SYSOLUTION

Cloud Internet Control Box M60B-S

Product Specification

Version number： Ver.1.6

Statement

Dear user friend, thanks for choosing SHENZHEN SYSOLUTION TECHNOLOGY CO.,LTD (hereinafter referred to as Sysolution Technology) as your LED advertising equipment control system. The main purpose of this document is to help you quickly understand and use the product. We strive to be precise and reliable when writing the document, and the content may be modified or changed at any time without notice.

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Update Record

No.	Version	Updates	Revision Date
1	Ver.1.0	Initial Release	2022.08.25
2	Ver.1.1	Update content	2023.02.15
3	Ver.1.2	Dimensioning update	2023.05.15
4	Ver.1.3	Accessories update	2023.07.06
5	Ver.1.4	Updated parameter	2023.11.14
6	Ver.1.5	Updated parameter	2024.03.15
7	Ver.1.6	Updated parameter	2024.09.27

The document is subject to change without prior notice.

Product Introduction

Sysolution M60B-S supports -40℃ to 75℃ in high temperature, and supports network backup with gigabit dual network ports. Support access to cloud platform publishing, easy to achieve remote cluster control of display screens；Hardware and software design fully consider user deployment, operation, and maintenance scenarios, making deployment easier, operation more stable, and maintenance more efficient. With safe and stable functional design, save space for users, reduce wiring, can be used for advertising machine, transparent screen, mirror screen, shaped screen, door screen, shopping mall screen. Subway screen, special stage screen and other scenes with load.

M60B-S series adopts industrial-grade quad-core processor, integrates four Cortex-A35, dual-core Mali-G31 GPU, four-core master frequency 1.5GHz, can withstand 85℃ high temperature stable operation, memory support 1GB+8GB (compatible with 2GB+16GB) LPDDR3. The chip can support GSM, WCDMA, TD-SCDMA, EVDO, TDD-LTE, FDD-LTE and other systems, is a highly integrated product.

Function Characteristics

1. Double gigabit network port output, can be used as a backup, to ensure the stability of picture transmission;

2. Eight-factor environmental sensor R68 can be connected through 485 interface to display environmental information without secondary development;

3. Support external Lora synchronization module to ensure multi-screen playback synchronization;

4. Support two remote power off, one control screen body switch, one control street lamp switch;

5. Support the optional 4G module, different countries module model is different, please provide the shipping country;

6. Lora wireless timing multi-screen synchronization;

7. Onboard WiFi module to realize wireless communication; Support AP mode, Station mode;

8. Support secondary development, support cloud platform remote cluster control;

9. Built-in Web Sever, support local web page production, support PC, mobile phone, Pad and other user terminal program release and display control, cluster remote program release and display control, cluster remote monitoring screen state;

10. Powerful processing performance, 4-core processor, 1.5GHz main frequency, support 1080P video hard decoding, 1GB running memory, 8GB internal storage space;

11. When the user terminal connects to the WiFi hotspot provided by the M60B-S, the default
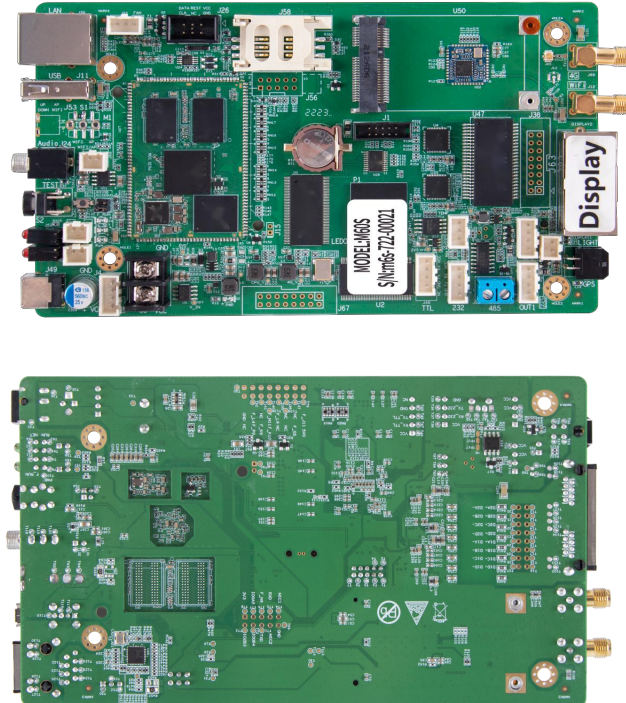
SSID is SN and the default password is 12345678.

12. Support GPS positioning and timing；

13. Can automatically adjust the brightness of the display screen, need supporting brightness sensor；

14. Support to play programs according to the program list；

15. Through the management system can centrally set the timing switch, volume, brightness；

16. Support USB camera；

17. Support NTP precise automatic time calibration；

18. Supporting software: AIPS4.0 cloud publishing platform, PC software LedOK Express, mobile APP: LedOK Lite.

Product Appearance
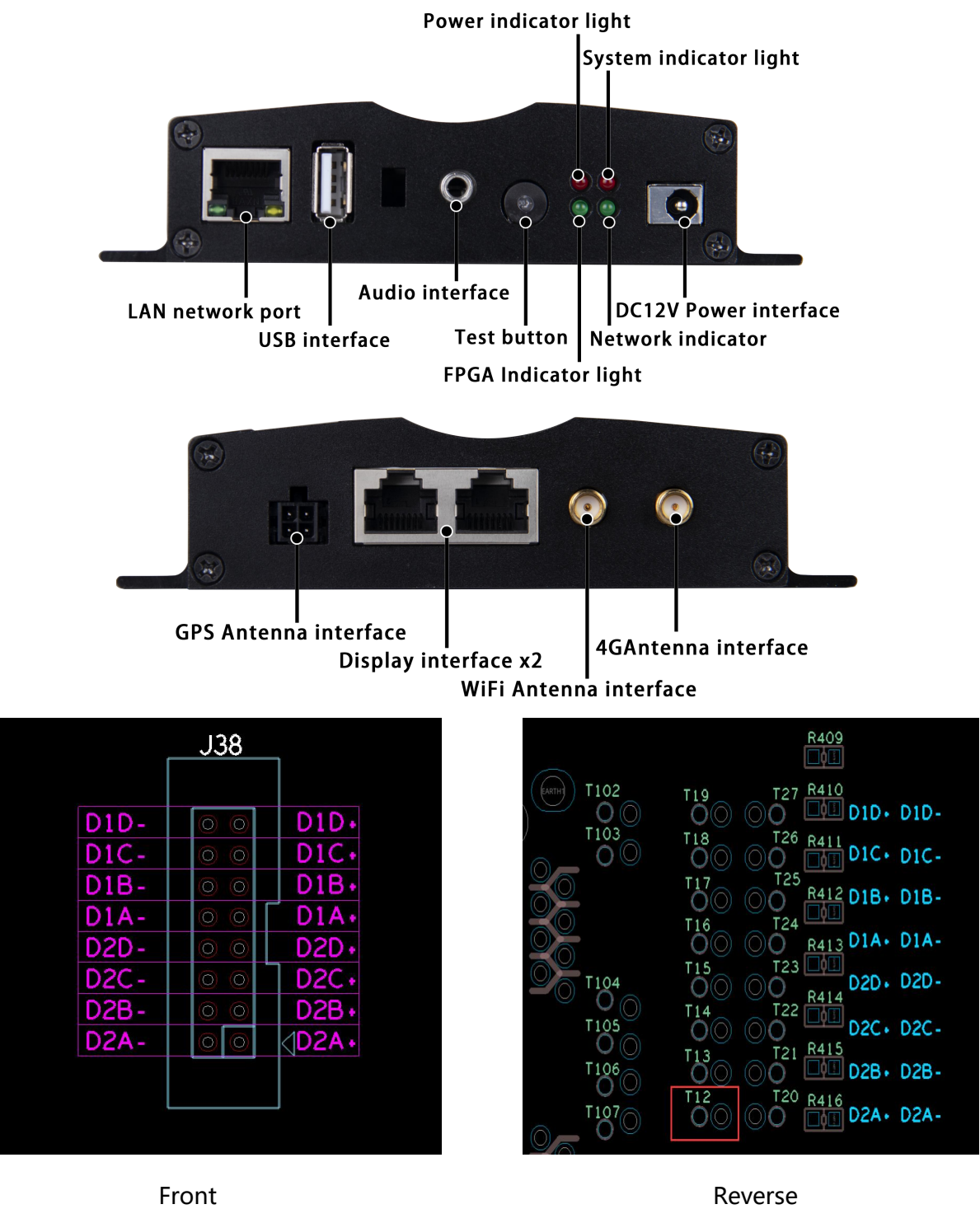
M60B-S with box

M60S Naked card

Product Parameter

Features	Description
Type	M60S(naked card)/M60B-S (player box), optional 4G module, M60B-S-CH China, M60B-S-g global access to foreign countries
Pixel	M60B-S: Dual Ethernet ports,900,000 pixels, maximum width 1920，maximum height 1920，Support discount maximum width 20222,maximum height 1920
Communication mode	Network port、WiFi、USB、Optional 4G module
CPU	Cortex-A35 4 Core main frequency 1.5GHz
GPU	Mali-G31MP2 OpenGL ES3.2, Vulkan 1.0, OpenCL 2.0 Dvalin-2EE
System memory	8GB Emmc+1GB LPDDR3
Operating system	Android 9.0
WiFi	IEEE 802.11b/g/n 2.4G
GPS	GNSS GPS/Beidou/Glonass
Other interface support	1. 1 stereo audio output. 2. 1 USB2.0 ports. 3. Support program import and play on USB disk. 4. One RS485 port, one RS232 port, and one TTL serial port. Connect the luminance sensor, other sensors, and other modules to achieve corresponding functions.
Configuration software	LedOK Express
Support frequency band	
Type	**3G/4G（optional）** **Certificate**

M60B-S-G	-Global FDD-LTE：B1/2/3/4/5/7/8/12/13/ 18/19/20/25/26/28 TDD-LTE：B38/39/40/41 WCDMA：B1/2/4/5/8/6/19 GSM：4 frequencies	Operator certification：Deutsche Telekom/ Verizon/ AT&T/ Sprint/U.S. Cellular/ Telus Mandatory / conformance certification：GCF/ CE/ FCC/ PTCRB/ IC/ Anatel/IFETEL/ SRRC/ NAL/ CCC/ KC/ NCC/ JATE/ TELEC/ RCM/ NBTC/ IMDA/ICASA others：WHQL
M60B-S-NA	-North America FDD-LTE：B2/4/5/7/12/13/17 WCDMA： B2/4/5	Operator certification：AT&T/ T-Mobile/Rogers/ TelusVerizon/AT&T (FirstNet)/T-Mobile/U.S. Cellular/Rogers/ Telus Mandatory / conformance certification：FCC/ IC/ PTCRB Others ： WHQL

M60B-S-EU	-Eurasia （EMEA/Korea/Thailand/India and other Asian countries） FDD-LTE：B1/3/5/7/8/20 TDD-LTE：B38/40/41 WCDMA：B1/5/8 GSM：B3/5/8	Operator certification： Vodafone/Deutsche Telekom/SKT/ Telefónica Mandatory / conformance certification：GCF/ CE/ KC/ NCC/RCM/ FAC/ NBTC/ICASA Others ：WHQL
M60B-S-LA	-Latin America（LA/AU/Newsland） FDD-LTE：B1/3/5/7/8/28 TDD-LTE：B40 WCDMA：B1/2/5/8 GSM：B2/3/5/8	Compulsory Certification：GCF/ FCC/ Anatel/ NCC/RCM Others：WHQL
M60B-S-J	-Japan FDD-LTE：B1/3/8/18/19/26 TDD-LTE：B41 WCDMA：B1/6/8/19	Operator certification：NTT DOCOMO/SoftBank/ KDDI Compulsory Certification：JATE/ TELEC Others ：WHQL

Interface Parameters/Define

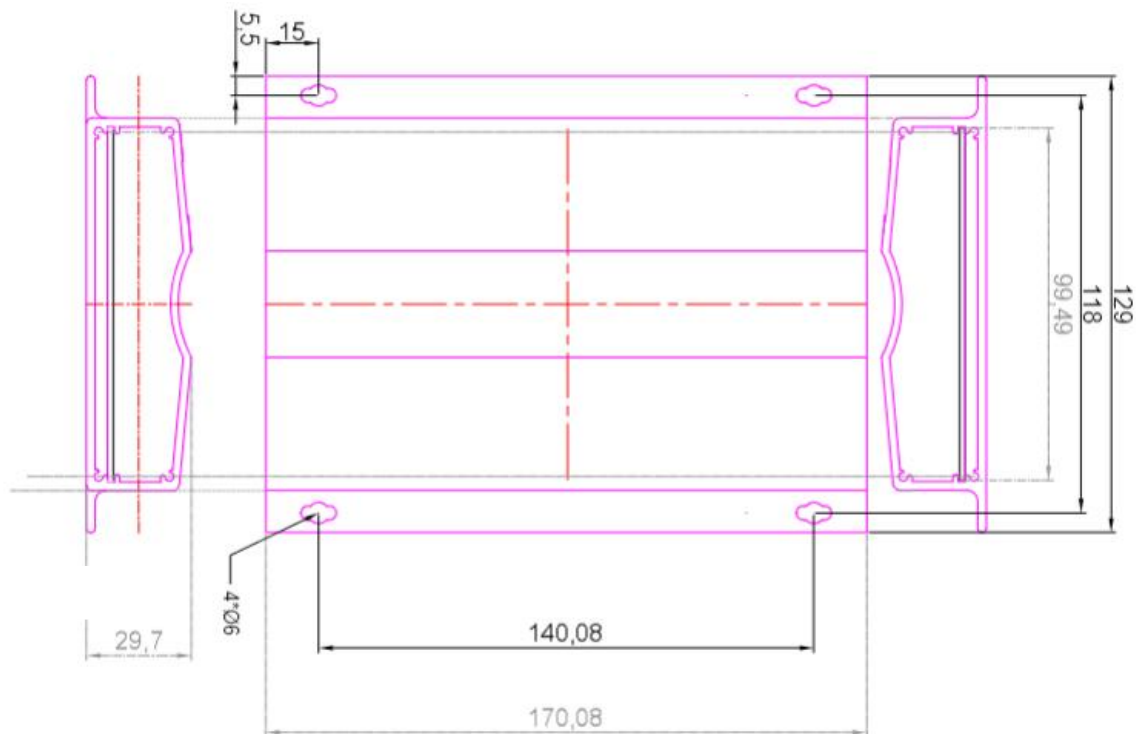M60B-S Product Interface Label (with box)

Power indicator light
System indicator light
LAN network port
Audio interface
USB interface
Test button
FPGA Indicator light
Network indicator
DC12V Power interface

GPS Antenna interface
Display interface x2
WiFi Antenna interface
4GAntenna interface

J38

D1D-   D1D+
D1C-   D1C+
D1B-   D1B+
D1A-   D1A+
D2D-   D2D+
D2C-   D2C+
D2B-   D2B+
D2A-   D2A+

Front   Reverse

Working Condition

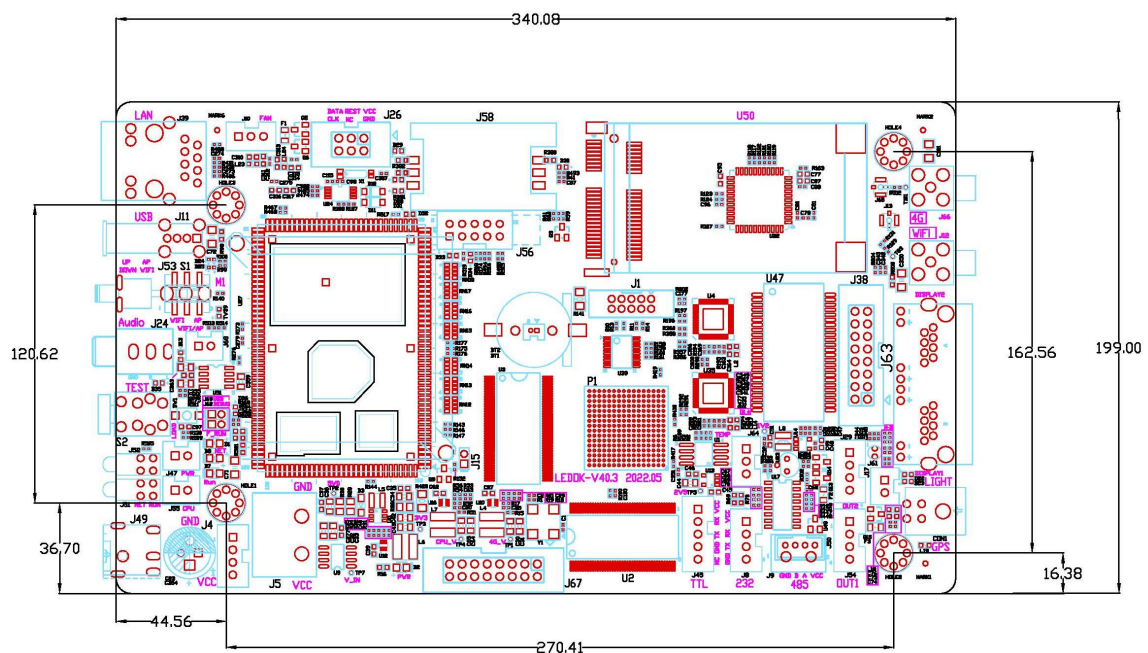| Working parameters	
Working voltage (V)	12V
Working current (A)	0.9A Max：3A
Maximum working power consumption（W）	10
working temperature （℃）	- 40℃～＋75℃
Storage temperature （℃）	-40℃ ～75℃，Recommend 5℃ ～35℃
Humidity of working environment (%)	10%～90%，No condensation

Important Notes:

1. The main control card must use more than 12V5A independent switching power supply, shared screen 5V switching power supply leads to low system voltage, system card failure increased by 50%；

2. High working temperature will cause a sharp decline in power efficiency. If the control card and the module share the same power supply, please ensure that the control card has a stable voltage and a reasonable actual current supply.

Dimensional Drawing

Installation dimensions of control box M60B-S

Installation dimensions of bare card M60S

Unit： mm

Accessories

Standard fittings	Quantity
WiFi antenna	1
4G antenna(4G module has been selected)	1
12V power supply adapter	1

Note:

Factory soldered IoT chip. Using the IoT chip provided by Sysolution Technology does not require any operator whitelist operation and can be used directly. Using self-supplied IoT card requires real name and adding platform related domain name, there are many instability factors.

The advantages of self-contained chip: high temperature resistance, not easy to deform, stable, not easy to fall off, long time use will not age, reasonable tariffs, simple recharge, after-sales guarantee (if you need other specifications accessories, please place an order)

Optional accessories	Accessory function
control box M60B-S with plug brightness sensor RL3B, bare card M60S with 2PIN terminal brightness sensor RL2	Test the brightness of the current environment
control box M60B-S with plug temperature and humidity integrated sensor RTH2B, bare card M60S with 4PIN terminal brightness sensor RTH2	Used to sense the humidity and temperature of the current environment
Optional multi-function card RS5 integrated synchronization module, 5-way voltage detection, opening and closing doors and	Picture timing synchronization, power supply detection

smoke interface (optional RD1 door sensor, RM1 smoke sensor)	
8-in-1 Environmental Sensor R68	Temperature, humidity, illumination, PM2.5, PM10, noise, wind speed, wind direction
Electricity statistics RM1275	Real-time view of daily electricity consumption
G11 GMous Multi-mode	GPS Positioning module
33W Horn *2 RLB1	Two remote broadcasts per screen, real-time shouts
Accessories that can be matched (the above selection, according to the needs of the order under the corresponding model)	

Notes

1. It is strictly forbidden to disassemble and assemble the product by yourself.

2. It is strictly forbidden to plug and unplug the SIM card with power.

3. It is strictly forbidden to use improper voltage for power supply.

4. It is strictly forbidden to share the 200w/5v switching power supply of the screen to supply power to the card, which will lead to unstable system operation and low horn sound.