



55-inch Dual-System Infrared Touch Interactive Flat Panel

Product Specifications

Model: LYB55BSN

Product Overview

This 55-inch dual-system interactive flat panel combines a 4K UHD LED display with high-precision infrared touch technology. It runs Android 16.0 natively and supports an optional OPS PC module for dual-system Windows operation. Designed for smart classrooms, multimedia meeting rooms, lecture halls and training rooms, the panel supports multi-point writing, wireless screen mirroring and multi-source switching.

1. Product Rendering



Product rendering (for reference only; the actual product may vary)



Main system interface

AI features

2. AI Features (Key Highlights)

AI Assistant

Voice assistant, phone calls, speech-to-text, QR-code commands from a phone and image analysis; voice-controlled smart subtitles and online lookup

AI Whiteboard Lasso

Recognises images and suggests search keywords; searches K-12 question banks by image; generates images from sketches or photos

DMS Remote Control

Start a remote session from a web page and operate the panel in real time

AI Large Model + Formula Pen

Natural-language understanding with a 10,000+ command training set; handwritten formulas are recognised, then deleted or inserted into the whiteboard

Whiteboard OCR

Handwriting recognition in most languages, backed by a library of 10,000+ handwritten shape models

Collaborative Whiteboard

Host and guest devices join one room with two-way sync of writing, erasing, lasso selection and chart insertion

Note: DMS remote control and the formula pen require a paid activation.

3. Design Highlights

Chassis

- 1. Aluminium alloy frame with sandblasted anodised finish and a steel rear cover, giving a strong metallic feel and active heat dissipation.
- 2. 4 mm fully tempered anti-shatter glass protects the LCD panel, improves visual quality and enhances the touch experience.
- 3. Low-friction structural design for a smooth, responsive writing feel.
- 4. Front-facing speakers prevent the sound degradation caused by recessed installation.

Interaction and Display

- 5. High-precision infrared touch frame: touch accuracy <1 mm, lift-off height <1 mm.
- 6. Supports simultaneous writing with two 2 mm pen tips or five 3 mm pen tips, and handwriting as small as 1 cm by several users at once.
- 7. 100% two-colour pen recognition (requires the Android whiteboard application).
- 8. No cursive joining when writing Latin script; meets the Promethean standard for UNESCO suppliers.
- 9. Gesture side menu for quick brightness, volume and input-source control; a side navigation bar calls up frequently used shortcuts.
- 10. Direct-lit (DLED) backlight module for stable, durable performance.
- 11. Freehand annotation over any Android or PC image, including live and full-screen annotation.

System and Expansion

- 12. Dual-system architecture: Android 16.0 built in, with an optional OPS PC module for Windows.
- 13. Standard international OPS slot with a one-piece plug-in design for easy upgrades and maintenance; no visible PC cabling on the outside.
- 14. The touch frame switches seamlessly between Android and Windows.
- 15. Multiple themes can be switched at any time, and the boot logo can be customised.
- 16. Built-in screen mirroring, electronic whiteboard and annotation functions.
- 17. Supports WiFi wireless and wired Ethernet connections.
- 18. Front expansion ports: 1x PC-USB, 1x full-channel USB, 1x HDMI input, 1x Type-C and 1x TOUCH USB for external devices.
- 19. Built-in 48 MP camera and an eight-microphone array.

4. Display Specifications

Screen Size	55-inch LED panel (16:9), 1211 x 681.3 mm (H x V)
Panel Type	Brand-new ultra-high-definition LED panel
Resolution	3840 (H) x 2160 (V)
Viewing Angle	178° (H) / 178° (V)
Brightness	400 cd/m²
Contrast Ratio	5000:1
Response Time	8 ms
Colour Depth	16.7M
Scan Rate	4K@30Hz
Backlight	DLED (direct-lit)
Display Output	HDMI
Colour System	PAL, NTSC
Audio Output	Three-dimensional stereo, 2 x 10 W output
Screen Protection	4 mm fully tempered anti-shatter glass

5. Touch Specifications

Touch Integration	Built-in one-piece design, not externally mounted
Touch Technology	Infrared touch recognition (20-point)
Input Method	Finger, touch pen or any tip at least 2 mm in diameter
Cursor Speed	120 points/s
Positioning Accuracy	±1 mm over more than 90% of the touch area
Communication Port	USB Type-B male
Touch Resolution	32767 x 32767
Touch Endurance	Unlimited in theory
Response Time	Auto-recognition by the system, <=15 ms
Driver	Driver-free
Touch Functions	20-point PC touch operation, image zoom in/out and rotation

6. Unit Specifications

Operating System	Android 16.0 (optional OPS PC module for dual-system Windows operation)
Mounting	Wall bracket (standard)
Bracket Hole Spacing	505 x 337 mm
Power Type	Three-core power cord / fixed
Power Connector	IEC C14 socket
Power Consumption	Approx. 181 W
Standby Power	<=0.5 W
Voltage Range	110~240 V / 50~60 Hz
Speakers	2 x 8 ohm 10 W front mid-range speakers
Recessed Mounting Dimensions	1243.8 x 738.9 x 59.9 mm
Recessed Mounting Clearance	20 mm on each side
Operating Environment	-10 °C to 55 °C; 10% RH to 90% RH
Storage Environment	-20 °C to 60 °C; 10% RH to 90% RH
Service Life	>=50,000 hours

7. Mainboard Solution: YS-EM3576

Mainboard Model	YS-EM3576 education display mainboard
SoC	Octa-core 64-bit, 4x Cortex-A72 + 4x Cortex-A53, up to 2.2 GHz
GPU	Mali-G52 MC3
NPU	6 TOPS
Memory	4 GB DDR4 (8 GB / 16 GB optional, expandable to 16 GB)
Storage	32 GB (64 GB / 128 GB / 256 GB optional, expandable to 512 GB)
Video Decoding	8K@30fps H.265 / H.264 / AVS3 / VVC / AV1 / HEVC
Video Encoding	4K@30fps H.265 / H.264
Display Output	VBYONE 4K@60Hz x1; HDMI OUT 1080P x1; DP 4K@60Hz x1; VGA 4K@60Hz x1
Display Input	OPS 4K@60Hz x1; HDMI IN 4K@60Hz x1
Audio Interface	LINE IN x2; LINE OUT x1; SPDIF OUT (coaxial) x1; speaker output up to 4 x 8 ohm 15 W, 2.0/2.1 channel by default, 2.2 channel optional
Network	Gigabit adaptive Ethernet x2 (10/100/1000M); dual-band WiFi 6; Bluetooth 5.4; WiFi AP 2.4G/5G
USB	USB 2.0 x8; USB 3.0 x3; Type-B_OUT x2; Type-C_OTG x1 (65 W fast charging and DP1.4 display input)
Serial Ports	TTL x2; TTL-Debug x1; RS485 x1; DB9 RS232 x1
Expansion	IIC x1; GPIO x4; ADC KEY x8; IR x1; LED x1; TF card slot x1 (optional)
Front Panel Board	YS-MTEXT-V1: USB 2.0 Type-A x3, USB 2.0 TOUCH_OUT x1, USB 2.0 Type-C x1, HDMI IN x1 (4K@60Hz), light sensor x1, IR receiver x1, LED x2, power button x1
Board Dimensions	230.0 x 245.0 x 18.0 mm, mounting holes Ø3.2 mm x6
Board Power	Normal 11.33 W; light sleep 10.30 W; standby 0.2 W

Mainboard specifications are compiled from the YS-EM3576 Product Approval Document V3.4 (Shenzhen Yisheng Technology Co., Ltd.). The actual shipping configuration may vary.

8. Optional OPS PC Configuration

Item	i5 configuration (optional)	i7 configuration (optional)
Processor	Intel Core i5	Intel Core i7
Chipset	Intel chipset	Intel chipset
Memory / Storage	8 GB DDR3 memory / 2.5-inch 256 GB drive	8 GB DDR3 memory / 2.5-inch 256 GB drive
Graphics	Intel HD Graphics	Intel HD Graphics
Input Ports	1x LAN, 3x USB 3.0, 3x USB 2.0, 1x MIC-IN	
Output Ports	1x HDMI, 1x VGA, 1x LINE-OUT	
Operating System	Windows 10 / Windows 11 (optional; the actual version depends on the purchased configuration)	

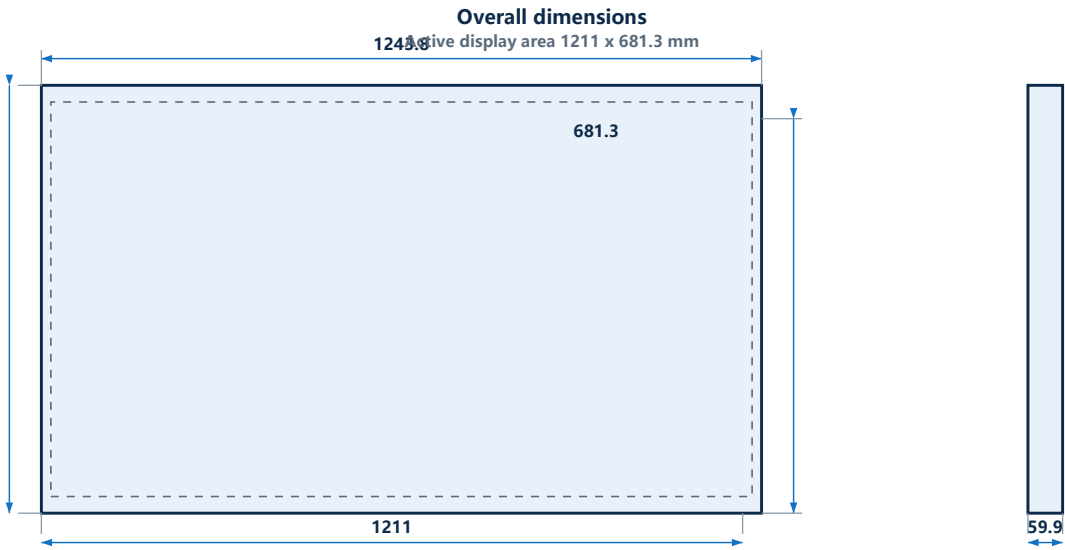
9. Standard Accessories

Standard accessories:

 Touch pen	 Warranty card	 Certificate of conformity
 User manual	 Remote control	 5 m power cord

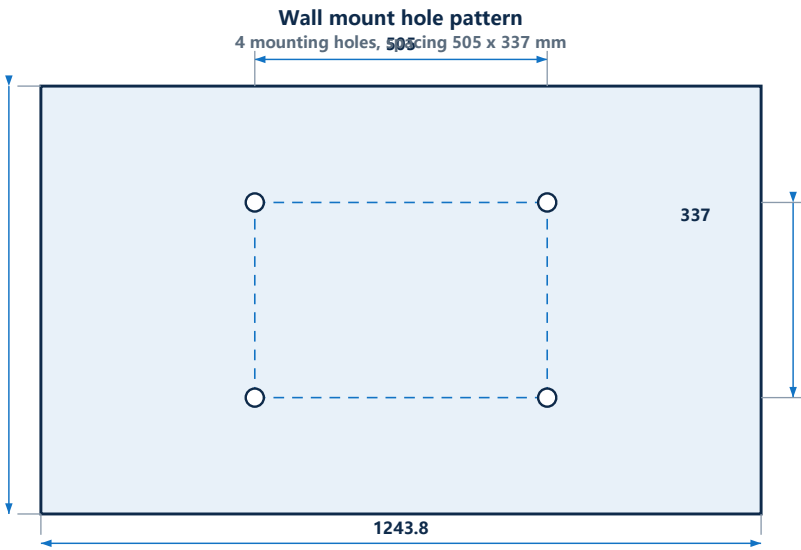
10. Dimensions

738.9



Unit: mm

738.9



Unit: mm

11. Typical Applications

适用行业

更广泛商业应用



企业会议



方案讲解



教案培训



幼儿教育



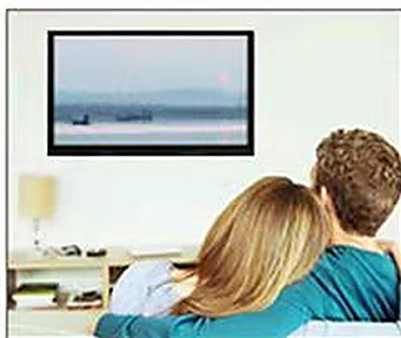
产品展示



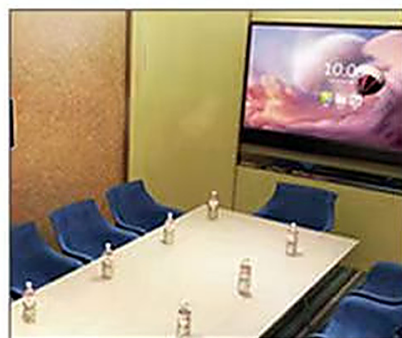
视频会议



教程录制



家庭娱乐



展览展示

Typical applications: smart classrooms, multimedia meeting rooms, training rooms and lecture halls