# ■ Product Specification

| Model No. | TH-80LFB70 | TH-65LFB70 | TH-50LFB70 | TH-80LFC70 | TH-65LFC70 | TH-50LFC70 |
|---|---|---|---|---|---|---|
| **DISPLAY PANEL** | | | | | | |
| Screen Size (Diagonal) | 80-inch (2,032 mm) | 65-inch (1,638 mm) | 50-inch (1,257 mm) | 80-inch (2,032 mm) | 65-inch (1,638 mm) | 50-inch (1,257 mm) |
| Panel Type | LCD VA panel/E-LED | | | | | |
| Aspect Ratio | 16:9 | | | | | |
| Effective Display Area (WxH) | 1,771 x 996 mm (69.7˝ x 39.2˝) | 1,428 x 803 mm (56.2˝ x 31.6˝) | 1,095 x 616 mm (43.1˝ x 24.2˝) | 1,771 x 996 mm (69.7˝ x 39.2˝) | 1,428 x 803 mm (56.2˝ x 31.6˝) | 1,095 x 616 mm (43.1˝ x 24.2˝) |
| Number of Pixels (HxV) | 1,920 x 1,080 pixel | | | | | |
| Brightness | 350 cd/m² | | | | | |
| Contrast Ratio | 5,000:1 | 4,000:1 | 5,000:1 | 5,000:1 | 4,000:1 | 5,000:1 |
| Response Time | 4 ms (G to G) | 6.5 ms (G to G) | 6.5 ms (G to G) | 4 ms (G to G) | 6.5 ms (G to G) | 6.5 ms (G to G) |
| Viewing Angle (Horizontal/Vertical) | 176 degrees/176 degrees | 178 degrees/178 degrees | 176 degrees/176 degrees | 176 degrees/176 degrees | 178 degrees/178 degrees | 176 degrees/176 degrees |
| Panel Life* | Approx. 50,000 hours* | Approx. 50,000 hours* | Approx. 30,000 hours* | Approx. 50,000 hours* | Approx. 50,000 hours* | Approx. 30,000 hours* |

*Approximate time until panel brightness decreases to half of its original value.

| | | | |
|---|---|---|---|
| **TOUCH PANEL** | | | |
| Detection Method | Infrared blocking detection method | | N/A |
| PC Connection Port | USB (3.0 compliant) | | N/A |

| | |
|---|---|
| **CONNECTION TERMINAL** | |
| VIDEO IN | BNC x 1 |
| AUDIO IN (L/R) | Stereo mini jack x 1 (Shared with COMPONENT/RGB IN) |
| HDMI IN | HDMI TYPE A connector x 2 |
| COMPONENT/RGB IN | BNC x 1 set |
| AUDIO IN (L/R) | Stereo mini jack x 1 (Shared with VIDEO IN) |
| DVI-D IN | DVI-D 24-pin (digital) x 1 |
| AUDIO IN (L/R) | Stereo mini jack x 1 (Shared with PC IN) |
| PC IN | Mini D-sub 15-pin (female) x 1, Plug & Play (VESA DDC 2B) |
| AUDIO IN (L/R) | Stereo mini jack x 1 (Shared with DVI-D IN) |
| PC OUT | Mini D-sub 15-pin x 1 |
| Function Slot | SLOT 2.0 x 1 |
| USB A | USB TYPE A connector x 1 (For Memory Viewer) |

| | | |
|---|---|---|
| USB B | USB TYPE B connector x 1 (For Touch Panel) | N/A |
| External Speaker | 8 Ω, 20 W [10 W + 10 W] (10% THD) | |

| | |
|---|---|
| **CONTROL** | |
| SERIAL | D-sub 9-pin (male) x 1, RS-232C compatible |
| DIGITAL LINK | RJ45 x 1 (Shared with LAN) |
| LAN | RJ45 x 1, 100 BASE-TX, compatible with PJLink™ (Shared with DIGITAL LINK) |

| | | | | | | |
|---|---|---|---|---|---|---|
| **AUDIO/ELECTRICAL** | | | | | | |
| Built-in Speaker | 20 W [10 W + 10 W] | | | | | |
| Power Requirements | 110—127 V AC, 50/60 Hz, 220—240 V AC, 50/60 Hz | | | | | |
| Power Consumption | 350 W | 215 W | 140 W | 345 W | 210 W | 135 W |
| Power Off Condition | Approx. 0.3 W | | | | | |
| Standby Condition | Approx. 0.5 W | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **MECHANICAL** | | | | | | |
| Dimensions (WxHxD) | 1,868 x 1,093 x 104 mm (73.6˝ x 43.1˝ x 4.1˝) | 1,517 x 892 x 106 mm (59.8˝ x 35.2˝ x 4.2˝) | 1,185 x 705 x 103 mm (46.7˝ x 27.8˝ x 4.1˝) | 1,868 x 1,093 x 99 mm (73.6˝ x 43.1˝ x 3.9˝) | 1,484 x 859 x 97 mm (58.5˝ x 33.8˝ x 3.9˝) | 1,151 x 672 x 94 mm (45.4˝ x 26.5˝ x 3.7˝) |
| Bezel Width | Approx. 43 mm (1.7˝) | Approx. 39 mm (1.6˝) | Approx. 39 mm (1.6˝) | Approx. 45 mm (1.8˝) | Approx. 25 mm (0.98˝) | Approx. 25 mm (0.98˝) |
| Weight | Approx. 84 kg/185.2 lbs. | Approx. 58 kg/127.9 lbs. | Approx. 33 kg/72.8 lbs. | Approx. 83 kg/183.0 lbs. | Approx. 55 kg/121.3 lbs. | Approx. 30 kg/66.2 lbs. |
| Cabinet Material/Color | Aluminum/Black | | | | | |
| Pitch for Wall-Hanging | VESA compliant 400 x 400 mm (15.8˝ x 15.8˝) | 684 x 300 mm (27.0˝ x 11.9˝) | 400 x 300 mm (15.8˝ x 11.9˝) | VESA compliant 400 x 400 mm (15.8˝ x 15.8˝) | 684 x 300 mm (27.0˝ x 11.9˝) | 400 x 300 mm (15.8˝ x 11.9˝) |
| Protective Glass Thickness | Approx. 4 mm (0.16˝)/Anti-Glare | Approx. 3.2 mm (0.13˝)/Anti-Glare | Approx. 2.5 mm (0.10˝)/Anti-Glare | Approx. 4 mm (0.16˝)/Anti-Glare | Approx. 3.2 mm (0.13˝)/Anti-Glare | Approx. 2.5 mm (0.10˝)/Anti-Glare |

| | |
|---|---|
| **ENVIRONMENTAL** | |
| Operating Environment | Temperature: 0°C to 40°C (32°F to 104°F) Humidity: 20% to 80% (Non-condensation) |
| Storage Environment | Temperature: -20°C to 60°C (-4°F to 140°F) Humidity: 20% to 80% (Non-condensation) |

| | | |
|---|---|---|
| Included Accessories | AC cord, remote control transmitter, batteries for the remote control transmitter (AA size x 2), software CD-ROM (Whiteboard Software/Wireless Manager Software/Operating Instructions) x 1, USB cable x 1, Touch Pen x 4 (TH-80LFB70), Touch Pen x 2 (TH-65LFB70/50LFB70), Eraser x 1, Pen Stand, operating instruction book | AC cord, remote control transmitter, batteries for the remote control transmitter (AA size x 2), software CD-ROM (Wireless Manager Software/Operating Instructions) x 1, operating instruction book |

| | |
|---|---|
| **BUILT-IN WIRELESS LAN FUNCTION** | |
| Standard | 2.4 GHz: IEEE802.11b/g/n, 5.0 GHz: IEEE802.11a/n |
| Infrastructure Mode | WPA2-PSK (TKIP/AES), WPA-PSK (TKIP/AES), WEP (64-bit/128-bit), WPA-EAP/WPA2-EAP (PEAP [MS-CHAPv2/GTC]/EAP-FAST [MS-CHAPv2/GTC]/EAP-TTLS [MD5/MS-CHAPv2], 128-bit/64-bit) |

---

# Panasonic

## LFB70 Series
### Multi-touch Screen LED Displays

## LFC70 Series
### Network LED Displays

# New Ideas for Creative Communication



**LED**

| Multi-touch Screen LED Displays | Network LED Displays |
|---|---|
| 80-inch TH-**80LFB70** | 80-inch TH-**80LFC70** |
| 65-inch TH-**65LFB70** | 65-inch TH-**65LFC70** |
| 50-inch TH-**50LFB70** | 50-inch TH-**50LFC70** |

**For more information about Panasonic professional displays, please visit:**
Global Web Site – **panasonic.net/prodisplays**
YouTube – **www.youtube.com/PanasonicProDisplay**

**All information included here is valid as of May 2014.**

CT14-G01PF-LFB/LFC Printed in Japan.

## Work Smarter

The LFB70 Series of professional Full HD displays incorporate intuitive touchscreen technology, fully interactive whiteboard functionality, and the very latest in wireless connectivity to allow you and your colleagues to work more closely as a team. These displays are loaded with the next-generation technology you need to be more productive, more efficient, and to achieve better quality results.

# LFB70 Series

Multi-touch Screen LED Display
80-inch / 65-inch / 50-inch

### Simple Touch Control

Progress smoothly through your presentation using familiar touchscreen gestures to turn pages, zoom in and out content, and navigate through multimedia functions without need of a remote control. Whether using a fingertip to cue content for a presentation, or the stylus pen to jot down notes for the group, you'll be delighted at how this user-friendly touch interface makes complex tasks simple.

### Work Together On Screen

Built-in whiteboard software lets you turn on the display and start work right away—no need to connect a PC. Up to four people can write at a time, and you can save your pages and email them directly to anyone who missed the meeting. Notes can be made on almost anything, from video and photos to PowerPoint® and PDF documents, and then saved as an image file—simply brilliant for the office or classroom.

### More Productive Remote Meetings

With vibrant Full HD resolution and a wide display area, remote videoconference participants seem like they're in the room with you. Team members in remote locations can write detailed notes onto shared documents and solve problems in real time, just as they would when working together in the office. These powerful web and videoconferencing capabilities reduce the need for travel, saving your organization time and money.

---

## Boost Your Performance

Panasonic professional LED displays are loaded with features to make working, communicating, and getting results easy. From the touch-panel and whiteboard functions of the LFB70 Series—which allow you to get to work instantly, writing on and saving documents, with no need for a connected PC—to the ultra-flexible wireless features of the LFC70 Series, these displays give you a genuine advantage by letting you work smarter, faster, and more effectively.

---

## Share and Collaborate

Make it easier for your team to share media content from smartphone, PC, and tablet on one of the industry's most advanced big-screen displays. A number of next-generation wireless technologies are included to support a wide variety of devices and media formats, so all members of your team can contribute to the flow of ideas in the office, classroom, or conference center.

# LFC70 Series

Network LED Display
80-inch / 65-inch / 50-inch

### Wireless Options for Mobile and PC

It's simple to get documents from different network-attached devices—such as notebooks, smartphones, and tablets—onto the big screen. These pro displays are compatible with Miracast™ (which doesn't require any software to mirror certain content) as well as dedicated apps that get the media you want up and on screen faster, with no cables or complicated setup.
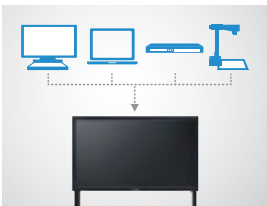
### Better Connectivity and Flexibility

With Panasonic's DIGITAL LINK, based on HDBaseT™ technology, and SLOT2.0 (which allows for easy installation and removal of customized terminal boards or a modular PC), it costs less money and time to set up the display exactly to your requirements. Compatibility with leading automation systems and switching devices lets you seamlessly integrate these displays into an existing A/V network.
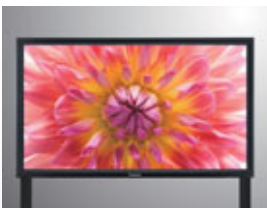
### Superior Imaging Quality

Panasonic professional LED panels combine the best of both worlds—brilliant Full HD imaging performance and the remarkable efficiency of edge-lighting. Compared with conventional backlit screens, Panasonic edge-lit LED displays are able to deliver bright, punchy images while consuming less energy. Both the LFB70 and LFC70 produce an impressive 350 cd/m² of brightness for vividly clear pictures.

World Energy Outlook

# TOUCH

A brilliant Full HD touchscreen absolutely anyone can use.

# CONNECT

A display that makes team communication more efficient and effective.

---

## Create and Share On the Built-in Whiteboard          `LFB70`

### Quick-Start Whiteboard
Start working on the built-in whiteboard instantly—just switch on the display. You can draw straight or freehand lines, and change line thickness, color, and background using the tool palette. To switch input sources, picture settings, and volume, swipe the edge of the screen to display the main menu—no remote control necessary.

**Power On** → **Start Whiteboard**

ABCDEFG
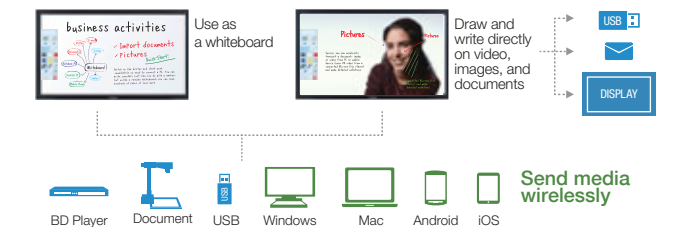Whiteboard
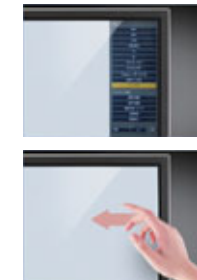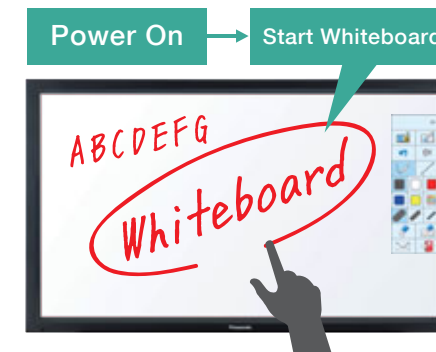
Swipe screen to display menu

### Easy and Intuitive Operation
Four-point multi-touch functionality makes it easy to resize and move graphics around on your documents. The included Stylus Pen and Eraser accessory is a convenient way to write large amounts of text. So simple to use, even for children and less technically experienced presenters.

### Write and Draw On Media from External Devices
You can write on almost any media you like, including video and still images. Swipe to bring up the main menu, display content from your external device, and start making notes. These dynamic multi-media capabilities make it easy for teams to share information and contribute ideas.

Use as a whiteboard

Draw and write directly on video, images, and documents

USB
DISPLAY

**Send media wirelessly**

BD Player · Document camera · USB · Windows · Mac · Android · iOS

### Easy Save and Share
Produce up to 100 pages of work on the whiteboard and save them to the built-in memory*1 or USB thumb drive as JPEG image files. You can also copy data stored on internal memory to a USB drive, or send your pages as image files directly from the screen via email*2. Keeping everyone in the loop is simple.

Save to built-in memory — DISPLAY
Save to USB memory — USB
Send via email

---
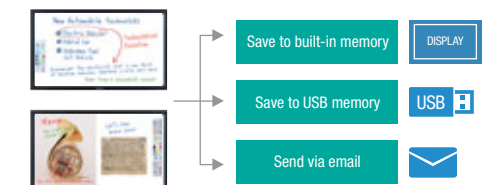
### Connect a Variety of Devices

Connect your video camera and write over the captured footage. You can also pause on a desired frame, take a screenshot, and make notes on the image. Perfect for a variety of applications, from strategic planning to video lectures.

Video Camera
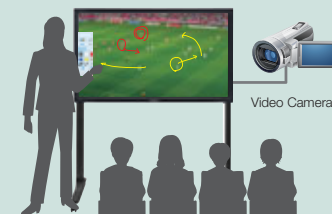
View documents and photos stored on USB memory quickly. Just plug in your thumb drive and tap on the USB Memory Viewer app. No time wasted, and a deeper, more effective presentation.

USB Memory
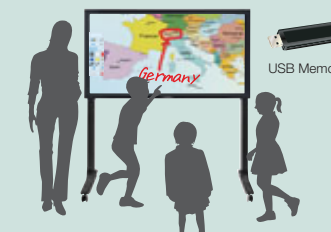
To display hard-copy materials such as textbook pages, connect your document camera via the appropriate display input. High resolution, brightness, and contrast make for clear and comfortable viewing of text and diagrams.

Document Camera

---
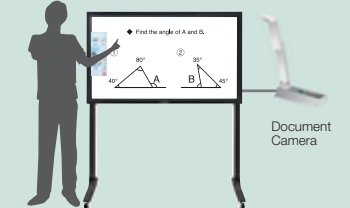
### Whiteboard Software for PC Extends Your Capabilities
Whiteboard Software for PC offers extra functionality for power users. As well as adding extra presentation tools and a PowerPoint® Link mode to easily import and modify PowerPoint files, the application's six-point touch interface lets up to six people write and draw simultaneously. Other highlights include:

- Three modes of operation*3 (Whiteboard Function, PowerPoint® Link Mode, and Desktop Operation)
- More presentation tools*3 (Loupe, Spotlight, Shade, Fade-out Marker)
- Screen video recorder function*3
- Image capture
- Image import (JPEG, PNG, BMP)
- Start-up from external memory*3

HDMI or VGA Cable
USB Cable

Easy Whiteboard Software
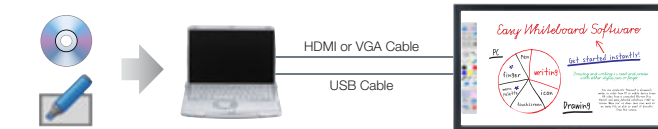
Whiteboard Software Version 5 for Windows
Supported by Windows® XP, Windows Vista®, Windows® 7, Windows® 8 and Windows® 8.1

Whiteboard Software Version 1 for Macintosh
Supported by Mac OS X v10.6, v10.7, v10.8, v10.9

For the latest software, please visit our global website: http://panasonic.net/prodisplays/

Close menu
Change mode
Change page
Scroll
Zoom in/Zoom out
Undo/Redo
Insert text
Straight line/Assist shape drawing
Select object
Marker
Highlighter
Color
Other colors/Select background
Line width
Eraser
Erase all
Multi mode
Single mode
Settings
Utilities
File operation
Exit application

Windows Version
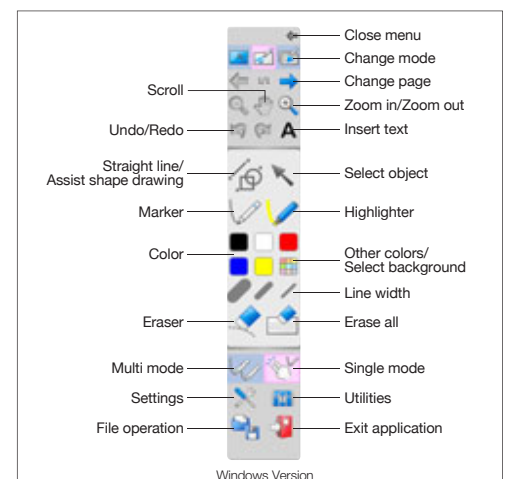
# Wireless and USB Connectivity

## Instant Playback of Content via USB

Playing back Full HD video, still images, and digital documents from USB storage devices couldn't be easier. Just insert the memory device into the display's USB port and commence your presentation without having to first connect a PC. The USB Memory Viewer app enables image (JPEG, BMP) and video (WMV, AVI, MOV, MP4, MPG) selection from handy thumbnail previews.

## Miracast™ for Instant Wireless Sharing

Transmit documents, Full HD video, images, and audio from compatible Android devices and Windows PCs to the big screen with Miracast™—the latest wireless standard that doesn't require software or complicated setup. With no cables, fast connection, and very high bandwidth to enable display of 1080p video at up to 60 frames per second, Miracast™ is a powerful tool for sharing media without cable hassles.

For list of tested Miracast™-compatible devices, please visit our global website: http://panasonic.net/prodisplays/

## Panasonic Wireless Solution with Multi-Screen Functions

### Easy Wireless Display of PC Screen

PC users can use Wireless Manager ME 6.0.2*⁴ software to wirelessly transmit content from their computer screen (including audio*⁵) to LFB70 and LFC70 series displays. Simultaneous transmission from up to 16 devices is enabled in Multi-Screen Mode, while one PC can also send content to up to eight displays.

### Save Time with Easy Wireless Stick

The optional Easy Wireless Stick (ET-UW100*⁶) incorporates built-in wireless application software and a wireless LAN adapter. Connect it to your laptop's USB port and send your PC screen to the display wirelessly, with no need to install software. This feature is useful for allowing visiting clients or students to share content when time is limited.

### Wireless Apps for iOS

The Panasonic Wireless Projector for iOS app enables wireless transmission of media from iPad®, iPhone®, and iPod touch®. Share PowerPoint® documents and PDF files quickly and conveniently on the big screen. The app also supports simultaneous display from multiple devices using Multi Mode.

4-Window Multi

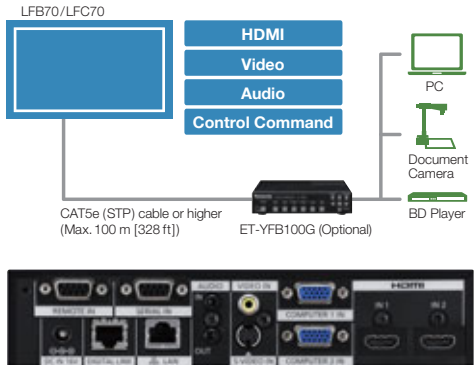4-Window Index

16-Window Index

# System Flexibility

## Simplified DIGITAL LINK Connection

DIGITAL LINK transmits uncompressed Full HD video, audio, and control commands through a single CAT5e cable for up to 100 m (328 ft). Connect all your source devices to an optional Digital Interface Box (ET-YFB100G) and use just one cable to link your display. This simplifies installation and saves on cabling costs.

## Compatible with Other Brands' Peripheral Devices

Based on the HDBaseT™ transmission standard formulated by HDBaseT Alliance, DIGITAL LINK is adapted to include specialized proprietary functions. These enable the connection of the Digital Interface Box (ET-YFB100G) as well as other brands' peripheral devices supporting the same transmission standard.

For list of tested compatible peripheral devices, please visit our global website: http://panasonic.net/prodisplays/

LFB70/LFC70

- HDMI
- Video
- Audio
- Control Command

PC
Document Camera
BD Player

CAT5e (STP) cable or higher (Max. 100 m [328 ft])  ET-YFB100G (Optional)

Terminal layout for ET-YFB100G

## Expand and Customize with SLOT2.0

SLOT2.0 allows you to add the functionality and connectivity needed for almost any application. Optional function boards including HDMI and HD-SDI can be mounted to support a customized content distribution system. The optional Plug-in PC (PLUGTHA54)*⁷, meanwhile, can be configured for easy access to web conferencing systems and Whiteboard Software.

## Supports Crestron Connected™ Software

The displays' wired LAN terminal is compatible with Crestron Connected automation and control software. You can monitor and control display devices in your network remotely from a single PC via Ethernet.

## Connect a Second Display

Use a VGA cable to mirror*⁸ content on a second display or projector—even the notes you might add to documents, images, or video during your presentation. This dual-display capability makes both the LFB70 and LFC70 series ideal for use in larger venues.

Supported Inputs: HDMI/DVI/PC/Memory Viewer/Whiteboard

## Compliance with PJLink™

Compliance with PJLink Class 1 enables remote control and monitoring of LFB70 and LFC70 series displays within a wider network of PJLink-compatible AV components of any brand. Incorporating these displays into an existing system via the local network is seamless and cost effective.

# Loaded with High-Value Features

## Picture-in-Picture Capability

Picture-in-Picture functions offer the versatility to display images from multiple input sources on the same screen. Documents, videos, and stills can be displayed full-screen with a sub-window showing content from a different source.

Note: Writing and drawing on sub screen in not available. Miracast™ and Memory Viewer do not support Picture-in-Picture capability. The following input combinations are not available:
- HDMI, DVI, DIGITAL LINK, Component, and PC
- Whiteboard and Panasonic Application

**Picture-in-Picture Mode**
Ideal for web conferencing, you can display meeting documents on the main screen and live video footage from a remote location in the sub-window.

**Picture-in-Whiteboard Mode**
Display media in a window on the whiteboard interface and make notes on the blank space surrounding it.

## Built-in Speaker

Both the LFB70 and LFC70 series feature a pair of built-in 20 W [10 W + 10 W] speakers for audio playback for audio-video presentations.

## Toughened Non-Reflective Glass Provides Clear Visibility

The non-reflective screen surface makes content easy to see in bright ambient illumination. Toughened scratch-resistant glass is designed for touch operation while enhancing the level of impact protection—perfect for classrooms or busy meeting rooms.

## ■ Optional Accessories

| Mobile Stand | | Wall-Hanging Bracket | | Pedestal | Ceiling Bracket | DIGITAL LINK Interface Box | Easy Wireless Stick |
|---|---|---|---|---|---|---|---|
| For 80-inch **TY-ST80LF70** | For 50-inch **TY-ST50PB2** **TY-ST58PF20** | For 80-inch **TY-WK70PV50 (Vertical)** | For 50-inch **TY-WK42PV20 (Vertical)** **TY-WK42PR20 (Angled)** | For 80-inch/65-inch **TY-ST65P20** | For 50-inch **TY-CE42PS20** | **ET-YFB100G** | **ET-UW100**\*⁶ |
| For 65-inch **TY-ST65PB2** | | For 65-inch **TY-WK65PR20 (Vertical/Angled)** | | For 50-inch **TY-ST42P50** | | | |

## ■ Optional Function Board

| Dual Video Terminal Board | DVI-D Terminal Board | Dual HDMI Terminal Board | HD-SDI Terminal Board | HD-SDI Terminal Board with Audio | Dual Link HD-SDI Terminal Board with Audio | Plug-in PC |
|---|---|---|---|---|---|---|
| **TY-FB9BD** | **TY-FB11DD** | **TY-FB10HMD** | **TY-FB9HD** | **TY-FB10HD** | **TY-FB11DHD** | **PLUGTHA54**\*⁷ |

*¹ Built-in memory ON/OFF is included. When OFF is selected, only one whiteboard page can be created. *² Can be sent as JPEG format only. *³ For Windows® only. *⁴ Supported by Windows® XP/Windows Vista®/Windows® 7/Windows® 8, and Macintosh (Mac OS X v10.6/v10.7/v10.8). *⁵ Windows® 7 and Windows Vista® users must log in using the Administrator's account. When a Windows® 7-equipped computer is first used, the sound driver may require adjustment. *⁶ The ET-UW100 cannot transfer audio files. Only the 16-Window Index Style can be used in Multi-Live Mode. The ET-UW100 is available in the following countries and regions as of October 2013: North America, England, Germany, France, Spain, Italy, Belgium, Austria, Sweden, Norway, Denmark, Switzerland, Holland, Finland, Portugal, Greece, Australia, and Japan. A firmware update is necessary before using the ET-UW100. For more information, please visit our Professional Display global website at http://panasonic.net/prodisplays/ *⁷ PLUGTHA54 is available in Americas and Europe only. *⁸ Supports 1080/60p signal only.