER TECH



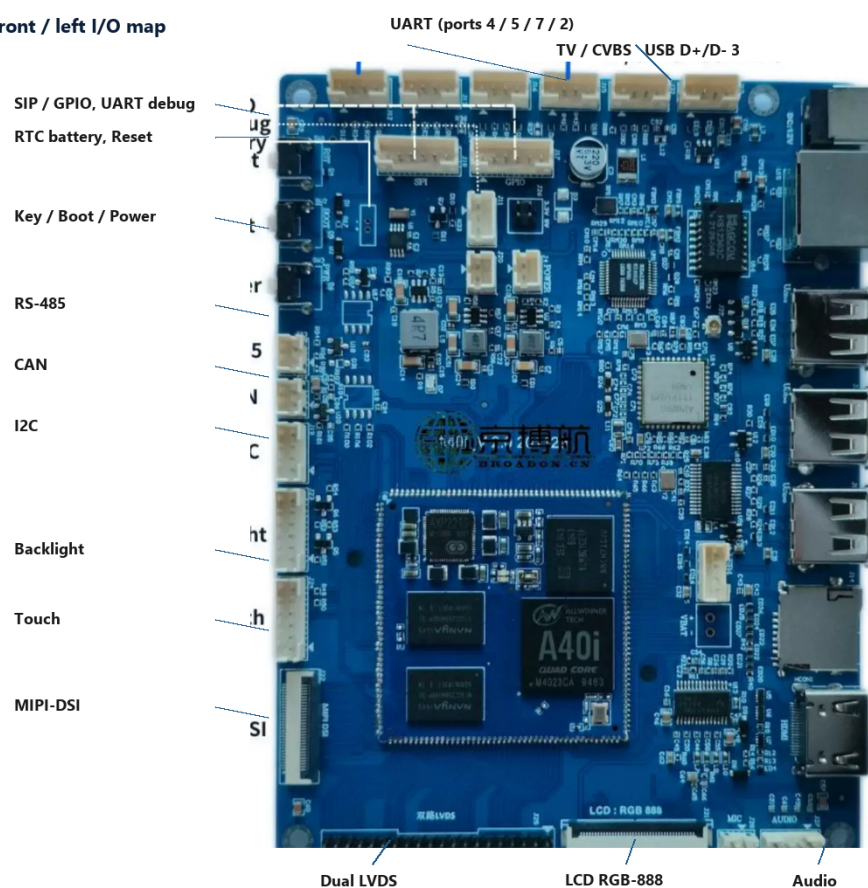
A40i-H core module

Electrical and interface specifications

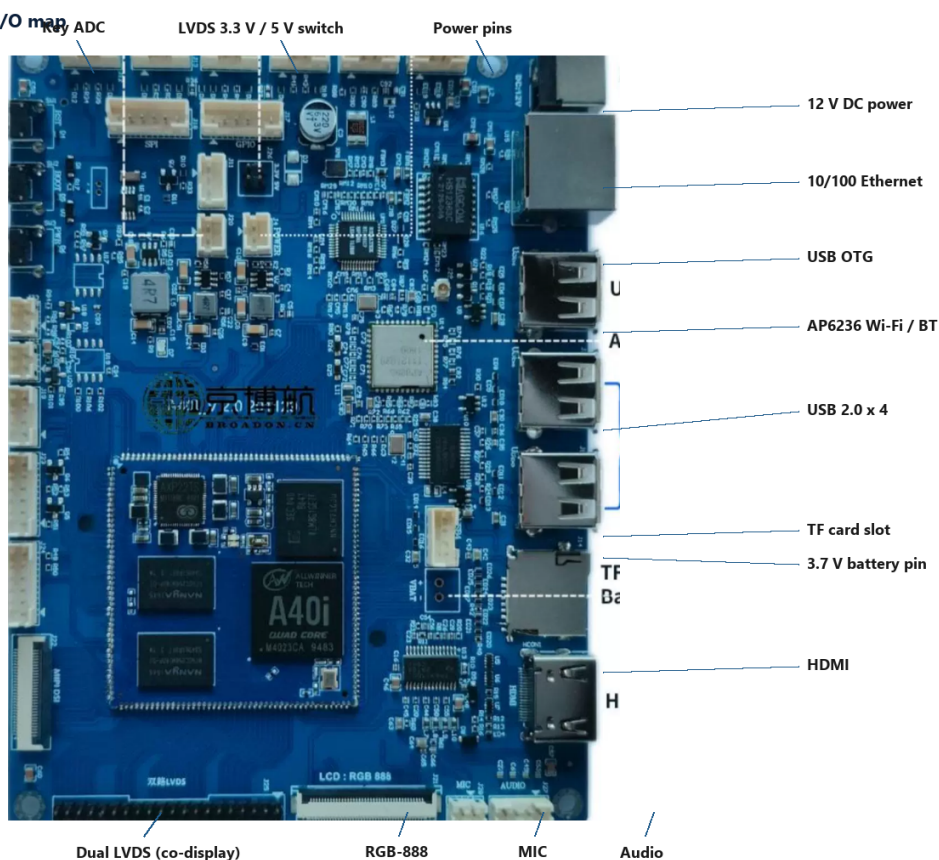
Product	Allwinner A40i full-function industrial SBC
SoC	Allwinner A40i, quad-core ARM Cortex-A7 up to 1.2 GHz
GPU	Mali-400 MP2, 3D graphics and HD video
Memory / storage	1 GB RAM, 8 GB eMMC
Operating system	Android 7.1 and Linux
Temperature	-40 C to +85 C industrial grade
Supply life	10+ years Allwinner industrial longevity
Power input	12 V DC, USB, or 3.7 V Li-ion (PMIC path select)
Battery management	Integrated charge / discharge control
Ethernet	10/100 Mbps
Wireless	AP6236 Wi-Fi and Bluetooth
USB	1x USB OTG, 4x USB 2.0 host, extra USB D+/D-
Display	HDMI, dual LVDS, dual 24-bit RGB, MIPI-DSI, TV/CVBS
Max resolution	1920 x 1080
Camera / video in	CSI, TV-IN
Audio	Line audio, microphone
Serial / fieldbus	UART (incl. debug, ports 2/4/5/7), CAN, RS-485, I2C, SPI
Storage expansion	TF / microSD (SDIO)
Other I/O	IR, VGA, SATA, GPIO / SIP, keypad ADC, touch, backlight
Core module option	A40i-H SOM for custom carrier-board designs

Connector map

Front / left I/O map

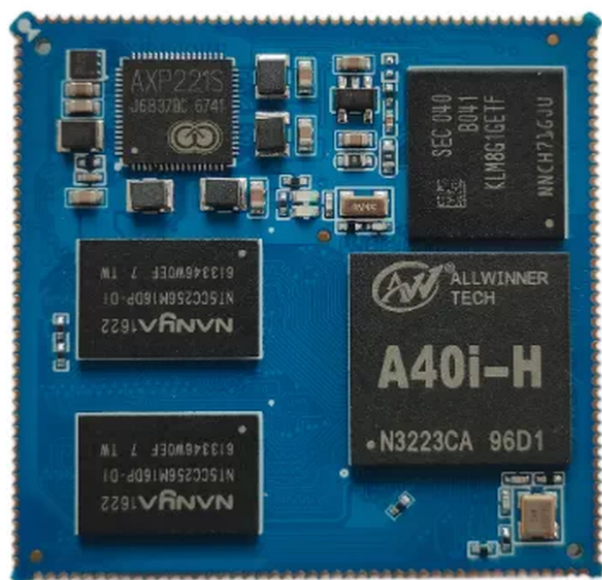


Right-edge I/O map

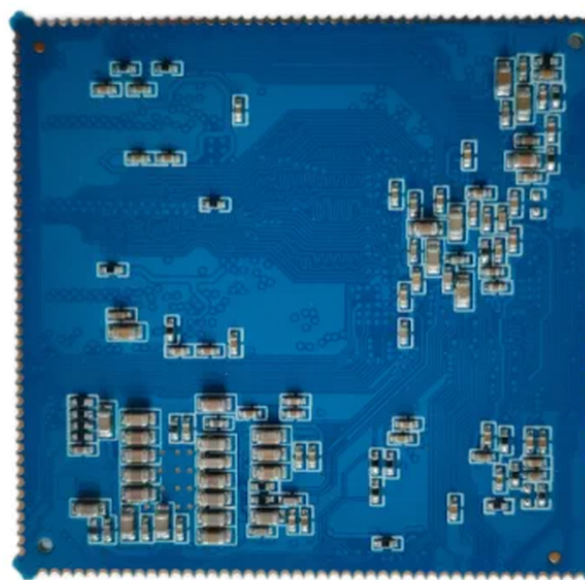


Core module and carrier reverse

A40i-H core module, top and bottom

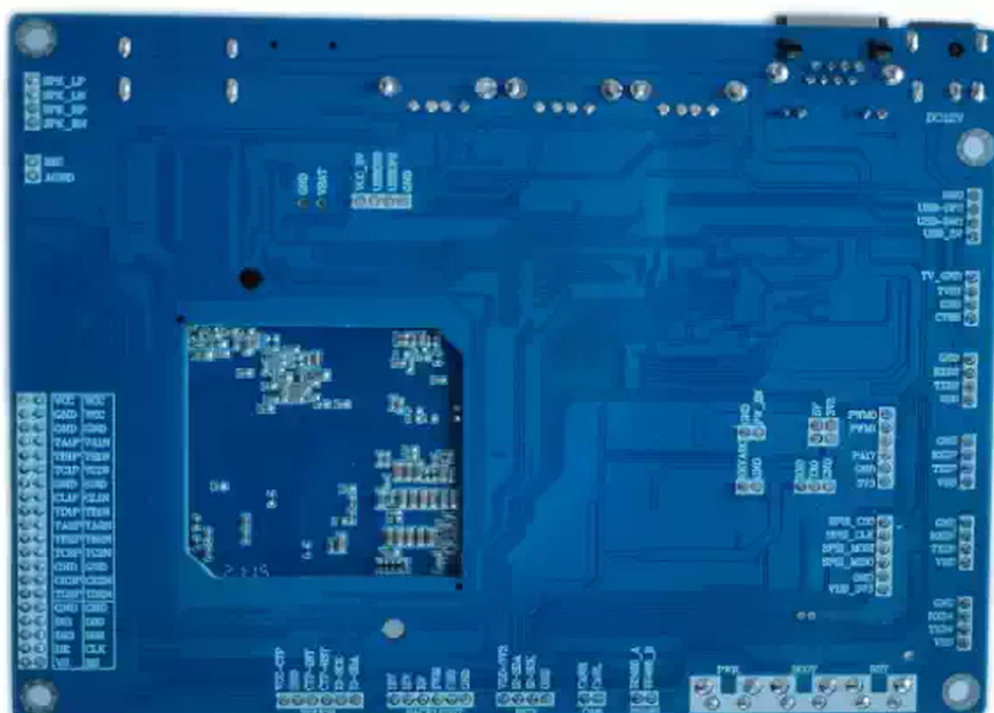


Top: A40i-H, PMIC, DRAM, eMMC



Bottom: high-density carrier pads

SBC rear side



Industrial 4-layer carrier with SOM landing pattern on the reverse.

Markets, files, and ordering notes

Typical applications and deliverables

Digital signage

Media playback, interactive advertising, large LCD walls

Industrial HMI

Android/Linux operator panels with 3D / HD video

Medical / traffic

Instruments, roadside and control-room terminals

Finance / auto

Kiosks, information terminals, in-vehicle devices

Development package included

- User manual
- Schematics
- Source code
- OS images / firmware
- Allwinner original documents
- Tools
- Chip documentation

Custom carrier note

The SOM path assumes basic hardware-design capability. Complete development files are provided so you can design a carrier, or commission a custom board. SMT production is available for companion PCBs.

Ordering and document notes

- Standard item is the A40i full-function SBC. The A40i-H SOM is the compact core for custom carriers.
- Development files include manual, Allwinner docs, schematics, tools, source, chip docs, and OS images.
- Confirm Android 7.1 / Linux image revision and memory configuration before production lock.
- This English datasheet was prepared from the original Chinese product package. Confirm critical ratings before use.
- Document: A40I-DS-EN-001 Rev A · SiCore Dynamics · September 2026