HW-2U Series 85" Smart Interactive Flat Panel

Model: TSB85BHW | 4K UHD | 40-point infrared touch | Android 16.0 | 6 TOPS NPU



Product image for reference only. Actual product may vary.

1. Product Overview

The TSB85BHW is a 85-inch dual-system interactive flat panel from the HW-2U series. The chassis combines full aluminium profile, fully tempered glass, zinc-alloy corner blocks and die-formed sheet metal. It carries a 4K UHD panel (3840 x 2160, centre brightness >=500 cd/m2) with D-LED backlighting (72% NTSC colour gamut, >=80% backlight uniformity). The YS-EM3576 (Rockchip RK3576) octa-core mainboard integrates a 6 TOPS NPU and runs Android 16.0, with one-touch switching to Windows via the optional OPS module. The panel provides 40-point infrared touch, an 8-array microphone and an optional 48 MP AI camera, plus front-facing TYPE-C / HDMI / TOUCH / USB ports and one-touch screenshot, recording and annotation shortcut keys. Its AI feature set includes an AI assistant, AI large model (10,000+ command training set), formula pen, AI whiteboard lasso (image search / image-to-image), whiteboard OCR (10,000+ handwritten shape model library), DMS remote control and collaborative whiteboard. Wireless casting, NFC casting, whiteboard writing, global annotation, file transfer and split-screen round out the feature set, making it suitable for meeting rooms, classrooms, training rooms and auditoriums.

2. Key Selling Points

1. 4K UHD display — 3840 x 2160 resolution, centre brightness >=500 cd/m2, D-LED backlight, 72% NTSC colour gamut, >=80% backlight uniformity.

2. Full aluminium chassis — Full aluminium profile + fully tempered glass + zinc-alloy corner blocks + die-formed sheet metal, anodised finish, ivory white top and bottom with matte black sides.

3. Flagship Android mainboard — YS-EM3576 (Rockchip RK3576) octa-core 64-bit up to 2.2 GHz with a 6 TOPS NPU, running Android 16.0; one-touch switching between Android and Windows (optional OPS module).

4. 40-point infrared touch — First touch <6 ms, continuous <2 ms, accuracy +/-1 mm, full-speed built-in USB, driver-free; up to 100-point touch when paired with OPS.

5. Flagship audio — Front-firing tweeter and woofer with active noise reduction; 2.0 channel 2x15 W, optional 2.1 channel (2x15 W + 20 W).

6. Smart conference camera — 8-array microphone with 4 structural holes, 10-12 m pickup distance; 13 MP / 48 MP (smart noise reduction) / 48 MP AI (face tracking + sound source localisation) options.

7. Front quick ports — TYPE-C, HDMI, TOUCH, USB x2 - single-cable connection, plug and play.

8. Front physical shortcut keys — Screenshot, recording, annotation, screen lock, volume +/- and power, all reachable in one press.

9. Rich meeting functions — Auto light sensing, remote conferencing, wireless casting, NFC casting, whiteboard writing, child lock, screenshot sharing, global annotation, file transfer and split screen.

10. AI smart features (key highlight) — AI assistant (voice assistant, speech-to-text, image analysis, QR-code commands), AI large model (10,000+ command training set), formula pen, AI whiteboard lasso (image search / image-to-image), whiteboard OCR (10,000+ handwritten shape model library), DMS remote control, collaborative whiteboard, PHET subject tools and whiteboard QR sharing; AI remote control and AI software optional.

11. Anti-glare tempered glass — >=3-4 mm fully tempered glass, Mohs hardness 7H, anti-glare and eye-friendly, durable.

12. Modular design — Hot-pluggable modules with a standard OPS 80-pin interface for simpler maintenance and upgrades.

3. Product Features

Chassis structure	Full aluminium profile + fully tempered glass + zinc-alloy corner blocks + die-formed sheet metal + internal structural parts + plug-in modules + wall bracket (mobile or floor stand optional)
Colour	Profile: anodised, ivory white top/bottom with matte black sides; corner blocks: white zinc-alloy coating; rear cover: black powder-coated sheet metal
Backlight	D-LED; 72% NTSC colour gamut (typical), >=80% backlight uniformity
Display	Brightness: centre >=500 cd/m2; resolution: 4K (3840 x 2160)
Front glass	>=3-4 mm clear / anti-glare fully tempered glass, Mohs hardness 7H
Audio	Front-firing tweeter and woofer: active noise reduction, full bass, clear treble; 2.0 channel 2x15 W (optional 2.1 channel 2x15 W + 20 W)
Built-in camera	8-array microphone + 4 structural holes, 10-12 m pickup; 13 MP / 48 MP (smart noise reduction) / 48 MP AI (face tracking + sound source localisation) options
Supported systems	Android 16.0 / Windows (OPS module) / one-touch dual-system switching
Front ports	TYPE-C, HDMI, TOUCH, USB x2
Front keys	Screenshot, recording, annotation, screen lock, volume -, volume +, power
Functions	Auto light sensing, remote conferencing, wireless casting, NFC casting, whiteboard writing, child lock, screenshot sharing, global annotation, file transfer, split screen
Optional	AI remote control, AI software (voice assistant, camera, conversation, annotation, screenshot)

4. Touch System

Sensing type	Infrared, 40-point touch (up to 100-point with OPS)
Response speed	First touch <6 ms, continuous <2 ms
Connection	Full-speed built-in USB (driver-free)
Accuracy	+/-1 mm
Surface protection	>=3-4 mm anti-glare fully tempered glass (standard), Mohs hardness 7H

5. Android System

Mainboard	YS-EM3576 (Rockchip RK3576)
Operating system	Android 16.0
CPU	Octa-core 64-bit: 4 x Cortex-A72 + 4 x Cortex-A53, up to 2.2 GHz
GPU	Mali-G52 MC3
NPU	6 TOPS
Memory	4 GB / 8 GB / 16 GB (expandable to 16 GB)
Storage	64 GB / 128 GB / 256 GB (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	1 x VBYONE (4K@60Hz), 1 x HDMI OUT (1080P), 1 x DP (4K@60Hz), 1 x VGA (4K@60Hz)
Display input	1 x OPS (4K@60Hz), 1 x HDMI IN (4K@60Hz), 1 x FRONT (USB / HDMI IN expandable)
Audio interface	2 x LINE IN, 1 x LINE OUT, 1 x SPDIF OUT; speaker output up to 4 x 8 ohm 15 W, 2.0 / 2.1 channel default, 2.2 channel optional
Network	Dual-band WiFi 6 + BT 5.4; WiFi AP 2.4G/5G; 10/100/1000M adaptive Ethernet
USB	8 x USB 2.0, 3 x USB 3.0, 2 x Type-B OUT, 1 x Type-C OTG (65 W fast charging and DP1.4 display input)
Serial	2 x TTL, 1 x TTL-Debug, 1 x RS485, 1 x DB9 RS232
Expansion	1 x IIC, 4 x GPIO, 8 x ADC KEY, 1 x IR, 1 x LED
Mainboard size	230.0 x 245.0 x 18.0 mm, 6 x screw holes dia. 3.2 mm
Mainboard power	Normal 11.33 W; light sleep 10.30 W; standby 0.2 W

6. AI Features (core highlight)

AI assistant	Voice assistant, phone calls, speech-to-text, settings, QR-code commands from a phone, image analysis; voice control of smart subtitles and online queries
AI large model	Natural language understanding with an added 10,000+ command training set
Formula pen	Automatic recognition of handwritten formulas, with deletion and insertion into the whiteboard (paid activation)
DMS remote control	Start a remote session from a web page and operate the panel in real time (paid activation)
Collaborative whiteboard	Host device creates a room, guest devices join; covers writing, erasing, lasso selection, chart insertion and two-way sync
AI whiteboard lasso	Recognises images and suggests search keywords; image search (K-12 question bank); sketch / image regeneration (image-to-image)
Whiteboard OCR	Multi-language handwriting recognition with a built-in 10,000+ handwritten shape model library
Subject tools	PHET subjects with a rich library of experiment teaching resources
Custom menu	Centre operation menu is customisable with up to 8 custom tools
QR sharing	Handwriting OCR, custom layer selection and encrypted sharing
Annotation	Multi-page annotation with a layer list and freely switchable annotation states
Paper eye-care mode	Reduces blue light to protect eyesight
Fingerprint / NFC	Jump to a specific app or function via the fingerprint module; NFC function is customisable
Pen-lift wake	Removing the stylus from the lift module opens the whiteboard automatically
Gesture control	Remote operation by gesture
Casting software	Switchable casting software (Feitu / Baoze / Yixiang)

7. PC System (OPS module, optional)

Design	Modular pull-in design; the PC module inserts securely into the panel; standard OPS 80-pin interface
Operating system	Windows 7 / 10 / 11
CPU	Intel Core i5 (i7 optional)
Memory	8 GB / 16 GB / 32 GB
Storage	128 GB / 256 GB / 512 GB / 1 TB SSD
Graphics	Intel HD Graphics, supports 3840 x 2160
Software	Whiteboard software supports editing, annotating and modifying WORD, EXCEL, PowerPoint and PDF documents while preserving original strokes; supports lesson recording

8. Operating Environment

Operating temperature	-10 to +50 C
Storage temperature	-20 to +60 C
Operating humidity	10% RH to 90% RH
Storage humidity	10% RH to 90% RH

9. Product Parameters

Panel size	85 inch
Model	TSB85BHW
Display area (mm)	1871 x 1052
Outline dimensions (mm)	1954 x 1190 x 106
Packaging, Chinese carton (mm)	2100 x 1285 x 215
Packaging, English carton (mm)	2065 x 1285 x 188
VESA mounting (mm)	800 x 400
Depth incl. bracket (mm)	140
Net weight (kg)	52
Gross weight (kg)	68
Service life (h)	>=50,000
Input voltage (V)	AC 90-264 (50/60 Hz)
Power consumption (W)	230
Supported OPS power (W)	90

10. Standard and Optional Accessories

Standard	Power cord, magnetic stylus x1, remote control, WiFi antenna, user manual, wall bracket
Optional	Casting dongle, presenter, mobile stand, HD cable, touch USB cable

TANGSHI Display | www.tangshilcd.com | lyaik@163.com | WhatsApp +86 134 2205 9082