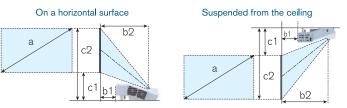
## **LCD** Projectors

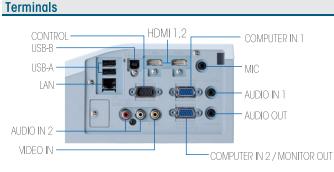
Model name			CP-TW2503	CP-TW3003				
Display system			3LCD					
Display Size of effective								
device	display area		0.59", aspect ratio 16 : 10					
	Number of pixels		1,024,000pixels (1,280 horizontal x 800 vertical)					
Lens Zoom			Digital zoom ( x 1.35)					
Focus			Powered					
Light source			250W					
Screen size			60 - 100inch					
Light output (Brightness)			2,700lm 3,300lm					
Contrast ratio			5,000 : 1 (full white / full black)					
Speaker			16W x 1 (mono)					
Displayable Horizontal			15 - 106kHz					
	frequency Vertical		50 - 120Hz					
Terminals			Mini-D-sub 15-pin connector x 1					
	COMPUTER IN 2 / MONITOR OUT		Mini-D-sub 15-pin connector x 1					
	VIDEO IN		RCA connector x 1					
	HDMI IN		HDMI connector x 2 (HDCP compliant)					
	AUDIO IN		3.5mm stereo mini connector x 1, RCA connector L / R x 1					
	AUDIO OUT		3.5mm stereo mini connector x 1					
	Microphone Input		3.5mm mono mini connector x 1					
	CONTROL (RS-232C)		D-sub 9-pin connector x 1					
	LAN		RJ45 connector x 1					
	USB-A		USB type A x 2 (PC less Presentation or wireless adapter)					
	USB-B		USB type B x 1 (Interactive function, USB Display, or USB mouse control)					
Operating temperature			0 - 40℃ 35 - 40℃ (The brightness of lamp is reduced automatically)					
Operating humidity (RH)			20 - 80%RH (non-condensing)					
Power requirements			AC 100 - 120V (50 / 60Hz) : 3.8 A					
			AC 220 - 240V (50 / 60Hz) : 1.9 A					
Maximum power			AC 100 - 120V : 380W					
consumpti	on		AC 220 - 240V : 360W					
Standby mo	ode power	consumption	0.35W at saving mode					
Standard outside dimensions			377mm x 141mm x 360mm (14.8" x 5.6" x 14.2")					
(W x H x D)			377mm x 136mm x 360mm (14.8" x 5.4" x 14.2") (Excluding protruding parts)					
Weight			Approx. 4.4kg (9.7lbs.)					
Accessories Optional parts			Remote control, AA batteries, Power cord, Computer cable, Cable cover,					
			Adapter cover, User's manuals (Book, CD), Security label, Application CD,					
			Application DVD, Interactive pen, AAA batteries, Pen tips, USB cable					
			Lamp : DT01411 Filter set : UX37191 Bracket for ceiling mount : HAS-AW100 Fixing adapter for low ceilings : HAS-203L Fixing adapter for high ceilings : HAS-P100	Wall mount unit : HAS-WM03 Table-top use kit : TT-03 USB wireless adapter : USB-WL-11N Interactive pen : I-PEN3 Finger touch unit : FT-01				

# Dimensions 377mm(14.8") 360mm(14.2") HITACHI

#### **Projection Distance**



CP-TW2503,CP-TW3003 (1,280 × 800) (±8%)													
Screen size	e (diagonal)	Projection distance				Screen height							
а		b1		b2		c1		c2					
type (inch)	m	m	inch	m	inch	m	inch	m	inch				
60	1.5	0.128	5.0	0.409	16.1	0.313	12.3	1.121	44.1				
70	1.8	0.198	7.8	0.479	18.9	0.351	13.8	1.293	50.9				
80	2.0	0.268	10.5	0.549	21.6	0.388	15.3	1.465	57.7				
90	2.3	0.338	13.3	0.619	24.4	0.426	16.8	1.638	64.5				
100	2.5	0.408	16.1	0.689	27.1	0.464	18.3	1.810	71.3				



CLASS 1 LASER PRODU

-Design and specifications are subject to change without notice.

Compliance with EU Directive RoHS<sup>\*1</sup>

Reduction of resin usage in production

Use of hot runners in molds for making upper housing in

Carton volume has been cut down to 94%"2, reducing CO2

Power saving mode engaged during standby

The projected images and comparison photos in this catalog are simulations.
 LCD panels, polarizers, other optical components, and cooling fans may need replacement after prolonged usage. For more details, please consult a Hitachi sales representative.

one carton box.

 Do not use in places where there is a lot of water, dampness, steam, dust, soot, or tobacco smoke. This may result in fire or malfunction.
 Optical components (lamp, LCD panel, polarizing plate, PBS [polarizer beam splitter]) have limited service lives. They must be repaired or replaced if they are used for a long period of time.
 These projectors use a mercury lamp with high internal pressure. Because of its properties, this lamp may burst with a loud noise or burn out if struck or after it has been used for a period of time. The time until it bursts or burns out varies greatly according to differences between lamps and usage conditions. Turning the lamp's power on and off frequently shortens its service life. Optical components other than the lamp. If the projector is used for six hours or more per day, they may need to be replaced in less than a year.
LCD panel: If the projector is used continuously for six hours or more, its replacement cycle may be shortened.
Do not turn the projector on again for ten minutes after shutdown. Neglect can shorten the lifetime or the lamp. During use and immediately after use, do not touch any area near the lamp.

. RoHS is the acronym of "Directive

Parliament and of the Council of 8 June 2011 on the restriction of the

use of certain hazardous substances

in electrical and electronic equipment

Compared to Hitachi CP-A100 ultra

short throw projector on the basis of

2011/65/EU of the European

and the vents as these parts are extremely hot. Mac® is a registered trademark of Apple Inc.
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Pentium<sup>®</sup> is a trademark of Intel Corporation in the U.S. and/or other countries.

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 ImageCare is a trademark or a registered trademark of Royal Philips in the United States and other countries.

StarBoard<sup>®</sup> is a registered trademark of Hitachi Solutions. Ltd. in Japan and other countries.

All other trademarks are the properties of their respective owners.
 The optional finger touch unit FT-01 is classified as a class 1 laser product. Do not look directly into the laser output port. Do not point the laser bean

# **HITACHI**

Environment

Eco mode

order to reduce mill ends.

emission during transport.

Reduction of CO<sub>2</sub> emission

Eco mode provides power saving

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#### September 2014

dnx

**pixelworks**<sup>™</sup>

**Image**Care

## **Interactive Ultra Short Throw LCD Projectors**



# Ultra short throw projectors with advanced interactive functions, capable of providing vivid images in bright rooms

IHDATIH

**CP-TW2503** 

**CP-TW3003** 

SATL









## An interactive function with enhanced operability and functionality

#### Advanced Writing/Drawing Capabilities

#### Multiple interactive pens

With up to 4 interactive pens pupils can do more than ust watch - they can interact with the onscreen content. Let them enjoy providing answers, showing their understanding and becoming involved in lessons as never before.



#### PC less Drawing

PC less IWB mode, allows users to draw directly onto a picture from a document camera and other devices, There are many photographs and templates stored within the projector, allowing users to draw directly onto pictures and templates without connecting a PC.

#### Windows 8 multi touch

Windows 8 multi touch allow users with touch enabled Windows 8 systems to operate the PC directly from the interactive screen with up to 4 Pens/Touch (optional) including Windows 8 gesture.



Auto Calibration

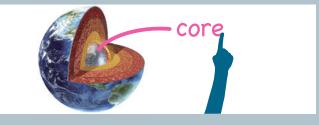
Auto calibration is completed quickly with one button press on the remote control. \* The image for aligning the position is displayed automatically.

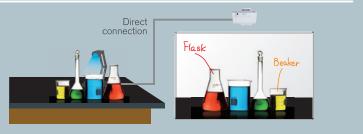
#### Finger Touch (Option)

The T Series incorporates sensors (sold separately) that detect finger touch activity on the screen area. Together with industry leading Hitachi Starboard software, it allows users to annotate and interact with the material presented. Instead of simply showing static images, students and teachers can interact with on screen material as never before, for hands-on interactivity that brings learning to life.

\*When using the finger touch unit at bright environment, auto calibration may not be used. \*Please use the finger touch unit on a flat screen.

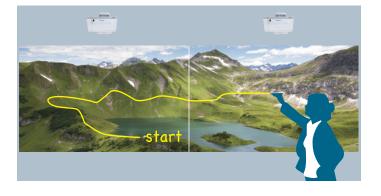
\*The finger touch unit may not be used in locations where there is sunlight or light from an incandescent light source.





#### **Dual Display**

For larger applications, two projectors can be combined via a single PC for continuous drawing over extended screens.



This product includes 2 drawing applications: Simple Drawing Software that offers simple drawing functions and StarBoard Software that offers more sophisticated drawing functions.

### Simple Drawing software

#### Write directly using the interactive pen

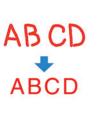
You can write letters and draw shapes directly on the image with the interactive pen, erase them, and change pen color or thickness from the toolbar.

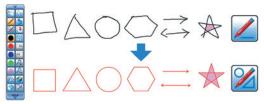


#### StarBoard<sup>®</sup> Software

#### Neatly Convert Letters or Figures with the StarBoard Software

You can automatically convert freehand shapes into geometric objects and handwriting into text on the projected image using the StarBoard Software, These operations are easily accomplished with the interactive pen.





#### Subject Toolbox

There are four subject toolboxes: Geography, Language Arts, Math In addition to Full Screen capture, you can also select Partial and and Science. You can choose one from the toolbar for display on the Freehand screen, and use the various tools to hold the students' attention and improve their comprehension of the subject.

#### System requirements for simple drawing software

Windows® CPU: Intel Core2 Duo 1.5GHz or faster + HDD: 100 MB free space • Memory: 1 GB or more • Graphic card: 256 MB or more • OS: Windows® 7 (32/64bit), Windows® 8 / 8.1 (32/64bit) • Others: Microphone, Speake ■ Macintosh® • CPU: Intel CPU • HDD: 100 MB free space • Memory: 1 GB or more • Graphic Card: 256 MB or more • OS: Mac OS® X 10.6/10.7/10.8/10.9

#### System requirements for StarBoard Software Windows

■ Windows® - CPU: Pentium 4 (1.8GHz or faster) · HDD: 600 MB free space · Memory: 1 GB or more · Display: 32bit · OS: Windows® 7 (32/64bit), Windows® 8.1 (32/64bit), (StarBoard Software has been verified with the latest service pack at the time of release. StarBoard Software does not support Windows Tablet PC Edition and Server Edition.) · Application: Internet Explorer® 8 / 9 / 10 / 11, Microsft Word® 2007/2010/2013, Microsft Excel® 2007/2010/2013, Microsft PowerPoint® 2007/2010/2013, Adobe® Reader X/XI, Adobe® Flash® Player 10 · Others: DVD-ROM drive, Video cards supporting hardware overlay feature. for using the movie features. [When using the Webcam function] DV (digital video devices, DV camera, D-VHS etc.), Capture Devices that supports DirectShow with WDM driver. [For hosting a remote conference] · CPU: Intel Core2 Duo 2.0GHz or faster · HDD: CPD prevent UPD remote CPD heat of CMD the form of the supports DirectShow with WDM driver. [For hosting a remote conference] · CPU: Intel Core2 Duo 2.0GHz or faster · HDD: CPD prevent UPD remote CPD heat of CMD the form of the supports DirectShow with WDM driver. [For hosting a remote conference] · CPU: Intel Core2 Duo 2.0GHz or faster · HDD: CPD prevent UPD remote CPD heat of CMD the form of the supports DirectShow with WDM driver. [For hosting a remote conference] · CPU: Intel Core2 Duo 2.0GHz or faster · HDD: CPD prevent UPD remote CPD heat of CMD the form of the SMD the supports DirectShow with WDM driver. [For hosting a remote conference] · CPU: Intel Core2 Duo 2.0GHz or faster · HDD: CPD prevent UPD remote CPD heat of CMD the form of the supports DirectShow with WDM driver. [For hosting a remote conference] · CPU: Intel Core2 Duo 2.0GHz or faster · HDD: CPD prevent UPD remote CPD heat of CMD the supports DirectShow with WDM driver. [For hosting a remote conference] · CPU: Intel Core2 Duo 2.0GHz or faster · HDD: CPD prevent CPD heat of CMD the support of CMD the supports DirectShow with WDM driver. [For hosting a remote conference] · CPU: Intel Cor 2GB or more · Memory: 2GB or more · Others: TPC/IP Network of 54Mbps or greater [For i-learn: maths toolbox] · Display : 1024x768 or higher · Application: Adobe® Reader · Others: 32bit color 3D graphic card, DVD-ROM Macintosh

CPU: Intel CPU • HDD: 600 MB free space • Memory: 1 GB or more • Display: High Color (16bit) or more • OS: Mac OS® X 10.8/10.9 • Application: Microsft PowerPoint® 2004/2008/2011 for Mac, Apple QuickTime® 7.1 or later, Adobe® Flash® Player 10 • Others: DVD-ROM drive [For hosting a remote conference] • CPU: Intel Core2 Duo 2.0GHz or faster • HDD: 2 GB or more • Others: TPC/P Network of 54Mbps or greater [For Hearn: maths toolbox] • Display: 1024 x 768 or higher • Application: Adobe® Reader • Others: 32bit color 3D graphic card

### **Interactive Software**

#### Save Handwritten data

You can save what you have written or drawn on the image with the interactive pen to the computer.

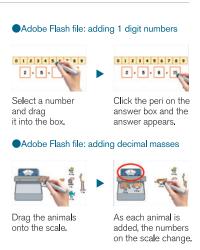
#### Import your files

You can import Microsoft<sup>®</sup> Office documents and PDF files to this software to make your presentation.

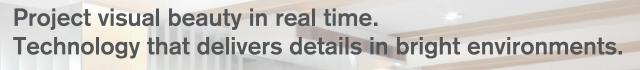
## Clip Art, Adobe<sup>®</sup> Flash<sup>®</sup> Learning Objects

The StarBoard Software includes clip art. You can drag 3D shapes and other images onto the page and then move, resize and rotate them.

There are many interactive Adobe Flash files, which are useful for lessons. Math and science are already included in Clip Art.



#### Screen Capture



Hitachi's original image processing technology enhances high-definition video in real time\*. Using this technology, you can enjoy high-definition images without losing the color information of the original image, and project high-definition video in classrooms, lecture halls, la<mark>rge meeting r</mark>ooms, and other bright spaces. \*1,920x1,2<mark>00pixels a</mark>t 60fps

HITACHI



HDCR (High Dynamic Contrast Range)

When average projectors are used in bright rooms, the darker colors of an image deteriorate and images become unclear.

Using this function, blurred images caused by room lighting or outside light sources are corrected, and an effect similar to increasing contrast occurs. This results in clear images even in bright rooms. \* Comparison photos are simulations.



#### HDCR + ECO Mode

Turning HDCR ON and activating ECO Mode achieves a brightness with a look and feel close to Normal Mode while suppressing lamp brightness to the ECO Mode level and cutting lamp power consumption up to approximately 30%.

\* Comparison photos are simulations.



Dark parts are obscure.





Dark parts are clear. (Distinct)

HDCR ON



## ACCENTUALIZER

Hitachi original technology makes pictures look more real by enhancing (1) Shade, (2) Sharpness, and (3) Gloss to make pictures as clear as pictures on a flat-panel device. You can also adjust the effects by three levels according to your surroundings so that the colors of projected images are the actual colors of the objects they represent.

\* Comparison photos are simulations.









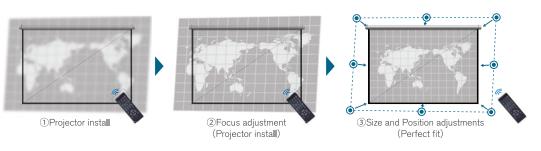
Increased Shade, Sharpness, and Gloss

## **Reduced Glare and Shadows**

These projectors feature Ultra Short Throw, for projecting a 2m see the audience. The audience also has a clearer view because the (80inches) image from only 54.9cm (21.6inches) \* onto a wall or shadows of the teacher's or presenter's hands and body are minimized. screen. Ultra Short Throw greatly reduces glare from the The result is a better classroom or meeting room experience for projector's light source, making it easier for the teacher or presenter to everyone.

#### Powered Focus and Perfect fit

Equipped with powered focus and Perfect fit with which the position of four corners and four sides of a projected image can be adjusted. With the remote controller at hand, you can adjust focus and the position of an image.



# 2 HDMI input



## **Tabletop Use**



The optional tabletop use kit (TT-03) allows the projector to be used vertically. You can project a 1.5m (60")\* image down onto a table.

16W Internal Speaker

Equipped with a 16W speaker and microphone terminal that allow you to comfortably make presentations using content with sound or using a microphone.

Easily install the projector using 4 screws.

#### Various Network Features

#### Wireless Capability (Option)

Connect a projector to a computer using the optional USB wireless adapter. The adapter supports IEEE802.11 b/g/n.

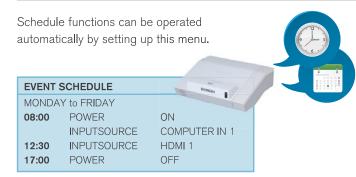


#### **Convenient Networking**

Manage and control multiple projectors over your LAN with Centralized Reporting, Scheduling, E-mail Alerts, and My Image (Image Transfer).



#### Easy Schedule Setting



#### Smart Device Control

Plugging the optional USB wireless adapter to the projector and using the dedicated free online application developed by Hitachi, projectors can be controlled from a tablet or smartphone.



\* See the Hitachi website for details http://www.hitachi.co.jp/proj/en/apps/pj\_connection.html

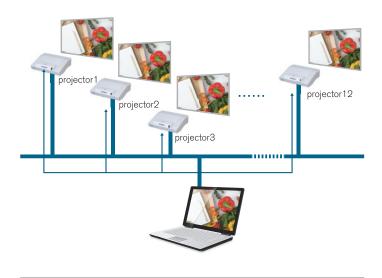
#### **Easy WLAN Connection**

Searches available wireless networks and displays the list of SSIDs when used in Infrastructure mode. You can select an SSID to connect to from the list.



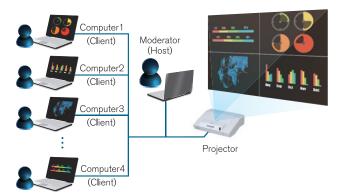
#### **Multi Projector**

You can project the same image to up to 12 projectors simultaneously. This is useful for meetings and lectures in large venues where a single screen would not be sufficient.



#### Moderator Control Mode

Setting one computer from the multiple computers (up to 50) that are connected to the projector as the moderator (host) makes it possible for the moderator to project from all the computers (Clients). \* Moderator Control Mode supports LiveViewer 6 (Windows application) only.





#### ECO

#### Saver Mode

This feature developed by Hitachi reduces the projector lamp brightness and consumption power, resulting in considerable energy savings. Set the Saver mode time from 1 to 30 minutes, and if the projected image does not change in that time, Saver mode activates. Saver mode can also be activated manually.





## Intelligent Eco Mode

This feature developed by Hitachi automatically changes the brightness of the lamp according to the level of the input signal. Lamp brightness is reduced when a darker image is projected, and returns to normal when a brighter image is projected, eliminating unnecessary energy consumption from the lamp.

# Eco Mode

Using Eco Mode reduces lamp power to 170W, an approximate 32% decrease compared to the 250W when using Normal Mode.

Normal Mode

Eco Mode

## **Ensuring High Reliability and Stability**

#### **Easy Maintenance**

The lamp door and the filter cover are located on the top and the side, facilitating maintenance and replacement even when the projector is installed on the ceiling.







#### ImageCare



\* Lamp brightness in Eco Mode is lower compared to Normal



The screen automatically turns dark when not in use during group discussions

### Saving Mode

Consumption power can be reduced to 0.35W when in standby, making it possible to reduce running costs.

\* STANDBY MODE must be set to SAVING.

\* Available functions during standby when SAVING is set are limited.



170W -32% -

## Hybrid Filter

The hybrid filter is composed of an unwoven cloth and a HAF (High Air Flow) filter, protecting the optics from dust, dirt, and chalk particles. The filter can last up to 4,000 hours\* without cleaning. \* Varies according to usage environment.

### 3LCD chips with **Inorganic Alignment Layers**

These Hitachi 3LCD projectors incorporate three LCD panels with inorganic alignment layers that are extremely light resistant, increasing brightness and contrast ratio. They ensure smooth images and high reliability.

