Lumens™

Brilliance by Design

So real, only a fly could tell the difference.

Lumens™

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About Lumens

Lumens Digital Optics was founded in 1998 in Hsinchu, Taiwan and Lumens is a member of ASUSTek group . Celebrating its tenth year, Lumens now has over 150 employees with annual revenues of USD $40 million and subsidiaries in the United States, China and Europe.

Possessing a strong and integrated R&D team with expertise in optics, hardware, software, firmware and mechanics, Lumens produces a full line of optoelectronic products, including visual presenters, DLP display cubes and HD scalers and switches . With sales in over 40 countries, Lumens is among the world's top-four market share leaders in all of its product lines. Lumens' goal is to maintain long term, sustainable growth to create world-leading products and to provide excellent customer service.

Europe Belgium Office

Lumens USA Branch

Lumens China Branch

Lumens Taiwan HQ

SGS

RoHS Compliant

Glossary

HD-ready Output

With 720p/1080p HDMI output to accommodate a large screen, flat panel high definition display. Since newer LCD TVs and digitalprojectors are all moving toward the HDMI (High Definition Multimedia Interface) connection for the best image quality.

Auto Tune

The auto tune feature enables teachers to instantly adjust for exposure, white balance and focus - all with the touch of a single button. By using the auto tune function, the camera adjusts to the ambient lighting and produces the best possible image.

Cold Cathode Lamp

All Lumens visual presenters are equipped with cold cathode lamps. Cold cathode lights not only produce natural color images which similar to with the sunlight color, they also have up to 20,000 hours of usage, thereby eliminating one of the most costly aspects of video presentation equipment. Cold cathode lamps have the best color spectrum for true color reproduction and offer a clearer and sharper image output. And unlike LED lights, cold cathode lamps do not produce unwanted hues that are highly monochromatic, emitting a pure color in a narrow frequency range. Dual cold cathode lamps also provide more light sources without hot spots.

Accurate Image with DVI Output

With DVI digital output, the visual presenters provide sharper and more accurate image.

High Frame Rate on Real-time Image

High frame rate provides real-time live streaming images without flickering and lessens images blur. A frame rate is the measurement of the frequency (rate) at which an imaging devise produces unique consecutive images called frames. A frame rate is most often expressed in frames per second (fps).

Flexible Gooseneck Design

The camera's gooseneck permits quick and easy viewing of objects from any angle while the cold cathode lamp on a separate gooseneck provides for optimal lighting with no shadows.

Convenient Book Mode

Half-page mode let teachers toggle from full page of the document to top half page in larger print to bottom half page in larger print without moving the actual paper. No need to constantly re-adjust material and risk loosing the class' attention and interest.

Picture by Picture

With the Picture by Picture feature, teachers can simultaneously display a previously captured image and a real-time image side-by-side for compare and contrast simultaneously.

Glossary

Built-in Power Adapter

Visual presenters with internal power sources are best for classroom environments. Power cords with an external power source, the ones with a large AC adaptor on the end, are expensive and just the kind of object that frequently gets "lost" in a classroom. All Lumens visual presenters have internal power source. If a power cord is lost, a new one can be purchased for a few dollars at any hardware or electronic store. It's cost saving and convenient to replace.

Exclusive queue™ Software

The Lumens exclusive queue software supports Windows Vista/XP and MAC operation system, and it replicates the visual presenter's functionality through the computer's environment and provides additional features such as annotation, saving or sharing video and image files.

Image Rotation

Rotate images from 0° to 90°, 180° or 270°, all without the need to stop and physically adjust material. A real classroom timesaver!

Unlimited Memory Storage

Internal memory can store up to 240 JPEG images for full screen. With SD card slot, extend memory supports 32GB SDHC card for easy slideshow playback.
SDHC card means SD High Capacity card is the new SD memory card based on the SDA 2.00 specification, introduced by the SD Card Association, which enables SD cards to reach higher capacities - 4GB-32GB.

Instant Playback Slide Show

Playback the images and videos in 0.5 sec without waiting for downloading and can launch an automatic slide show with one touch of button immediately.

Plug-and-Play by TWAIN/WIA Software Protocol

The TWAIN and WIA (Windows Image Acquisition) software protocol standards makes the communication between software applications and imaging devices simple. It's also easy to capture images and video without 3rd party applications. The TWAIN and WIA open software protocol standards support Windows while the TWAIN and QuickTime multimedia framework support the Macintosh.

High Speed USB2.0

High speed USB2.0 allows for faster slide show presentations and smooth data transfers between the visual presenter and the computer. It helps lesson plans go smoothly and effectively without technical delays during class.

Full-frame Audio and Video Recording

Record "full-frame" audio and video presentations to an external SDHC card that supports up to 32GB memory for immediate playback, or save the presentations to the computer for later use. Teachers don't have to repeat modeling lessons or experiments.

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DC133

24 FPS
Live Video

Gooseneck
Flexible

Focus
Smooth and Fast

Full
USB2.0

Power
Built-in

queue
For computer
Software

TWAIN & WIA
Plug-and-Play
Software

Lumens' entry level, portable XGA visual presenter

The Lumens DC133 is a compact, XGA resolution, portable visual presenter with 6X mechanical zoom and manual focus for easy image capture. The distinguish Lumens design of dual fully-rotating gooseneck allows the optical and light sources functioning on independent axles so the objects can be captured at any angle without limitation or reflection.

24 fps Real-time Progressive Video Output

The DC133 captures images at 24 frames per second. With such a high frame-rate, the DC133 users can enjoy almost real-time live streaming images without flickering.

Flexible Gooseneck Design

The camera's gooseneck permits quick and easy viewing of objects from any angle while the cold cathode lamp on a separate gooseneck provides optimal lighting without any hot spot.

Smooth and Fast Manual Focus

To focus on an object, a half-turn of the single finger focus operation is all you need.

2 Sec.

USB 2.0 Full Speed

DC133 is equipped with USB 2.0 Full Speed, which transfers data up to 12Mbit/sec to the computer.

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DC155

Lumens' portable XGA visual presenter with auto focus

The Lumens DC155 is a compact XGA resolution, automatic focus visual presenter. Apart from the gooseneck design, it comes with analog output for TVs and VCRs, and USB 2.0 connection to both PC and MAC, as well as built-in, 80-image storage for full screen, JPEG slideshow playback capability, and pure DVI digital output for sharp and fast image capture. The DC155 is an indispensable classroom presentation tool that offers educators a versatile means for enhancing virtually any curriculum.

24 fps Real-time Progressive Video Output

The DC155 captures images at 24 frames per second. With such a high frame-rate, the DC155 users can enjoy almost real-time live streaming images without flickering.

Flexible Gooseneck Design

The DC155 features a flexible dual-gooseneck arm for maximum optical and lighting effectiveness. The camera's gooseneck permits quick and easy viewing of objects from any angle while the cold cathode lamp on a separate gooseneck provides optimal lighting.
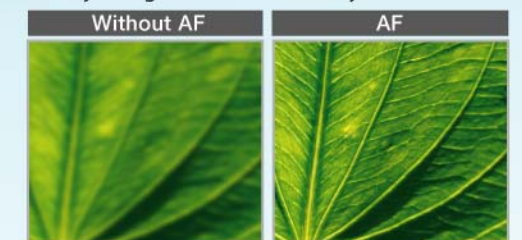
Built-in 80 JPEG Image Memory

Built-in memory can capture and store up to 80 JPEG images. The captured images can be played back as a slide show with the remote control.

Auto Focus

The automatic focus is a great time-saving feature that allows the lens to focus until the sharpest image of a subject is projected, instead of adjusting the focus manually.

Auto Tune

The auto tune feature enables teachers for instant adjustment for exposure, white balance and focus to the ambient lighting and produces the best possible image - all with a one-touch button set-up.
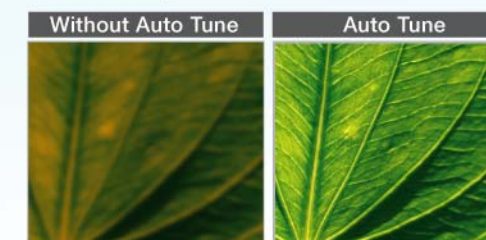
USB 2.0 Full Speed

DC155 is equipped with USB 2.0 Full Speed, which transfers data up to 12Mbit/sec to the computer.

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DC162

The industry's first portable visual presenter with SXGA resolution

Transform your teaching with the DC162, which represents the highest output resolution with the lowest price point in portable visual presenters today. It is the first portable SXGA visual presenter in the market with 4X optical zoom and auto focus. Capturing 66 % more detail than XGA presenters, the DC162 offers impeccable image quality, out-of-the-box ease of use, and an unmatched price.

4X Optical Zoom

The DC162 offers 4X optical zoom, the true magnification rate for a portable visual presenter. The auto focus button is ergonomically designed on the camera head for quick focus adjustments. Once a subject is zoomed in, the camera brings the subject into sharp focus, automatically.

True SXGA Resolution

The SXGA resolution (1280 x 1024 pixels) captures 66% more detail compared to XGA visual presenters (1024 x 768 pixels) in the market and is affordable at an appealing price.
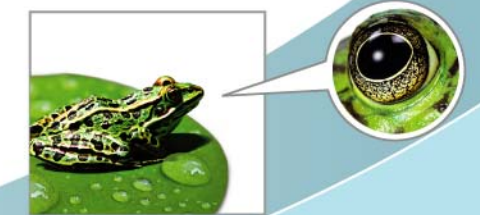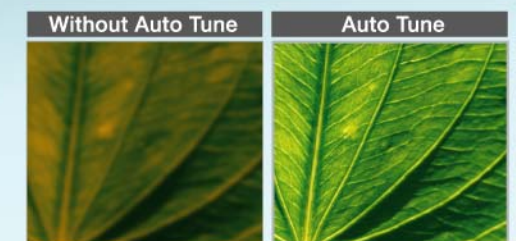
Built-in 64 JPEG Image Memory

Built-in memory can capture and store up to 64 JPEG images. The captured images can be played back as a slide show with the remote
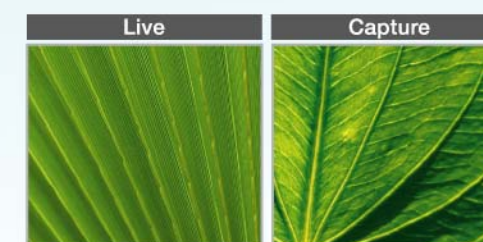
Auto Tune

The auto tune feature enables teachers to instantly adjust for exposure, white balance and focus - all with the touch of a single button.

Without Auto Tune | Auto Tune

Picture by Picture

The Picture by Picture feature allows teachers to display a captured image and a real-time image side-by-side for comparison and contrast simultaneously

Live | Capture

USB 2.0 Full Speed

DC162 is equipped with USB 2.0 Full Speed, which transfers data up to 12Mbit/sec to the computer.

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DC260

4X Optical Zoom

Dual Two lights

Gooseneck Flexible

240 images Internal Storage

Auto Auto Tune

Rotation 90/180/270

PBP Picture-by-Picture

Power Built-in

queue For computer Software

TWAIN & WIA Plug-and-Play Software

The First Multimedia, HD-Ready Portable Visual Presenter

The Lumens DC260 represents the first ever generation of multimedia HD capable visual presenter. Equipped with a dedicated powerful processor, the DC260 will thrill and amaze even the most sophisticated consumer with such features as a 1080p HDMI output for a large screen flat panel high definition display, audio and video processor for a full frame video recording to SD card, ultra sharp 4X optical zoom, unparalleled true SXGA output with extended gooseneck, and a double lamp design to provide optimal lighting. And the output images and video quality are amazing! The DC260 is easily the most power-packed portable visual presenter on the market today!

1080p HD Resolution

HD-Ready Output Resolution

The DC260 includes a 1080p HDMI output to accommodate a HDTV. For the best image quality, the DC260 features true SXGA resolution, commanding a resolution of 1280 x 1024 pixels that provides 66% more detail than a XGA visual presenter. SXGA is a desirable feature to consider when sharpness and detail are critical.

Half Page Switch view

Half-Page Book Mode

The Half-page mode let teachers toggle from full page of the document to top half page in larger print to bottom half page in larger print without moving the actual paper.

Full Page   Half Page
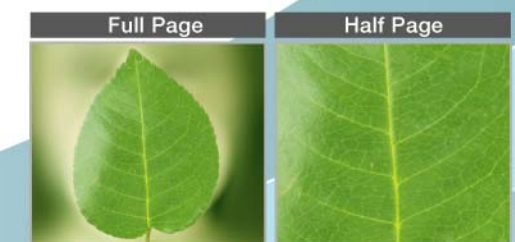
Slide Slide show

Instant Playback Slide Show

With the powerful and fast processor, the DC260 can playback the images and videos in 0.5 sec without waiting for downloading and can launch an automatic slide show with one touch of button immediately.
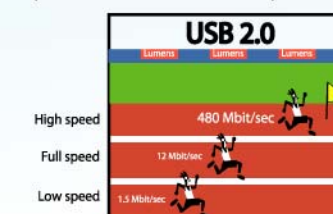
Video Recording

Full Frame Audio and Video Recording

With the built-in microphone, teachers can record full-frame audio and video to a SDHC card for immediate playback. The entire lecture or experiment can be saved for later use or uploaded to the website for students to review.

High USB2.0

USB 2.0 High Speed

The DC260 is equipped with USB 2.0 high-speed port (with data transfers up to 480Mbit/Sec), which allows for faster and smoother data transfers between the visual presenter and the computer.

USB 2.0

High speed — 480 Mbit/sec
Full speed — 12 Mbit/sec
Low speed — 1.5 Mbit/sec

SD HC Support

Support 32GB SDHC Card

Users can either save the captured images and videos to the internal memory up to 240 images at XGA resolution,(150 images at SXGA resolution)or to an external SDHC card, supporting up to 32 GB memory.

SDHC card

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PS400

12X Optical Zoom · 24 FPS Live Video · 80 images Internal Storage · Full USB2.0 · CF card Expandable memory

Back Light Built-in · Auto Auto Tune · Power Built-in · queue For computer Software · TWAIN & WIA Plug-and-Play Software

Lumens' full-featured, desktop visual presenter

The PS400 is Lumens' full-featured, desktop visual presenter that boasts a full- size, 350x260 mm capture area for reflective images and 13x10 cm for transmissive materials. The camera head rotates 90/180/270 degrees for increased convenience and flexibility. The features include 12X optical zoom with XGA resolution, 24 fps, and RS-232 interface for easy installation and connectivity. The Lumens full-sized PS400 is an incredibly feature-rich yet affordable solution.

12X Optical Zoom

The PS400 offers 12X optical zoom, the true magnification rate for a portable visual presenter. The auto focus button is ergonomically designed on the camera head for quick focus adjustments. Once a subject is zoomed in, the camera brings the subject into sharp focus, automatically.
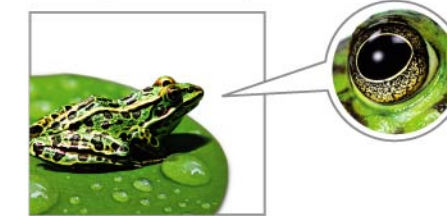

24 fps Real-time Progressive Video Output

The PS400 captures images at 24 frames per second. With such a high frame-rate, the PS400 users can enjoy almost real-time live streaming images without flickering.

Built-in 80 JPEG Image Memory

Built-in memory can capture and store up to 80 JPEG images. The captured images can be played back as a slide show with the remote control.

USB 2.0 Full Speed

PS400 is equipped with USB 2.0 Full Speed, which transfers data up to 12Mbit/sec to the computer.

Built-in Compact Flash Card Slot

Put your pre-created presentations on a CF card and pop it into the PS400 for easy portable, slideshow playback.

Built-in Backlight for Presentation

The highlight of backlight enables users to present the slide.

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PS660

Advanced Functionality for Today's Colleges and Universities

The PS660 features a future ready HDMI 1080p output for play back on high-definition displays, true SXGA output resolution, 15X optical zoom, 2 by 2 VGA switcher, USB 2.0 High Speed supporting for fast connectivity to the computer and full frame audio and video recording to a SDHC card.

15X Optical Zoom

The PS660 offers 15X optical zoom, the true magnification rate for a portable visual presenter. The auto focus button is ergonomically designed on the camera head for quick focus adjustments. Once a subject is zoomed in, the camera brings the subject into sharp focus, automatically.

HD-Ready Output Resolution

The PS660 includes a 1080p HDMI output to accommodate a HDTV. For the best image quality, the PS660 features true SXGA resolution, commanding a resolution of 1280 x 1024 pixels that provides 66% more detail than a XGA visual presenter. SXGA is a desirable feature to consider when sharpness and detail are critical.

Image Rotation

Allow users to rotate images from 0° to 90°, 180° or 270°, all without the need to stop and physically adjust material for viewing from the different directions. A real classroom timesaver!

R   90°   180°   270°
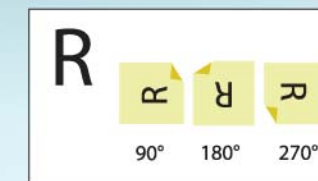
5-Step Book Mode

With the exclusive five-step Book mode, teachers can first project a full magazine or book, and then focus on enlarged left-up, left-down, right-up or right-down parts of the document with the simple press of a "PAN" button. No need to constantly re-adjust material.

Instant Playback Slide Show

With the powerful and fast processor, the PS660 can playback the images and videos in 0.5 sec without waiting for downloading and can launch an automatic slide show with one touch of button immediately.

Full Frame Audio and Video Recording

With the built-in microphone, teachers can record full-frame audio and video to a SDHC card for immediate playback. The entire lecture or experiment can be saved for later use or uploaded to the website for students to review.
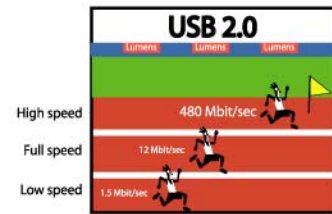
PS660

USB 2.0 High Speed

The PS660 is equipped with USB 2.0 high-speed port (with data transfers up to 480Mbit/Sec), which allows for faster and smoother data transfers between the visual presenter and the computer.

USB 2.0

High speed	480 Mbit/sec
Full speed	12 Mbit/sec
Low speed	1.5 Mbit/sec

Support 32GB SDHC Card

Users can either save the captured images and videos to the internal memory up to 240 images at XGA resolution,(150 images at SXGA resolution)or to an external SDHC card, supporting up to 32 GB memory.

SDHC card

Dual VGA Switch

The PS660 is equipped with two VGA input ports for active pass through from two computers, and also has two VGA output ports for convenient, simultaneous connectivity to a projector and monitor, eliminating the need for a VGA splitter.

Lumens brings clarity to learning.
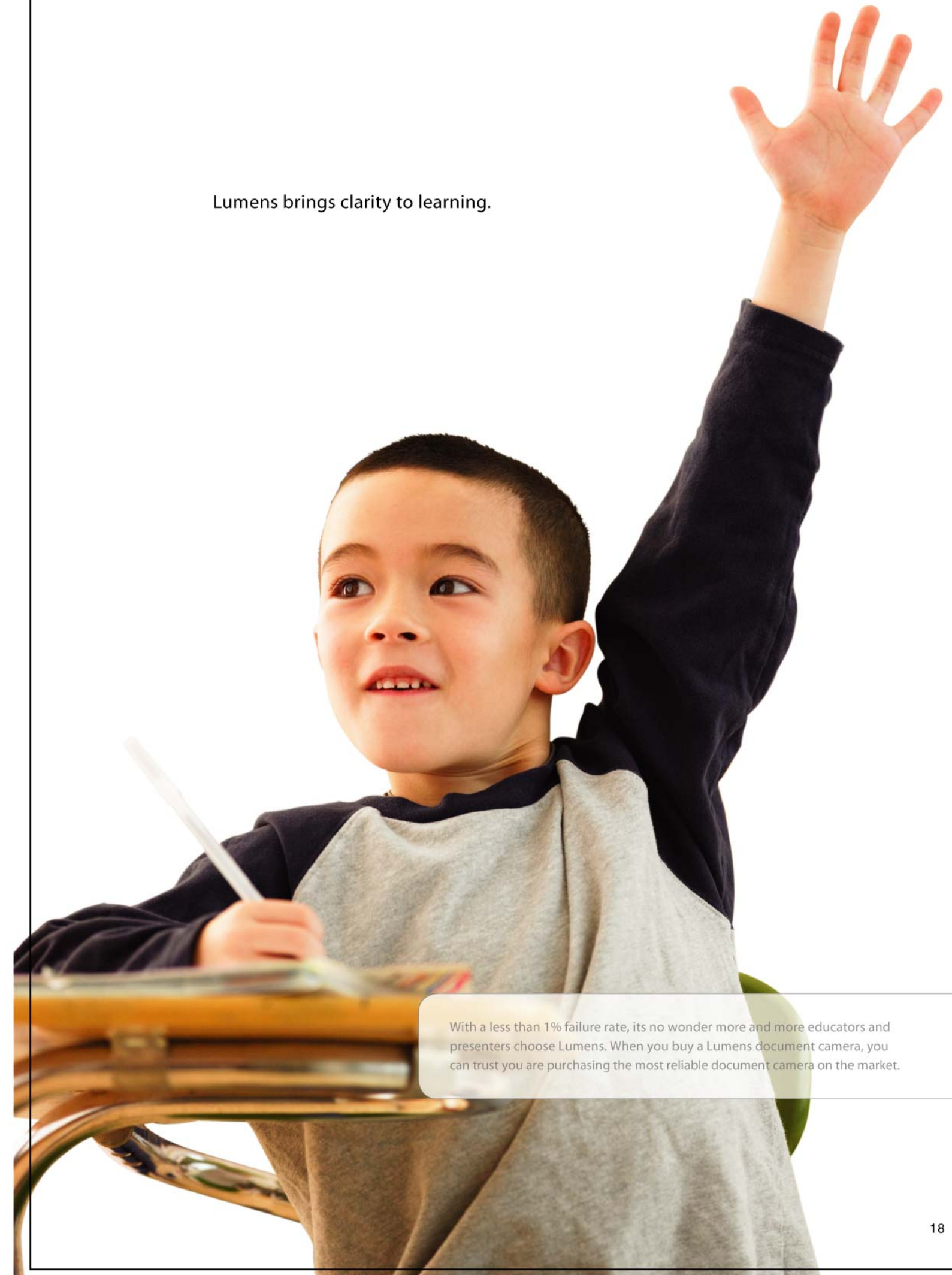
With a less than 1% failure rate, its no wonder more and more educators and presenters choose Lumens. When you buy a Lumens document camera, you can trust you are purchasing the most reliable document camera on the market.
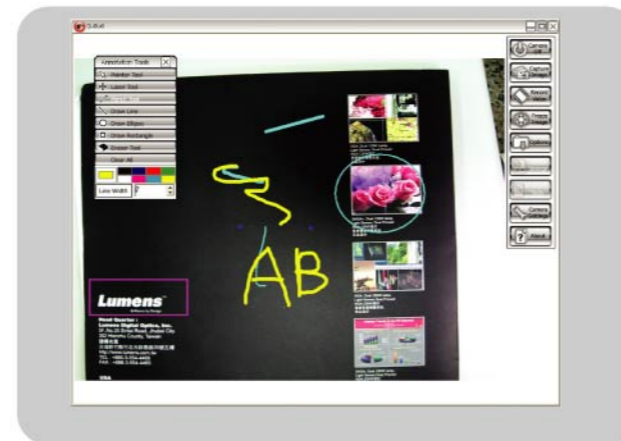
Visual Presenter Image Software

Exclusive queue™ Software

The Lumens exclusive queue software replicates the visual presenter's functionality through the computer's environment, supports Windows Vista/XP and MAC.

Features:
- Image Capture
- Video Recording
- Annotation Tool
- Full screen real-time image

Plug-and-Play by TWAIN/WIA Software Protocol

Support TWAIN and WIA (Windows Image Acquisition) software protocol standards facilitate communications between software applications and imaging devices, such as computers and projectors, and capture image and video without 3rd party applications. The WIA and TWAIN open software protocol standards support Windows while the TWAIN and QuickTime multimedia framework supports the Macintosh.
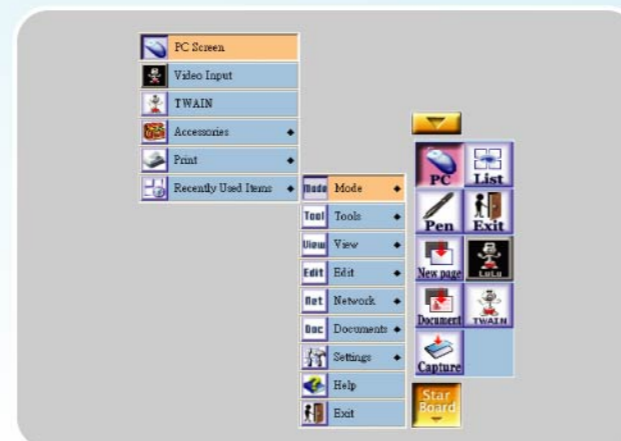
Features:
- Visual presenter control
- Image capture in MS-Paint
- Set visual presenter as a webcom
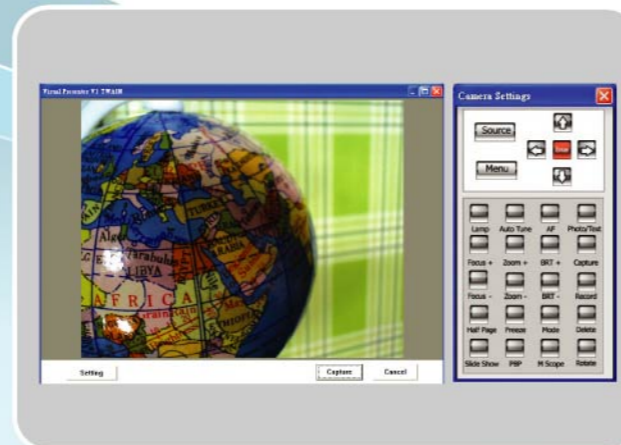
Tightly Integrated with Interactive Whiteboards

Lumens visual presenters are tightly integrated with the Interactive Whiteboards, which allows teachers to capture live image feeds conveniently by using a single button.

Optional Accessories

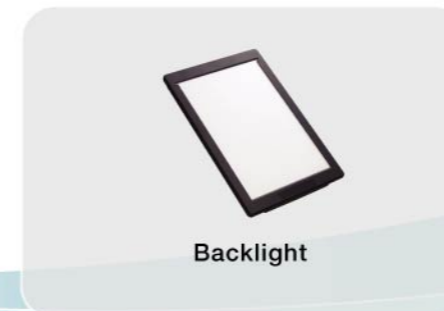| DC133 | DC155 | DC162 | DC260 | PS400 | PS660 |

Padded carry case

Padded carry case

Padded carry case

Backlight

Backlight

Backlight

RS232 adapter

RS232 adapter

Microscope adapter

Key Specifications

Lumens™

No.	Model No.	DC133	DC155	DC162
1	Photo			
2	Zoom	16X Digital	16X Digital	4X Optical 16X Digital
3	Output Resolution	XGA	XGA	XGA, SXGA
4	Frame Rate	24 fps(max)	24 fps(max)	20 fps(max)
5	Shooting Area	310x232mm	350x260mm	340x270mm
6	Lamp	Cold cathod x1	Cold cathod x1	Cold cathod x1
7	Arm	Gooseneck	Gooseneck	Gooseneck
8	Built-in Memory	9	80	64
9	Focus	Manual	Auto/Manual	Auto/Manual
10	Auto Tune	NA	AF/AE/AWB	AF/AE/AWB
11	Photo/Text Mode	Photo/Text	Photo/Text	Photo/Text
12	Image Mode	Normal/Slide/Gray/ Microscope/Film	Normal/Slide/Gray/ Microscope/Film	Normal/Slide/Gray/ Microscope/Film
13	Image Rotation	0/180 degree	0/180 degree	0/180 degree
14	Half Page (Pan)	NA	NA	NA
15	Picture By Picture	NA	NA	Yes
16	Slide Show	NA	NA	NA
17	Recording	NA	NA	NA
18	Capture	Yes	Yes	Yes
19	Freeze	Yes	Yes	Yes
20	Input	VGA	VGA	VGA
21	Output	VGA, C-Video	VGA, DVI, C-Video	VGA, DVI, C-Video
22	RS232	NA	Yes	Yes
23	USB	USB 2.0 FS	USB 2.0 FS	USB 2.0 FS
24	Memory Card Slot	NA	NA	NA
25	Backlight	Option	Option	Option
26	Microscope Adapter	NA	Included	Included
27	Built-in Power	Yes	Yes	Yes
28	Software	queue(MAC, XP, Vista)	queue(MAC, XP, Vista)	queue(MAC, XP, Vista)
29	Driver	TWAIN, WIA	TWAIN, WIA	TWAIN, WIA

No.	Model No.	DC260	PS400	PS660
1	Photo			
2	Zoom	4X Optical 4.8X Digital	12X Optical 4X Digital	15X Optical 4X Digital
3	Output Resolution	XGA, SXGA, UXGA, 720P, 1080P	XGA	XGA, SXGA, UXGA, 720P, 1080P
4	Frame Rate	20 fps(max)	24 fps	30 fps(max)
5	Shooting Area	350x280mm	350x260mm	355 x 266 mm
6	Lamp	Cold cathod x2	Cold cathod x2	Cold cathod x2
7	Arm	Gooseneck	Mechanics	Mechanics
8	Built-in Memory	XGA : 240 SXGA : 150	XGA : 80	XGA : 240 SXGA : 150
9	Focus	Auto/Manual	Auto/Manual	Auto/Manual
10	Auto Tune	AF/AE/AWB	AF/AE/AWB	AF/AE/AWB
11	Photo/Text Mode	Photo/Text/Gray	Photo/Text/Gray	Photo/Text/Gray
12	Image Mode	Normal/Slide/ Microscope/Film	Normal/Slide/ Microscope/Film	Normal/Slide/ Microscope/Film
13	Image Rotation	0/90/180/270 degree	0/180 degree	0/90/180/270 degree
14	Half Page (Pan)	Yes(Half Page)	NA	Yes(Pan)
15	Picture By Picture	Yes	NA	Yes
16	Slide Show	Yes	NA	Yes
17	Recording	Yes	NA	Yes
18	Capture	Yes	Yes	Yes
19	Freeze	Yes	Yes	Yes
20	Input	VGA, MIC	VGA	VGA(*2), MIC, Audio(*2)
21	Output	VGA, HDMI, C-Video, Audio	VGA, DVI, C-Video, S-Video	VGA(*2), HDMI, C-Video, Audio
22	RS232	Yes	Yes	Yes
23	USB	USB 2.0 HS	USB 2.0 FS	USB 2.0 HS
24	Memory Card Slot	x1(SD)	x1(CF)	x1(SD)
25	Backlight	Option	Built-in 4''x5''	Built-in 4''x5''
26	Microscope Adapter	Included	Option	Included
27	Built-in Power	Yes	Yes	Yes
28	Software	queue(MAC, XP, Vista)	queue(MAC, XP, Vista)	queue(MAC, XP, Vista)
29	Driver	TWAIN, WIA	TWAIN, WIA	TWAIN, WIA

✱ Features and Specifications are subject to change without notice.

March, 2009

Lumens™

Brilliance by Design