



DATA
PROJECTIONS

Council Chambers Technology Upgrade

prepared for

City of Bryan

Quote #006332 v2

Simply
Connected.



Executive Summary

Data Projections is presenting the following design proposal for the City of Bryan Council Chambers AV Technology upgrade. Our recommendations result from the on site discussion and needs analysis between the City of Bryan key Technology Managers and DPI's Design and Sales Team. DPI is suggesting an upgrade of most audio and video components currently installed in the Chambers, as well as improving the functionality of the system itself (i.e.: Control of all system functionality by the Video Specialists during meetings in one convenient panel location). The infrastructure of the system will be upgraded from analog only sources and outputs, to Digital Media. This allows for any input, whether analog or digital, will be scaled if needed to be displayed a high resolution digital image.

Below is a breakdown of each area of the system as proposed:

Visual Display/Sources:

- The system will have two new WUXGA (1920 x 1200), 6500 lumen projectors with two new 137" diameter perm wall HD finish screens. The projectors will be mounted on custom built shelf units (by others) on the columns in the back of the Chambers.
- Each Council Member will have a new 21" monitor installed in front of them on the Dais.
- DPI is proposing to replace the three cameras currently installed with new In Wall Enclosure HD PTZ cameras. The camera in the front of the room will be installed to the right of the City Seal (rather than below where it is currently installed). This will improve aesthetics as well as provide a better video capture of the Presenter from the podium. The two rear cameras will be installed with "in wall" enclosures and will also have a more aesthetic look. All cameras will provide a very high quality image, improved color reproduction, and also a wide angle shot of the Chambers to capture participants for the broadcast from most angles.
- DPI will provide a Tricaster mini to replace the existing system. This will take an HD signal from the matrix switch and send it out through a converter back to the Granicus system. City of Bryan also has the option to stream the signal HDMI if desired.
- DPI will install a small document camera at the podium. This will provide presenters the opportunity to share an actual 3D object to the audience. For example, if someone wanted to share a document that was not in electrical format, that person could lay the image on the document camera base and the meeting administrator could send that image to the projectors/Council members monitors for closer viewing. Likewise, an actual object could be placed on the document camera as well.
- A new ADA compliant, motorized podium will replace the existing podium. DPI is proposing a City Seal to also be added to the front of the podium for The podium will have an Extron Cable Cubby for presenter laptop connections, a Smart Technology Interactive HD Display, and the Elmo Document camera. The Smart Podium will allow the presenter to annotate over the document being output to the displays. This increases the functionality of the system by truly allowing an interactive presentation for collaboration. For example, if a budget is being displayed, the presenter can annotate over the image, emphasizing various points of discussion.

Switchers/Routers/Distribution:

- DPI will replace the existing infrastructure with a new Crestron Digital Media system. This provides a complete digital system ready for HD broadcasting.
- The infrastructure will provide preview ability of all sources by the administrator prior to going "live" for the meeting. This control in a public meeting space is extremely important.

Audio:

- The new audio system will provide improved program sound and microphone audio with full management capabilities.
- DPI will replace the existing gooseneck microphones with new 15" gooseneck mics around the Dais. These will each have a new desktop base.



- New surface mount speakers will replace the existing speakers and a new multi-channel audio amplifier will be integrated into the audio system (this includes overflow lobby areas).

Video Conference/Collaboration:

- DPI is proposing a new Lifesize Icon 800 for Video Conferencing. It is also recommended that the City of Bryan utilize a cloud based conferencing solution provided by Lifesize as well. This is a subscription based platform that allows for growth as video becomes more a standard. Participants can join in a meeting via their laptop and webcam, smart phone or tablet. DPI is proposing a 10 license package for Phase I.

Control System:

- A new Crestron Room Control System will provide expanded control of the room's AV technology. The system will include the existing Crestron Pro3 dual bus control processor, one new 20" touch panel for the AV Administrator/Technician, one new 10.5" touch panel for the Mayor at the Dais, and eight new 4.5" Touch Panels for each council member.
- The system will allow for full control of the room's functionality. Some of these functions are system on/off, source selection, source destination, camera control, audio control (volume up/down & mute), and more.
- The system will be programmed to allow for a queuing system for the Council Members. The members will select a "request to speak" button on their individual touch panels. The Mayor will then see the request on his panel and will be able to allow permission to that Council member.
- DPI's programmer will work closely with the client to obtain official logos for the panel branding, panel layout design, permissions and passcodes (if required).

Other Design Notes:

DPI will relocate the equipment rack from its current location to the dedicated room on the opposite side of the Chambers.

Cable path for the system will be via the crawl space under the Chamber floor. The existing confidence monitor installed in the back of the Chambers will be removed. No replacement is being proposed. DPI will walk the room with the client to locate where power and network will need to be provided (by others) prior to installation.

DPI's proposal also includes travel and per diem needed for this job.



Prepared For:

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Quote ID: 006332

Date: Tuesday, March 24, 2015

Expires: Wednesday, March 04, 2015

Visual Display

Description	Manufacturer	MSRP	Price	Qty	Ext. Price
Panasonic PT-EZ770ZL LCD Projector - 1080p - HDTV - 16:10 - UHM - 400 W - SECAM, NTSC, PAL - 3000 Hour - 4000 Hour - 1920 x 1200 - WUXGA - 5,000:1 - 6500 lm - DisplayPort - HDMI - DVI - VGA In - Fast Ethernet - 590 W	Panasonic PT-EZ770ZLU	\$9,599.00	\$5,082.79	2	\$10,165.58
Zoom Lens	Panasonic ET-ELT20	\$1,999.00	\$1,757.65	2	\$3,515.30
DA-SNAP HD.9 72.5X116NPA 137D	Da-Lite Screen Company 21909V	\$1,952.67	\$1,378.35	2	\$2,756.70
IN-Wall Enclosure for Vaddio RoboSHOT Cameras	Vaddio 999-2225-118	\$249.00	\$180.72	3	\$542.16
RoboSHOT 12 QDVI System	Vaddio 999-9906-000	\$5,295.00	\$3,984.71	3	\$11,954.13
TriCaster Mini (w/ Integrated Display and 2 Internal Drives) HD Production assistant/switcher	TriCaster TCMiniHD4i	\$7,995.00	\$7,054.41	1	\$7,054.41
Crestron DigitalMedia CAT Input Card for DM Switchers	Crestron Electronics, Inc DMC-CAT	\$1,100.00	\$662.65	1	\$662.65



Visual Display

Description	Manufacturer	MSRP	Price	Qty	Ext. Price
RCA Analog Video Input Card w/Analog Audio for DM Switchers	Crestron DMC-VID-RCA-A	\$650.00	\$391.57	2	\$783.14
TT-12i Document Camera	Elmo 1341	\$885.00	\$713.25	1	\$713.25
Samsung 21.5" LED LCD Monitor - 16:9 - 5 ms - Adjustable Display Angle - 1920 x 1080 - 16.7 Million Colors - 250 Nit - 1,000:1 - Full HD - DVI - VGA - DisplayPort - USB - 26 W - Matte Black - ENERGY STAR 6.0, EPEAT Gold, TCO Displays 5.0, Eco-lab	Samsung S22C650D	\$232.99	\$235.28	9	\$2,117.52
Visual Display Subtotal					\$40,264.84

Switchers/Routers/Distribution

Description	Manufacturer	MSRP	Price	Qty	Ext. Price
Crestron 16x16 DigitalMedia Switcher - 2048 x 1152 - UXGA, WUXGA - 408p, 480i, 576i, 576p16 x 16	Crestron Electronics, Inc DM-MD16x16	\$8,600.00	\$5,058.82	1	\$5,058.82
DigitalMedia 8G+™ Input Card for DM® Switchers	Crestron DMC-C	\$1,100.00	\$662.65	4	\$2,650.60
4K HDMI® Input Card for DM® Switchers	Crestron DMC-4K-HD	\$800.00	\$481.93	5	\$2,409.65
Crestron DVI/RGB Input Card for DigitalMedia Switchers - 2048 x 1152 - UXGA, WUXGA - 1080p1 x 1	Crestron Electronics, Inc DMC-DVI	\$800.00	\$481.93	2	\$963.86
2-Channel HDMI® Output Card for DM® Switchers	Crestron DMC-HDO	\$700.00	\$421.69	5	\$2,108.45
2-Channel 4K DigitalMedia 8G+™ Output Card for DM® Switchers	Crestron DMC-4K-CO-HD	\$1,300.00	\$783.13	3	\$2,349.39



Switchers/Routers/Distribution

Description	Manufacturer	MSRP	Price	Qty	Ext. Price
DigitalMedia 8G+™ Receiver & Room Controller w/Scaler	Crestron DM-RMC-SCALER-C	\$1,400.00	\$843.37	5	\$4,216.85
DigitalMedia 8G+ Transmitter 201	Crestron Electronics, Inc DM-TX-201-C	\$1,300.00	\$783.13	5	\$3,915.65
Atlona AT-HD530 HDMI/DVI Comp. & S Video	ATLONA ATHD530	\$302.00	\$251.81	1	\$251.81
Cable Cubby 202 US	Extron 60-1399-02	\$390.00	\$234.94	1	\$234.94
Switchers/Routers/Distribution Subtotal					\$24,160.02

Audio

Description	Manufacturer	MSRP	Price	Qty	Ext. Price
15" Shock-Mounted Gooseneck, Cardioid, Less Preamplifier	SHURE MX415LP/C	\$226.00	\$190.36	10	\$1,903.60
Shure Microflex Desktop Base	Shure, Inc MX400DP	\$239.00	\$191.57	10	\$1,915.70
Saros® 8" 2-Way Surface Mount Speaker, White Textured, Single	Crestron SAROS_SR8T-W-T-EACH	\$350.00	\$210.84	2	\$421.68
Saros® Express 8" 2-Way In-Ceiling Speaker, White Textured, Single	Crestron SAROS_ICE8T-W-T-EACH	\$298.00	\$179.52	4	\$718.08
Multi-Channel Amplifier	Crown CTs4200A	\$2,169.59	\$1,224.10	1	\$1,224.10
Audio Subtotal					\$6,183.16



Video Conference/Collaboration

Description	Manufacturer	MSRP	Price	Qty	Ext. Price
Lifesize Icon 800 - Dual Display, 1080P - Codec Only	Lifesize 1000-0000-0890	\$11,699.00	\$7,845.21	1	\$7,845.21
SMART Podium 24" LCD Touchscreen Monitor - 16:9 - 5 ms - Infrared - 1920 x 1080 - Full HD - Adjustable Display Angle - 16.8 Million Colors - 580:1 - 180 Nit - DVI - USB - VGA - RoHS, WEEE - 2 Year	SMART Technologies, Inc SP524-SMP	\$4,199.00	\$3,540.96	1	\$3,540.96
Lifesize Cloud 10 - Up to 10 users -1 yr subscription*	Lifesize 3000-0000-0013	\$0.00	\$3,486.72	1	\$3,486.72

Video Conference/Collaboration Subtotal **\$14,872.89**

Control System

Description	Manufacturer	MSRP	Price	Qty	Ext. Price
V-Panel™ 20" VESA Mount HD Touch Screen Display, Black	Crestron TSD-2020-B	\$2,000.00	\$1,176.47	1	\$1,176.47
Digital Graphics Engine, DM CAT & HDMI, Dual-Window HD Video	Crestron DGE-2	\$8,000.00	\$4,705.88	1	\$4,705.88
Wall Plate 4K DigitalMedia 8G+™ Receiver, White Textured (Decorator faceplate not included) [Just Released]	Crestron DM-RX1-4K-C-1G-W-T	\$700.00	\$421.69	1	\$421.69
10.5" Touch Screen, Black Smooth	Crestron TSW-1050-B-S	\$2,400.00	\$1,411.76	1	\$1,411.76
Tabletop Kit for TSW-1050 Black Smooth	Crestron TSW-1050-TTK-B-S	\$250.00	\$150.60	1	\$150.60
1-to-8 4K HDMI® Distribution Amplifier	Crestron HD-DA8-4K-E	\$1,000.00	\$602.41	1	\$602.41
1-to-2 4K HDMI® Distribution Amplifier	Crestron HD-DA2-4K-E	\$300.00	\$180.72	1	\$180.72



Control System

Description	Manufacturer	MSRP	Price	Qty	Ext. Price
4.3" Room Scheduling Touch Screen, Black Smooth	Crestron TPMC-4SM-B-S	\$1,100.00	\$647.06	8	\$5,176.48
TableTop Kit for TPMC-4SM(D) & TPCS-4SM(D), Black Smooth	Crestron TTK-4SM-B-S	\$200.00	\$117.65	8	\$941.20
Control System Subtotal					\$14,767.21

Misc Hardware

Description	Manufacturer	MSRP	Price	Qty	Ext. Price
MISCELLANEOUS CABLING/HARDWARE/MATERIALS NECESSARY TO COMPLETE INSTALLATION.	DPI-MISC-MATERIALS	\$0.00	\$3,530.78	1	\$3,530.78
Electric Lift Roll-about Podium Large top surface to support monitors, laptops and room control systems. Inside compartment with an 12RU rack frame for additional equipment and a PC/storage compartment. 2 locking doors. 4" heavy duty casters (2 lock) Di	VFI PDYZ35	\$5,999.00	\$3,528.24	1	\$3,528.24
Misc Hardware Subtotal					\$7,059.02

Service Agreements

Description	Manufacturer	MSRP	Price	Qty	Ext. Price
Bronze Maintenance Agreement - 1 Year Bronze Maintenance Agreement includes unlimited and toll-free technical assistance by phone or video, on-site response time within 24 business hours, warranty processing and UPS ground shipping, additional end-user training	SVC-BRONZE 1 YEAR	\$8,584.57	\$7,500.00	1	\$7,500.00
Lifesize Icon 800 - LAMS (1-year)	Lifesize 1000-2100-1172	\$0.00	\$758.80	1	\$758.80
Service Agreements Subtotal					\$8,258.80



Services

Description	Extended Price
LABOR	\$15,960.00
Labor Installation/Integration and Testing of System (2 man crew)	
DESIGN/ENGINEERING	\$1,250.00
Design/Engineering and documentation	
PROJECT MANAGEMENT	\$2,000.00
Project Management	
PROGRAMMING	\$14,700.00
Control System Development and Programming	
LODGING/PER DIEM	\$3,500.00
Services Subtotal	\$37,410.00

Quote Summary

Description	Amount
Visual Display	\$40,264.84
Switchers/Routers/Distribution	\$24,160.02
Audio	\$6,183.16
Video Conference/Collaboration	\$14,872.89
Control System	\$14,767.21
Misc Hardware	\$7,059.02
Services	\$37,410.00
Service Agreements	\$8,258.80
Subtotal	\$152,975.94
Total	\$152,975.94

Taxes, shipping, handling and other fees may apply. We reserve the right to cancel orders arising from pricing or other errors.



Notes

1. To avoid delay in processing your Purchase Order, please insure that the following information is included with your Order:

- **Bill To Address with Contact Person and Phone Number.**
- **Ship To Address with Contact Person and Phone Number.**
- **Reference that Order is issued under DIR ICT Co-op Contract # DIR-SDD-2011.**

Missing information may delay the processing and fulfillment of your order.

2. Standard Ground shipping charges to location indicated on customer Purchase Order are included in the prices shown above. If Ship To address and Installation address are not the same, Customer will be responsible for transporting equipment to the installation location. When taking receipt of delivery, note any shortages or damage to packaging on the shipping document and communicate in writing such information to Data Projections immediately.

3. Pricing does not include any network provisioning and/or trouble shooting of customer network. All IP addressing and H.323 QoS requirements, including network reconfiguration of and/or upgrades to the data network and LAN/WAN hardware/software, are the responsibility of the customer and not Data Projections.

Hub Certification:

The Texas Comptroller of Public Accounts (CPA) has certified Data Projections Inc. as a Historically Underutilized Business (HUB). Certificate/VID Number 1760326022903, File/Vendor Number 85833.



Statement of Performance

TERMS AND CONDITIONS

Proprietary Notice

This proposal contains confidential information and intellectual property of Data Projections, Inc.(DPI), and may be legally privileged. Recipient agrees not to reproduce or make this information available in any manner to persons outside the group directly responsible for evaluation of its contents.

Payment Schedule

The total for this proposal/project is presented as a “not to exceed” unless DPI and the “client” agree to add hardware, software or functionality not specifically addressed in this Statement of Work (SOW)/Executive Summary.

Client will pay DPI the total presented in this proposal in payments as follows:

- 50% down payment upon proposal acceptance prior to equipment procurement by DPI.
- Balance for remaining hardware and services is to be paid upon client sign off (see “Project Methodology” below), Net 30 (US funds only).
- Interest may be charged after maturity at the rate of two percent (2%) per month on the unpaid balance.

Project Methodology

DPI project methodology follows the Project Management Institute (PMI) standards for project management. The five phases are (1) Initiating Process, (2) Planning Process, (3) Executing Process, (4) Monitoring and Controlling Process, and (5) Closing Process. The activities required in each phase to complete the install and commissioning of products are described following.

INITIATING PROCESS: Project Acceptance; Receive signed and executed Proposal/PO, order product upon negotiated down payment.

PLANNING PROCESS: Initial Project planning to determine schedule, resources. Logistics, finalizing design documents.

EXECUTING PROCESS: Install and configure proposed system(s).

MONITORING & CONTROLLING PROCESS: (1) End-to-end testing of system, (2) User Acceptance testing, (3) Client sign off of substantial completion / beneficial use, and (4) Identify any performance exceptions to the system.

CLOSING PROCESS: (1) End user knowledge transfer, (2) Remedy any exceptions, and (3) Identify the beginning of the Warranty Period and turn over to DPI Service

Assumptions and Exceptions

Room(s) where installation is to be completed are to be made available for DPI’s exclusive use on the days of the scheduled installation. Unless specifically arranged in advance, rooms will be available during normal business hours, defined as Monday through Friday, 8:00 AM to 5:00 PM. Any work required outside these or other mutually agreed to hours could be subject to additional overtime, holiday or other rates. All required spaces (rooms, access points, etc.) must be available at the start of the installation and remain available for the duration of the Project. Any required space that is unavailable during the scheduled installation timeframe may result in delayed delivery of the Project and/or additional charges. Additional rates will only be applied after execution of DPI generated Project Change Request according to the Change Management Procedure section following and signed approval by Owner or Owner’s representative.

The project schedule must allow for sufficient time for completion of all installation and final testing of systems prior to occupancy of the site. If sufficient time is not allowed, DPI will be held harmless for systems that do not meet requirements. In this case, all costs associated with completion of work, including overtime labor rates, will be considered outside the scope of this offering and billable to the Client.



Unless otherwise stated, the installation shall be scheduled contiguously from start to finish. Projects requiring multiple site visits and/or intervals of inactivity between events must be noted as such prior to acceptance of this SOW. If notification is made after initial acceptance of this SOW, Change Management Procedure section following shall be implemented and additional charges may apply.

DPI reserves the right to revise the proposal/scope of work based upon information obtained from subsequent site surveys and other sources not available at the time of that the original proposal was issued. Any such revision will follow the Change Management Procedure section following.

DPI reserves the right to substitute equipment of similar specifications should any of the specified equipment be unavailable at time of order from the manufacturer. This will be done in an effort to maintain the completeness of the proposed audiovisual system and meet the anticipated installation schedule.

DPI makes no guarantees or warranty as to suitability or compatibility of any owner furnished equipment (OFE) that may be integrated into this proposed system. Any OFE shall be integrated only at clients request, and will be installed in "as-is" condition at the time of installation. Should incompatibilities manifest, DPI Engineering shall propose solution via Change Management Procedure outlined below, and cost of all remedies will be borne by the Client.

Change Management Procedure

Any changes to the Scope of the project, equipment or materials to be used must be in writing signed by the Customer and an authorized representative of Data Projections, Inc. Oral changes to the project scope, equipment or materials shall not be binding upon the parties. Changes may impact the ability of Data Projections, Inc. to deliver the desired solution per the original terms of the Contract. After acceptance of this Scope of Work, such signed and approved change orders will be incorporated by reference into and become part of this Contract and will be processed in accordance with the Change Management Procedure detailed below.

0. A Project Change Request (PCR) form will be the initial vehicle for communicating change.
0. The PCR must describe the change, the reason for the change, and the impacts the change will have on the Project, including any anticipated charges or credits.
0. The designated Project Manager of the requesting party will review the proposed change and determine whether to submit the request to the other party.
0. Following Client submission of a PCR, DPI Project Management will agree to a response date and then review the submitted Change Request.
0. Upon review of the request, DPI will document the impact of the change and also approve the change or document why the change was not approved. A formal Customer Change Order (CCO) shall be generated by DPI Design/Engineering and Project Management detailing any additional equipment and/or labor charges required.
0. Customer Change Order shall be submitted to the Client for review and approval.
0. Customer Change Orders must be approved and signed by both parties to authorize implementation of the changes.
0. The implementation of changes made by the Owner via approved Customer Change Order during the Project and after acceptance of the above Scope of Work will be billed at the rates identified in the Customer Change Order.

Client Responsibilities/Room Readiness

The following describes the physical conditions we require at the site in order to bring equipment into the designated area. These "room-ready" conditions have been developed to insure proper site conditions that pose no compromise to the proper operation and performance of the equipment. Further, they will allow our installation technicians to work at maximum efficiency insuring timely completion. Where reasonable or possible:

- All 120V electrical provisions (Specifications provided by DPI after executed agreement)
- All Mains Power (Electrical) provisions. All AC receptacles and power with feed to all equipment must be independently grounded and be on the same phase. If DPI discovers improper grounding or phasing to be the cause of functional anomalies, Client will remedy without penalty or cost to DPI.
- Low Voltage Interfaces: Only those low voltage interfaces specifically included on the attached equipment list are



included in this offering. All owner furnished equipment is assumed to be supplied with the appropriate low voltage interface and low voltage interfaces required to connect to any systems furnished and/or installed by others, are assumed to be supplied by the installing contractor.

- All conduit and raceway as required by local code.
- Conveyance (pathway) for AV cabling – includes any core drilling or structural modifications (Specifications and call-outs provided by DPI after executed agreement).
- Equipment Delivery: Prior to the delivery of all equipment and electronics, all spaces are "broom-clean" and the site is free of dust and dirt. All construction, including drywall, painting, ceilings, flooring and millwork is complete. If, at the discretion of the Client, equipment is brought to site before it is clean, functionality, longevity and warranties may be compromised.
- OSHA Requirements: Prior to commencement of work by DPI, the job site must meet OSHA requirements for a healthy workplace. Appropriate safety policies should be set, maintained, and enforced by all work forces.
- Any room remediation that may be required for the installation of the equipment relevant to this Project.
- All alteration, cutting, drilling and remediation of millwork, casework, furniture, trim, patching, painting and refinishing.
- Modification or replacement of ceiling tiles and/or grid.
- All hazardous material discovery and/or abatement.
- All required permits, plan approvals, inspection and compliance procedures.
- All conduits, back boxes, raceway and other distribution/infrastructure items required to support the system(s) as designated by DPI Engineering design documentation and/or applicable electrical codes.
- All "Hard Points" for mounting of equipment. When in doubt, the Customer should contact a certified Structural Engineer for safety factors. ("Hard Points" are defined as structural reinforcement and/or connection points for equipment specific mounting devices provided within this offering.)
- All in-wall blocking required to support AV equipment or displays shall be furnished and installed by others.
- Telephone and/or Data Network infrastructure.
- Firewall configuration for videoconference traffic (DPI to provide firewall configuration information).
- Vibration, Ambient Noise and Acoustics: Excessive vibration may cause certain equipment (i.e. ceiling mounted video projectors and microphones) to exhibit functional anomalies. Conference and recording systems, which employ open microphones, may not perform properly if excessive ambient noise or reverb is present. If any of these conditions exist, DPI will be held harmless; costs associated with remedy of these conditions will be considered billable to the Client.
- Delivery and Acceptance: The Client agrees to designate a representative who will have the authority to sign for delivery of equipment. Client is responsible for the security and loss liability of all delivered equipment. Acceptance of delivery does not imply that systems have been accepted as functional. Unless other arrangements are made, a secure, lockable space will be furnished for storage of equipment and material.

No Hire Policy

During the term of the Contract, and for a period of one (1) year after the termination of the Contract, or the completion of the Project, whichever is later, the Client agrees that it will not, either directly or indirectly, hire, employ, retain, offer to employ, or solicit the employment of, any individual that was employed by DPI during the term of the Contract, nor will Client attempt to do any of the foregoing. In the event Client breaches this provision, the parties agree that it would be difficult to establish the precise amount of damages incurred by DPI as a result of such conduct, and therefore the parties agree that immediately upon hiring said individual, Client shall pay to DPI an amount equal to 50% of the gross annual salary or wages paid to the individual in question during the twelve months prior to the termination of that individuals employment with DPI.



DATA
PROJECTIONS

**PLEASE RETURN ELECTRONICALLY TO YOUR
ACCOUNT REPRESENTATIVE:**

NAME:	
PHONE:	
EMAIL:	

CUSTOMER ID #

NEW CUSTOMER INFORMATION

GENERAL INFORMATION

CUSTOMER NAME			
STREET ADDRESS		CITY	STATE
PHONE		FAX	
TYPE OF BUSINESS	DATE BUSINESS STARTED	CHECK THE FOLLOWING THAT APPLIES: <input type="checkbox"/> CORPORATION <input type="checkbox"/> GOVERNMENT <input type="checkbox"/> LLC <input type="checkbox"/> PARTNERSHIP <input type="checkbox"/> PROPRIETORSHIP	
COUNTY WHERE BUSINESS IS LOCATED	STATE OF INCORPORATION	AMOUNT OF CREDIT REQUESTING	

OWNERSHIP INFORMATION

OFFICER/PARTNER NAME	% OWNERSHIP	TITLE
OFFICER/PARTNER NAME	% OWNERSHIP	TITLE
OFFICER/PARTNER NAME	% OWNERSHIP	TITLE

ACCOUNTS PAYABLE INFORMATION

ACCOUNTS PAYABLE CONTACT	ACCOUNTS PAYABLE PHONE #	ACCOUNTS PAYABLE FAX #
ACCOUNTS PAYABLE E-MAIL ADDRESS *MANDATORY*	SALES TAX EXEMPT (Y/N)	IF YES, ATTACHED SALES TAX EXEMPTION CERTIFICATE

BILLING ADDRESS

CITY	STATE	ZIP CODE
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PURCHASING INFORMATION

AUTHORIZED PURCHASER NAME	AUTHORIZED PURCHASER PHONE #	AUTHORIZED PURCHASER E-MAIL ADDRESS
AUTHORIZED PURCHASER NAME	AUTHORIZED PURCHASER PHONE #	AUTHORIZED PURCHASER E-MAIL ADDRESS

THE INFORMATION PROVIDED IN THIS CREDIT APPLICATION IS GIVEN FOR THE PURPOSE OF OBTAINING CREDIT AND IS WARRANTED TO BE TRUE. WE UNDERSTAND THAT THIS INFORMATION WILL BE HELD IN STRICT CONFIDENCE AND WILL BE USED BY DATA PROJECTIONS, INC. IN APPROVING A LINE OF CREDIT. THE UNDERSIGNED AGREES THAT THE PAYMENT TERMS FOR PURCHASES ON CREDIT SHALL BE NET 30 DAYS FROM THE DATE OF INVOICE. INVOICES UNPAID AFTER 30 DAYS MAY BE SUBJECT TO A MONTHLY SERVICE CHARGE OF 1.5% (18% ANNUALLY) AND/OR MAY CAUSE FUTURE ORDERS TO BE DELAYED.

SIGNATURE	DATE
PRINTED NAME	TITLE

CUSTOMER ID #

FOR INTERNAL USE ONLY

CUSTOMER NAME

INITIAL ORDER INFORMATION

CHECK THE FOLLOWING TYPE OF TRANSACTION:

 DROPSHIP INSTALL SERVICE

IF DROP SHIP, SUMMARY OF PRODUCT ORDERED

AMOUNT OF INITIAL ORDER

NAME OF BUYER

CUSTOMER PO#

SHIPPING ADDRESS (IF DIFFERENT FROM ABOVE)

CITY

STATE

ZIP

CHECK THE TYPE OF SALE:

 EDUCATION CORPORATION HIGHER EDUCATION
 GOVERNMENT HEALTHCARE

SALESPERSON ID #

PAYMENT INFORMATION

CHECK THE FOLLOWING THAT APPLIES:

 CREDIT CARD SALE PRE-PAYMENT NET 30

SALES TAX EXEPMT:

 YES NO**IF THE CUSTOMER IS SALES TAX EXEMPT, PLEASE ATTACH A SALES TAX EXEMPTION CERTIFICATE OR FAX TO ACCOUNTING AT 713-953-0779:****ACCOUNTING WILL SET UP CUSTOMER AS TAXABLE UNTIL THE SALES TAX EXEMPTION CERTIFICATE IS RECEIVED.****ACCOUNTING USE ONLY**

LINE OF CREDIT GRANTED

DATE APPROVED

APPROVED BY

BUYER VERIFIED

SHIPPING ADDRESS VERIFIED

PHONE # VERIFIED



Maintenance Agreement

The Maintenance Agreement for Audio/Visual Presentation Systems

Our Bronze Maintenance Program minimizes risk and solves service issues quickly and efficiently to provide our clients with optimal usage of their audio/visual solution without extended delay. As an authorized reseller and service center for many manufacturers, Data Projections has built an infrastructure of qualified and experienced service technicians. Our technicians receive a series of audio/visual industry certifications and intensive manufacturer training to obtain product knowledge and provide exceptional service.

48 Hour On-Site Technical Response

Data Projections will assist you via phone (1.866.225.5374) for initial evaluation and troubleshoot information. If the issue is unresolved via phone, a technical representative will arrive at your location within eight business hours of your call to assess the issue(s) with your A/V solution.

Installation of Replacement Lamp

Data Projections will replace any purchased lamp for the projector(s) covered under the Maintenance Agreement. Lamp must be purchased from Data Projections.

(*If applicable and upon availability)

Technical Assistance by Phone

Data Projections will provide free unlimited and toll-free technical assistance by phone. Data Projections will provide a two business hour response time to any of your phone support needs.

UPS Ground Shipping

Data Projections will provide UPS ground shipping associated with the return of your A/V product to manufacturer repair center. Crating or special packaging required for the return of products will be included at no additional charge to client.

Processing of Manufacturer Warranties

Data Projections will process all manufacturer warranty claims per manufacturer limited warranty. Data Projections will return any equipment under the agreement to and from the manufacturer to be repaired.

Training Overview

Data Projections will provide one additional training overview session during the agreement period. The session can be used to refresh existing skills or train new employees to help you achieve maximum performance of your A/V solution.

Videoconference - Network/Hardware Troubleshooting

If it is determined that the client network is at fault, our technicians will troubleshoot and work directly with the client IT department of the IP/ISDN network provider to help resolve any issues. All reasonable efforts will be made to ensure video quality and reliability.

Data Projections is not responsible for the cost of parts and labor associated with the repair of equipment unless manufacturer warranty supplies reimbursement of said repairs to Data Projections in full. Parts and labor required for repairs are the responsibility of the client, but will be discounted 35% from published pricing. All after-hour, weekend and holiday service charges are billed at time and a half. The maintenance program shall commence on the first day of system completion or customer use, whichever is earlier, and continue for one full year. Any client outside of a 50 mile radius from the nearest Data Projections location will require adjustment to the above on-site technical response time, depending on travel requirements.

www.dataprojections.com / 1.866.CALL.DPI

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Panasonic

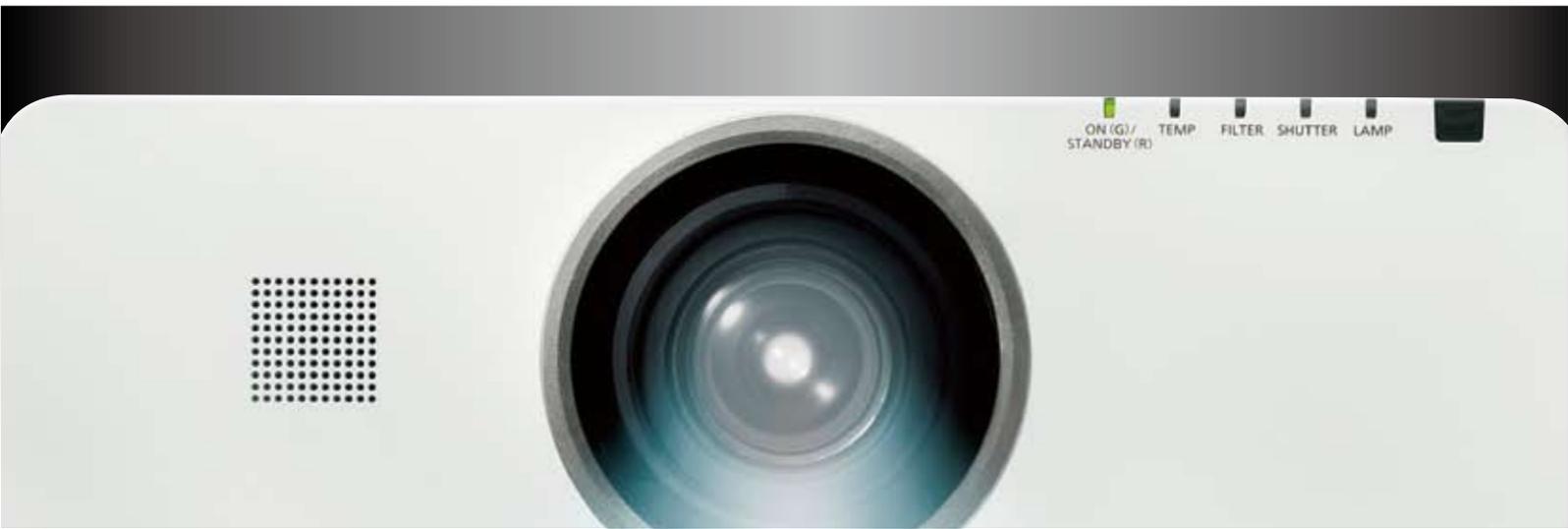
ideas for life

PT-EZ570 Series

LCD Projectors

PT-EZ570/EZ570L
PT-EW630/EW630L
PT-EX600/EX600L
PT-EW530/EW530L
PT-EX500/EX500L

Bright, Ecological Projectors with Excellent System Flexibility



Classrooms

Lecture rooms

Meeting rooms



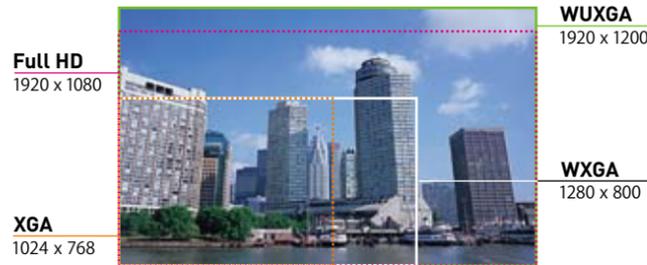
Quality Images with High Brightness

Compact, Yet Bright and High Contrast

Even with its light, compact body, the PT-EZ570 Series produces brightness of up to 6,000 lm¹. In addition, the iris automatically adjusts itself to match the situation, resulting in high contrast ratio of up to 5,000:1².

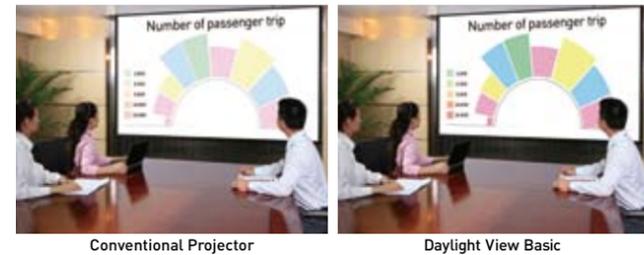
Full-HD Ready WUXGA Resolution (PT-EZ570/L)

In response to the increasing popularity of widescreen image viewing, including Blu-ray content, the PT-EZ570/L features native WUXGA resolution for full-HD viewing. This brings you lifelike projection of intricate, highly detailed images.



The Daylight View Basic Function Ensures Clear Images Even in Brightly Lit Rooms

Panasonic's Daylight View Basic technology achieves sharp, easy-to-see images by clearly reproducing the details in dark image areas, which were previously difficult to see in brightly lit rooms. A built-in sensor measures the ambient light, and the Daylight View Basic function adjusts the halftone color and brightness level according to the surrounding illumination.



Ecology-Conscious Reliability

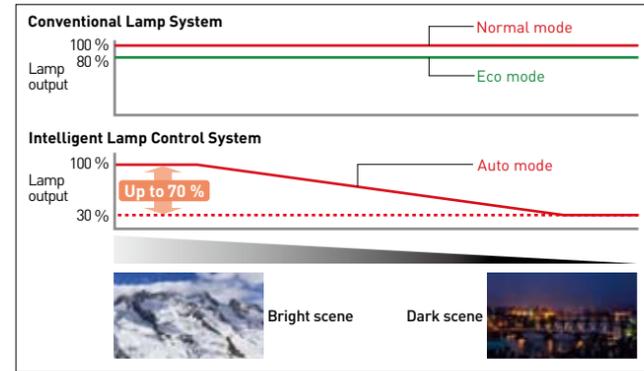
A Dust-Resistant Cabinet Design and an Eco Filter that Needs No Replacement for 12,000 Hours³

The cabinet is designed with a straight airflow path, from intake to exhaust. The shielding of the lens section, where dust is likely to enter, has been further improved to keep dust out. And the sealing performance of the air filter unit and air intake duct has been increased to prevent the entry of dust from the filter periphery, resulting in a highly dust-resistant structure. The Eco Filter unit, which efficiently captures dust in the intake airflow path, requires no replacement for 12,000 hours³. And the large, pleated Micro Cut Filter [electrostatic filter] uses an ion effect to trap minute dust particles, further raising the overall dust-trapping capability. These features minimize the entry of dust into the optical block and maintain brightness over a long period of time, while reducing the hassle of maintenance. Also, in addition to achieving a long replacement cycle, the Eco Filter can be washed with water⁴ and reused as an environmental consideration.



Intelligent Lamp Control System Reduces Power Consumption

When the lamp power is set to Auto, the intelligent lamp control system automatically adjusts the lamp output in accordance with the brightness of the projected image and reduces it by up to 70%⁷. It also combines with color shift correction, which corrects the shift in the color balance that occurs when the lamp output drops. As a result, power consumption is effectively reduced while excellent color reproduction is maintained.



Inorganic Materials Maintain Image Quality Longer

The PT-EZ570 Series projectors' optical block maintains a high level of performance over time, due to the use of inorganic materials in the LCD panels and polarizers, thus achieving a replacement cycle of 10,000 hours. It also makes them the logical choice for a truly dependable LCD projector system.

Lamp Replacement Cycle of up to 4,000 Hours⁵

The PT-EZ570 Series projectors feature a lamp replacement cycle of up to 4,000 hours. This helps to lower operating costs by providing longer usage between lamp replacements.

Environmentally Friendly Standby Power Consumption of Only 0.4 W⁶

When the Standby mode is set to Eco, the standby power consumption is low at 0.4 W. This lowers running costs, and helps to reduce environmental impact.

Eco Management Functions

A number of functions are provided to reduce power consumption. They adjust the brightness according to ambient light conditions, and reduce the lamp power when there is no signal input or the projector is in AV Mute mode*. You can easily set the Eco Management functions according to operating conditions by using the ECO button on the remote control.

* PT-EW530/L, PT-EX500/L only



High Brightness, Image Quality and Reliability From Educational to Business Applications

The PT-EZ570 Series projectors provide high brightness and superb contrast in spite of their compact body.

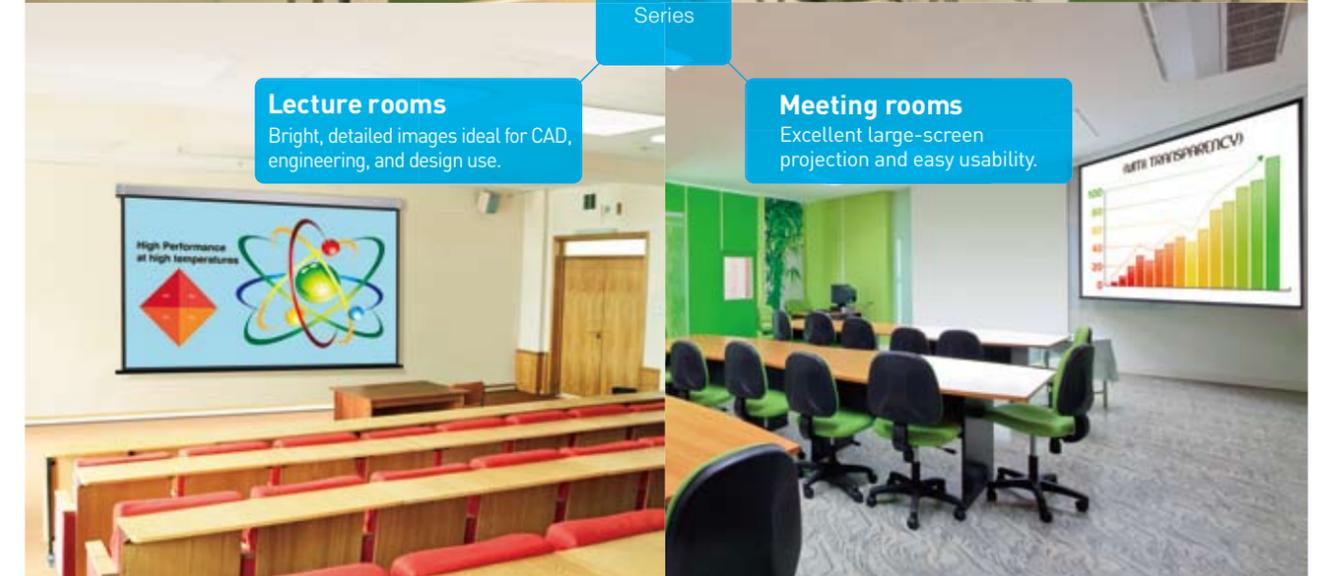
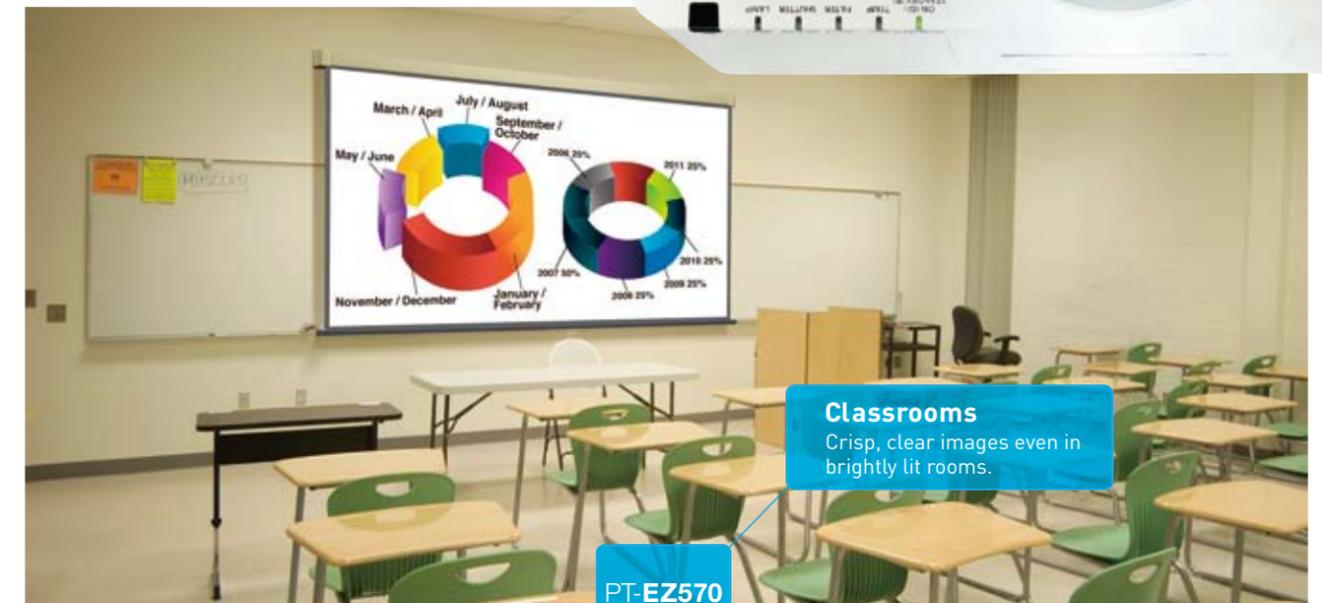
The unique Daylight View Basic function allows them to project crisp, high-resolution images without having to dim the room light.

From classrooms in elementary and high schools to university lecture rooms, engineering or art classes, and company meeting rooms, these advanced projectors produce bright, easy-to-see images for all kinds of applications.

They also feature an ecological design that lowers power consumption, flexibility in installation, and easy maintenance.

PT-EZ570/EZ570L*	5000 lm	5000:1	WUXGA
PT-EW630/EW630L*	5500 lm	5000:1	WXGA
PT-EX600/EX600L*	6000 lm	5000:1	XGA
PT-EW530/EW530L*	4500 lm	2000:1	WXGA
PT-EX500/EX500L*	5000 lm	2000:1	XGA

The PT-EZ570L/PT-EW630L/PT-EX600L/PT-EW530L/PT-EX500L Series is sold without lenses. The specifications are the same as those of the PT-EZ570 Series.

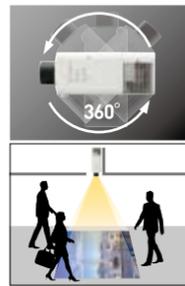


* Product numbers vary depending on the market. The general guideline is as follows: The product numbers in the Americas and Taiwan are PT-EZ570U/PT-EZ570UL, PT-EW630U/PT-EW630UL, PT-EX600U/PT-EX600UL, PT-EW530U/PT-EW530UL and PT-EX500U/PT-EX500UL. The product numbers in Europe, CIS, Asia (except Taiwan), Oceania, Middle East, and Africa are PT-EZ570E/PT-EZ570EL, PT-EW630E/PT-EW630EL, PT-EX600E/PT-EX600EL, PT-EW530E/PT-EW530EL and PT-EX500E/PT-EX500EL.

System Integration Flexibility and Easy Maintenance

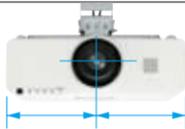
Flexible Installation

The wide adjustment range of the powered horizontal/vertical lens shift function assures convenience and versatility during installation. It lets you easily make adjustments with the remote control. The unit can also be rotated 360 degrees vertically. This means you can install it at any angle you want, to accommodate different installation conditions.



Lens-Centered Design

A lens-centered, symmetrical design provides ease of installation, eliminating the need for special considerations when planning the installation site.



A Wide Selection of Optional Lenses

Choose from a wide lineup of lenses for your system, including short-throw, long-throw zoom and fixed-throw lenses for rear projection use. The additional lenses make it easy to adapt your projector to the installation site. The lenses attach and detach with one-touch ease.

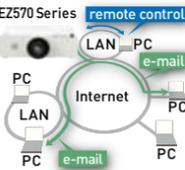


Corner Keystone Correction* Enables Angled Projection

All you need to do is designate four points as the corners of the projected image, and this function automatically carries out horizontal and vertical keystone correction. * PT-EZ570/ET-ELW20/ET-ELT21 only.

Web Browser Control/Monitoring and E-mail Message Alert

The PT-EZ570 Series can be easily operated remotely over a LAN network, because it is all done using the computer's familiar web browser. Furthermore, the projector sends an e-mail message to notify the operator when an error has occurred, or a lamp needs to be replaced.



Multi Projector Monitoring & Control Software

Panasonic's original freeware, "Multi Projector Monitoring & Control Software," allows the user to control and monitor multiple projectors at the same time via LAN. Projectors can be scheduled to turn on and off at a certain hour everyday. When a problem occurs, an alarm message is sent to the monitoring/controlling PC.

PJLink™ Compatibility



The LAN terminals support PJLink™ Class 1 connection, which is highly convenient for system construction.

Crestron RoomView™ Compatibility

The LAN terminal allows a computer connected to the network to use Crestron RoomView™ application software to manage and control system devices.

Abundant Terminals Including HDMI and DVI-D Inputs

Extensive interfaces include HDMI and DVI-D input terminals, two sets of computer (RGB) input terminals, and a serial (RS-232C) terminal for external control. It is also possible to output audio during Standby mode. This is convenient when connecting an external audio system through the projector.



Built-in 10-W Speaker

The PT-EZ570 Series projectors feature a high-output 10-watt monaural speaker that produces a large sound volume without requiring external speakers.

Quiet 31-dB⁸ Design Does Not Interrupt Meetings or Classes

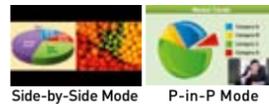
The quiet design keeps noise levels down to 31-dB, so the sound of the cooling fan is hardly noticeable. This helps the audience to keep their attention on the speech when someone is giving a presentation or on the screen images during quiet scenes.

Side-by-Side and P-in-P Function⁹ for Effective Presentations and Lectures (PT-EZ570/L, PT-EW630/L, PT-EW530/L)

Two different image sources can be simultaneously displayed onto a single screen. You can also switch to P-in-P (Picture-in-Picture) mode and display a sub-window onto the main screen.

The sub-window can be positioned at any of the four corners (upper left, upper right, lower left, lower right)

to expand the usable area as only a wide-screen projector can do.



Effective Theft Prevention with the Startup Logo

You can change the default Panasonic start up logo to your desired logo. A new logo can be easily uploaded by connecting a computer to the PT-EZ570 Series through the LAN or serial connection by using the Logo Transfer Software*. An abundance of other security measures are also included, such as a security bar, a user password and a control panel lock.

* Uploadable still images are limited to 1024 x 768 pixel bitmap files. Also, the application will reduce the number of colours to 191.



Easy Lamp and Air Filter Replacement

For easy maintenance, you can replace the filter from the side and the lamp from the top of the projector. The filter and lamp are easily replaced even after the projector is installed on the ceiling.



Mechanical Lens Shutter (PT-EZ570/L, PT-EW630/L, PT-EX600/L)

The mechanical lens shutter completely blocks annoying light leakage when the projector is on standby or temporarily not in use, such as during a meeting.

Direct Power Off

The cooling fan continues to operate even when the main power switch is turned off after projection is finished. This also allows the power to be turned off by directly switching off the room's main breaker for systems, such as ceiling mounted systems, where the main power switch cannot be reached.

Other Valuable Features

- Closed caption decoder built-in for the US market. (NTSC only)

Ecology Conscious Design

- No halogenated flame retardants are used in the cabinet.
- Lead-free glass is used for the lens.
- Lamp power switching further reduces power consumption.
- "ECO" button on the remote control.
- Standby power consumption of only 0.4 W*⁶ has been achieved.
- RoHS compliant.

* In STANDBY MODE set to ECO, network functions such as power on over the LAN will not operate. Also, only certain commands can be received for external control using the serial terminal.
¹ The PT-EX600/L has 6,000 lm, PT-EW630/L 5,500 lm, PT-EZ570/L and PT-EX500/L 5,000 lm, and PT-EW530/L has 4,500 lm of brightness.
² For the PT-EZ570/L, PT-EW630/L, PT-EX600/L, PT-EW530/L and PT-EX500/L has 2,000:1 contrast ratio.
³ The usage environment affects the duration of the filter.
⁴ When washing with water, please follow the procedures listed in the operating instructions. Also, we recommend replacing the filter with a new one after it has been washed and reused twice. If the filter is not sufficiently clean after washing, replace it with a new one.
⁵ With the lamp power set to Eco 1/Eco 2. Up to 3,000 hours with the Lamp power set to Normal.
⁶ When the Standby mode is set to Eco, network functions such as power on over the LAN will not operate. Also, only certain commands can be received for external control using the serial terminal.
⁷ With the lamp mode set to auto.
⁸ With the lamp power set to Eco 1 or Eco 2. 37 dB with the lamp power set to Normal.
⁹ This function is not effective for some source combinations.

Projection distance

Diagonal image size	Projection distance [L]										Height from the edge of screen to center of lens [H]	
	ET-ELW20		Standard lens		ET-ELT20		ET-ELT21		ET-ELW21		ET-ELW20/Standard/ET-ELT20/ET-ELT21	ET-ELW21
	1.3-1.7:1		1.7-2.8:1		2.8-4.6:1		4.6-7.2:1		0.8:1			
Throw ratio (16:10 aspect ratio)	min.[wide]	max.[tele]	min.[wide]	max.[tele]	min.[wide]	max.[tele]	min.[wide]	max.[tele]	fix			
40"	1017 [3.3]	1407 [4.6]	1357 [4.5]	2354 [7.7]	2290 [7.5]	3807 [12.5]	3716 [12.2]	6029 [19.8]	629 [2.1]		-54 - 592 [-0.20 - 1.90]	269 [0.90]
50"	1285 [4.2]	1772 [5.8]	1710 [5.6]	2954 [9.7]	2891 [9.5]	4787 [15.7]	4699 [15.4]	7589 [24.9]	801 [2.6]		-67 - 740 [-0.20 - 2.40]	337 [1.10]
60"	1553 [5.1]	2137 [7.0]	2063 [6.8]	3554 [11.7]	3492 [11.5]	5767 [18.9]	5681 [18.6]	9149 [30.0]	973 [3.2]		-81 - 888 [-0.30 - 2.90]	404 [1.30]
70"	1822 [6.0]	2502 [8.2]	2416 [7.9]	4155 [13.6]	4093 [13.4]	6747 [22.1]	6663 [21.9]	10709 [35.1]	1145 [3.8]		-94 - 1037 [-0.30 - 3.40]	471 [1.50]
80"	2090 [6.9]	2867 [9.4]	2770 [9.1]	4755 [15.6]	4694 [15.4]	7727 [25.4]	7645 [25.1]	12269 [40.3]	1317 [4.3]		-108 - 1185 [-0.40 - 3.90]	538 [1.80]
90"	2358 [7.7]	3233 [10.6]	3123 [10.2]	5356 [17.6]	5295 [17.4]	8707 [28.6]	8627 [28.3]	13829 [45.4]	1488 [4.9]		-121 - 1333 [-0.40 - 4.40]	606 [2.00]
100"	2626 [8.6]	3598 [11.8]	3476 [11.4]	5956 [19.5]	5896 [19.3]	9687 [31.8]	9609 [31.5]	15389 [50.5]	1660 [5.5]		-135 - 1481 [-0.40 - 4.90]	673 [2.20]
120"	3162 [10.4]	4328 [14.2]	4182 [13.7]	7157 [23.5]	7098 [23.3]	11647 [38.2]	11573 [38.0]	18509 [60.7]	2004 [6.6]		-162 - 1777 [-0.50 - 5.80]	808 [2.60]
150"	3967 [13.0]	5423 [17.8]	5241 [17.2]	8959 [29.4]	8901 [29.2]	14587 [47.9]	14520 [47.6]	23189 [76.1]	2519 [8.3]		-202 - 2221 [-0.70 - 7.30]	1010 [3.30]
200"	5308 [17.4]	7249 [23.8]	7006 [23.0]	11961 [39.2]	11906 [39.1]	19487 [63.9]	19431 [63.7]	30988 [101.7]	3378 [11.1]		-269 - 2962 [-0.90 - 9.70]	1346 [4.40]
250"	6649 [21.8]	9074 [29.8]	8771 [28.8]	14963 [49.1]	14911 [48.9]	24387 [80.0]	24341 [79.9]	38788 [127.3]	4237 [13.9]		-337 - 3702 [-1.10 - 12.10]	1683 [5.50]
300"	7989 [26.2]	10900 [35.8]	10537 [34.6]	17965 [58.9]	17917 [58.8]	29252 [96.0]	29252 [96.0]	46588 [152.8]	5096 [16.7]		-404 - 4442 [-1.30 - 14.60]	2019 [6.60]
400"	10671 [35.0]	14551 [47.7]	14067 [46.2]	23970 [78.6]	23927 [78.5]	39088 [128.2]	39073 [128.2]	62188 [204.0]	6813 [22.4]		-538 - 5923 [-1.80 - 19.40]	2692 [8.80]

Diagonal image size	Projection distance [L]										Height from the edge of screen to center of lens [H]	
	ET-ELW20		Standard lens		ET-ELT20		ET-ELT21		ET-ELW21		ET-ELW20/Standard/ET-ELT20/ET-ELT21	ET-ELW21
	1.3-1.7:1		1.7-2.8:1		2.8-4.6:1		4.6-7.2:1		0.8:1			
Throw ratio (16:10 aspect ratio)	min.[wide]	max.[tele]	min.[wide]	max.[tele]	min.[wide]	max.[tele]	min.[wide]	max.[tele]	fix			
40"	1041 [3.4]	1435 [4.7]	1390 [4.6]	2402 [7.9]	2339 [7.7]	3885 [12.7]	3795 [12.5]	6154 [20.2]	643 [2.1]		-54 - 592 [-0.20 - 1.90]	269 [0.90]
50"	1315 [4.3]	1807 [5.9]	1750 [5.7]	3015 [9.9]	2952 [9.7]	4885 [16.0]	4797 [15.7]	7745 [25.4]	819 [2.7]		-67 - 740 [-0.20 - 2.40]	337 [1.10]
60"	1589 [5.2]	2179 [7.1]	2110 [6.9]	3628 [11.9]	3565 [11.7]	5799 [19.0]	5799 [19.0]	9337 [30.6]	994 [3.3]		-81 - 888 [-0.30 - 2.90]	404 [1.30]
70"	1863 [6.1]	2551 [8.4]	2470 [8.1]	4241 [13.9]	4179 [13.7]	6884 [22.6]	6801 [22.3]	10928 [35.9]	1169 [3.8]		-94 - 1037 [-0.30 - 3.40]	471 [1.50]
80"	2137 [7.0]	2923 [9.6]	2830 [9.3]	4854 [15.9]	4792 [15.7]	7883 [25.9]	7803 [25.6]	12519 [41.1]	1344 [4.4]		-108 - 1185 [-0.40 - 3.90]	538 [1.80]
90"	2411 [7.9]	3295 [10.8]	3190 [10.5]	5467 [17.9]	5405 [17.7]	8883 [29.4]	8805 [28.2]	14110 [46.3]	1519 [5.0]		-121 - 1333 [-0.40 - 4.40]	606 [2.00]
100"	2685 [8.8]	3657 [12.0]	3550 [11.6]	6080 [19.9]	6018 [19.7]	9807 [32.1]	9807 [32.1]	15701 [51.5]	1694 [5.6]		-135 - 1481 [-0.40 - 4.90]	673 [2.20]
120"	3233 [10.6]	4411 [14.5]	4270 [14.0]	7306 [24.0]	7245 [23.8]	11881 [39.0]	11811 [38.8]	18884 [62.0]	2045 [6.7]		-162 - 1777 [-0.50 - 5.80]	808 [2.60]
150"	4055 [13.3]	5527 [18.1]	5350 [17.6]	9145 [30.0]	9084 [29.8]	14880 [48.8]	14817 [48.6]	23657 [77.6]	2570 [8.4]		-202 - 2221 [-0.70 - 7.30]	1010 [3.30]
200"	5425 [17.8]	7387 [24.2]	7150 [23.5]	12210 [40.1]	12150 [39.9]	19877 [65.2]	19827 [65.1]	31613 [103.7]	3446 [11.3]		-269 - 2962 [-0.90 - 9.70]	1346 [4.40]
250"	6795 [22.3]	9247 [30.3]	8950 [29.4]	15275 [50.1]	15216 [49.9]	24875 [81.5]	24837 [81.5]	39569 [129.8]	4322 [14.2]		-337 - 3702 [-1.10 - 12.10]	1683 [5.50]
300"	8165 [26.8]	11107 [36.4]	10750 [35.3]	18340 [60.2]	18282 [60.0]	29872 [98.0]	29847 [97.9]	47525 [155.9]	5198 [17.1]		-404 - 4442 [-1.30 - 14.60]	2019 [6.60]
400"	10905 [35.8]	14827 [48.6]	14350 [47.1]	24470 [80.3]	24414 [80.1]	39867 [130.8]	39867 [130.8]	63437 [208.1]	6950 [22.8]		-538 - 5923 [-1.80 - 19.40]	2692 [8.80]

Diagonal image size	Projection distance [L]										Height from the edge of screen to center of lens [H]	
	ET-ELW20		Standard lens		ET-ELT20		ET-ELT21		ET-ELW21		ET-ELW20/Standard/ET-ELT20/ET-ELT21	ET-ELW21
	1.3-1.7:1		1.7-2.8:1		2.8-4.6:1		4.6-7.2:1		0.8:1			
Throw ratio [4:3 aspect ratio]	min.[wide]	max.[tele]	min.[wide]	max.[tele]	min.[wide]	max.[tele]	min.[wide]	max.[tele]	fix			
40"	972 [3.2]	1346 [4.4]	1301 [4.3]	2256 [7.4]	2191 [7.2]	3650 [12.0]	3555 [11.7]	5777 [19.0]	602 [2.0]		0 - 610 [0.0 - 2.0]	305 [1.00]
50"	1229 [4.0]	1696 [5.6]	1640 [5.4]	2832 [9.3]	2768 [9.1]	4690 [15.1]	4697 [14.8]	7274 [23.9]	767 [2.5]		0 - 762 [0.0 - 2.5]	381 [1.30]
60"	1486 [4.9]	2046 [6.7]	1979 [6.5]	3408 [11.2]	3344 [11.0]	5531 [18.1]	5439 [17.8]	8771 [28.8]	932 [3.1]		0 - 914 [0.0 - 3.0]	457 [1.50]
70"	1743 [5.7]	2396 [7.9]	2318 [7.6]	3984 [13.1]	3921 [12.9]	6471 [21.2]	6382 [20.9]	10268 [33.7]	1097 [3.6]		0 - 1067 [0.0 - 3.5]	533 [1.80]
80"	2000 [6.6]	2746 [9.0]	2657 [8.7]	4560 [15.0]	4497 [14.8]	7412 [24.3]	7324 [24.0]	11765 [38.6]	1262 [4.1]		0 - 1219 [0.0 - 4.0]	610 [2.00]
90"	2257 [7.4]	3096 [10.2]	2996 [9.8]	5136 [16.9]	5073 [16.6]	8353 [27.4]	8266 [27.1]	13262 [43.5]	1427 [4.7]		0 - 1372 [0.0 - 4.5]	686 [2.30]
100"	2514 [8.2]	3446 [11.3]	3335 [10.9]	5712 [18.7]	5650 [18.5]	9293 [30.5]	9208 [30.2]	14759 [48.4]	1592 [5.2]		0 - 1524 [0.0 - 5.0]	762 [2.50]
120"	3028 [9.9]	4146 [13.6]	4013 [13.2]	6864 [22.5]	6803 [22.3]	11174 [36.7]	11092 [36.4]	17753 [58.2]	1922 [6.3]		0 - 1829 [0.0 - 6.0]	914 [3.00]
150"	3799 [12.5]	5196 [17.0]	5030 [16.5]	8592 [28.2]	8532 [28.0]	13996 [45.9]	13918 [45.7]	22244 [73.0]	2417 [8.0]		0 - 2286 [0.0 - 7.5]	1143 [3.80]
200"	5084 [16.7]	6946 [22.8]	6725 [22.1]	11472 [37.6]	11414 [37.4]	18699 [61.3]	18629 [61.1]	29729 [97.9]	3242 [10.6]		0 - 3048 [0.0 - 10.0]	1524 [5.00]
250"	6369 [20.9]	8696 [28.5]	8420 [27.6]	14352 [47.1]	14296 [46.9]	23402 [76.8]	23339 [76.6]	37214 [122.1]	4067 [13.3]		0 - 3810 [0.0 - 12.5]	1905 [6.30]
300"	7654 [25.1]	10446 [34.3]	10115 [33.2]	17232 [56.5]	17178 [56.4]	28105 [92.2]	28050 [92.0]	44699 [146.7]	4892 [16.1]		0 - 4572 [0.0 - 15.0]	2286 [7.50]
400"	10224 [33.5]	13946 [45.8]	13505 [44.3]	22992 [75.4]	22942 [75.3]	37511 [123.						

Specifications						
Model	PT-EZ570/EZ570L*	PT-EW630/EW630L*	PT-EX600/EX600L*	PT-EW530/EW530L*	PT-EX500/EX500L*	
Power supply	100-240 V AC, 50/60 Hz					
Power consumption	490 W [0.4 W with STANDBY MODE set to ECO*1, 11 W with STANDBY MODE set to NETWORK.]					
LCD panel	Panel size	19.2 mm [0.76"] diagonal [16:10 aspect ratio]	19.0 mm [0.75"] diagonal [16:10 aspect ratio]	20.0 mm [0.80"] diagonal [4:3 aspect ratio]	19.0 mm [0.75"] diagonal [16:10 aspect ratio]	20.0 mm [0.80"] diagonal [4:3 aspect ratio]
	Display method	Transparent LCD panel (x 3, R/G/B)				
	Drive method	Active matrix				
	Pixels	2,304,000 (1,920 x 1,200) x 3, total of 6,912,000 pixels	1,024,000 (1,280 x 800) x 3, total of 3,072,000 pixels	786,432 (1,024 x 768) x 3, total of 2,359,296 pixels	1,024,000 (1,280 x 800) x 3, total of 3,072,000 pixels	786,432 (1,024 x 768) x 3, total of 2,359,296 pixels
Lens	PT-EZ570/EW630/EX600/EW530/EX500*: powered zoom [1.7-2.8:1], powered focus F 1.7-2.3, f 26.9-45.4 mm, PT-EZ570L/EW630L/EX600L/EW530L/EX500L*: optional powered zoom/focus and fixed-focus lens					
Lamp	330 W UHM lamp x 1					
Lamp replacement cycle *2	3,000 hours *3 (LAMP POWER: NORMAL), 4,000 hours *3 (LAMP POWER: ECO 1/2)					
Screen size (diagonal)	1.02-10.16 m (40-400 in), 16:10 aspect ratio		1.02-10.16 m (40-400 in), 4:3 aspect ratio	1.02-10.16 m (40-400 in), 16:10 aspect ratio	1.02-10.16 m (40-400 in), 4:3 aspect ratio	
Brightness *4	5,000 lm (lamp power: Auto/Normal)	5,500 lm (lamp power: Auto/Normal)	6,000 lm (lamp power: Auto/Normal)	4,500 lm (lamp power: Auto/Normal)	5,000 lm (lamp power: Auto/Normal)	
Center-to-corner uniformity *4	90 %					
Contrast *4	5,000:1 (full on/full off, lamp power: Auto)			2,000:1 (full on/full off, lamp power: Auto)		
Resolution	1,920 x 1,200 pixels (Input signals that exceed this resolution will be converted to 1,920 x 1,200 pixels.)	1,280 x 800 pixels (Input signals that exceed this resolution will be converted to 1,280 x 800 pixels.)	1,024 x 768 pixels (Input signals that exceed this resolution will be converted to 1,024 x 768 pixels.)	1,280 x 800 pixels (Input signals that exceed this resolution will be converted to 1,280 x 800 pixels.)	1,024 x 768 pixels (Input signals that exceed this resolution will be converted to 1,024 x 768 pixels.)	
Scanning frequency	HDMI/DVI-D	fh: 26-80 kHz, fv: 23-85 Hz, dot clock: 162 MHz or lower				
	RGB (analog)	fh: 15-120 kHz, fv: 48-100 Hz, dot clock: 230 MHz or lower [Signals exceeding the dot clock rate of 163 MHz are downsampled.]	fh: 15-120 kHz, fv: 48-100 Hz, dot clock: 230 MHz or lower [Signals exceeding the dot clock rate of 140 MHz are downsampled.]			
	YPbPr (YCbCr)	fh: 15.75 kHz, fv: 60 Hz [480i [525i]] fh: 31.50 kHz, fv: 60 Hz [480p [525p]] fh: 15.63 kHz, fv: 50 Hz [576i [625i]] fh: 31.25 kHz, fv: 50 Hz [576p [625p]] fh: 45.00 kHz, fv: 60 Hz [720 [750]/60p] fh: 37.50 kHz, fv: 50 Hz [720 [750]/50p]	fh: 33.75 kHz, fv: 60 Hz [1035/60i] fh: 33.75 kHz, fv: 60 Hz [1080 [1125]/60i] fh: 28.13 kHz, fv: 50 Hz [1080 [1125]/50i] fh: 28.13 kHz, fv: 25 Hz [1080/25p] fh: 28.13 kHz, fv: 50 Hz [1080/25sF] fh: 27.00 kHz, fv: 24 Hz [1080/24p]	fh: 27.00 kHz, fv: 48 Hz [1080/24sF] fh: 33.75 kHz, fv: 30 Hz [1080/30p] fh: 33.75 kHz, fv: 60 Hz [1080/30sF] fh: 67.50 kHz, fv: 60 Hz [1080/60p] fh: 56.25 kHz, fv: 50 Hz [1080/50p]		
	Video/S-Video	fh: 15.75 kHz, fv: 60 Hz [NTSC/NTSC4.43/PAL-M/PAL60], fh: 15.63 kHz, fv: 50 Hz [PAL/SECAM/PAL-N]				
Optical axis shift	Vertical ± 60 %, horizontal ± 10 % from center of screen (powered) *5		Vertical ± 50 %, horizontal ± 10 % from center of screen (powered) *5	Vertical ± 60 %, horizontal ± 10 % from center of screen (powered) *5	Vertical ± 50 %, horizontal ± 10 % from center of screen (powered) *5	
Keystone correction range	Vertical: $\pm 30^{\circ}$ *6, horizontal: $\pm 30^{\circ}$ *7		Vertical: $\pm 40^{\circ}$ *6, horizontal: $\pm 30^{\circ}$ *7		Vertical: $\pm 40^{\circ}$	
Installation	Ceiling/floor, front/rear					
Built-in speaker	3.7 cm round shape x 1, output power: 10.0 W (monaural)					
Terminals	INPUT 1 *8	DVI-D INPUT Terminal: HDMI INPUT Terminal: RGB INPUT Terminal:	DVI-D 24-pin x 1 (DVI 1.0 compliant, compatible with HDCP, compatible with single link only) HDMI 19-pin x 1 (Deep Color, compatible with HDCP) D-Sub HD 15-pin (female) x 1			
	INPUT 2 *8	RGB/VIDEO INPUT Terminal:	BNC x 5 (RGB/YPbPr/YCbCr x 1), shared with VIDEO IN (BNC x 1, composite video)			
	INPUT 3 *8	COMPONENT/VIDEO INPUT Terminal: S-VIDEO INPUT Terminal:	RCA x 3 (YPbPr/YCbCr x 1), shared with VIDEO IN (RCA x 1, composite video) Mini DIN 4-pin x 1 (S-Video)			
		RGB OUT:	D-Sub HD 15-pin (female) x 1			
		AUDIO IN:	RCA (L, R) x 1, M3 (L, R) x 2			
		AUDIO OUT:	M3 (L, R) x 1 (variable)			
		SERIAL IN:	D-Sub 9-pin (female) x 1 for external control (RS-232C compliant)			
		REMOTE IN:	M3 x 1 for wired remote control			
		LAN:	RJ-45 x 1 [for network connection, 10Base-T/100Base-TX, compliant with PLink™]			
	Operating noise *9	37 dB (LAMP POWER: NORMAL), 31 dB (LAMP POWER: ECO 1/ECO 2)				
Filter	x 1, recommended replacement cycle: 12,000 hours*10					
Mechanical shutter	Yes				-	
Cabinet materials	Molded plastic (PC + ABS)					
Dimensions (W x H x D)	PT-EZ570/EW630/EX600/EW530/EX500*: 489.5 x 164*11 x 434 mm [19.3 x 6.5*11 x 17.1 in] (with supplied lens) PT-EZ570L/EW630L/EX600L/EW530L/EX500L*: 489.5 x 164*11 x 370 mm [19.3 x 6.5*11 x 14.6 in] (without lens)					
Weight *9	Approximately 10.3 kg [22.7 lbs] (with supplied lens), approximately 9.6 kg [21.2 lbs] (without lens)			Approximately 10.2 kg [22.5 lbs] (with supplied lens), approximately 9.5 kg [20.9 lbs] (without lens)		
Operating environment	Operating temperature: 0 °C-40 °C [32 °F-104 °F]*12, operating humidity: 20 %-80 % [no condensation]					
Supplied accessories	Power cord x 1 [x 2 for EZ570E/EZ570EL, EW630E/EW630EL, EX600E/EX600EL, EW530E/EW530EL and EX500E/EX500EL], power cord holder x 1, wireless/wired remote control unit x 1, batteries (R03/LR03/AAA type x 2), computer cable x 1, Software CD-ROM x 1 [Logo Transfer Software, Multi Projector Monitoring and Control Software]					

*1 When the STANDBY MODE is set to ECO, network functions such as power on over the LAN will not operate. Also, only certain commands can be received for external control using the serial terminal. *2 The values above are maximum values when they are used in cycles of being turned on for 2 hours and off for 0.25 hours. When the lamps are turned on and off more frequently, the lamp replacement cycle is shortened. The usage environment affects the lamp replacement cycle. *3 The usage environment affects the lamp replacement cycle. *4 Measurement, measuring conditions, and method of notation all comply with ISO 21118 international standards. *5 The axis shift function cannot be used with the ET-ELW21. *6 With vertical correction only. *7 With horizontal correction only. *8 Menu selectable. *9 Average value. May differ depending on the actual unit. *10 The usage environment affects the duration of the filter. *11 With legs at shortest position. *12 The operating temperature range is 0 °C to 30 °C [32 °F to 86 °F] when the fan control is set to ON 1 for altitudes from 1,000 m to 2,000 m [3,281 ft to 6,562 ft] above sea level, 0 °C to 30 °C [32 °F to 86 °F] when the fan control is set to ON 2 for altitudes from 2,000 m to 2,700 m [6,562 ft to 8,858 ft] above sea level.
* Product numbers vary depending on the market. The general guideline is as follows: The product numbers in the Americas and Taiwan are PT-EZ570U/PT-EZ570UL, PT-EW630U/PT-EW630UL, PT-EX600U/PT-EX600UL, PT-EW530U/PT-EW530UL and PT-EX500U/PT-EX500UL. The product numbers in Europe, CIS, Asia (except Taiwan), Oceania, Middle East, and Africa are PT-EZ570E/PT-EZ570EL, PT-EW630E/PT-EW630EL, PT-EX600E/PT-EX600EL, PT-EW530E/PT-EW530EL and PT-EX500E/PT-EX500EL.

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Weights and dimensions shown are approximate. Specifications and appearance are subject to change without notice. Product availability differs depending on region and country. This product may be subject to export control regulations. The projection distances and throw ratios given in this leaflet are for use only as guidelines. For more detailed information, please consult the dealer from whom you are purchasing the product. The PLink trademark is an application trademark in Japan, the United States, and other countries and regions or registered trademarks. RoomView, Crestron RoomView, and Crestron Connected are trademarks of Crestron Electronics, Inc. All other trademarks are the property of their respective trademark owners. Projection images simulated. © 2012 Panasonic Corporation. All rights reserved.

All information included here is valid as of April 2012.

PT-EZ570G1 Printed in Japan.

DA-SNAP



Permanent Wall Mount Screen

- Designed for mounting on the wall or into wall opening.
- Easily attach front or rear projection screen surface with snaps or optional Velcro®.
- Surface mounts to back of 1½" wide black powder coated frame that provides a masking border.

SCREEN SURFACES

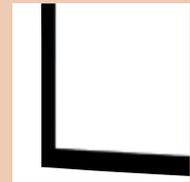
Da-Mat®	High Contrast High Power®
High Contrast Da-Mat®	Dual Vision
Da-Tex® (Rear)	HD Progressive 1.1 Perf
Pearlescent	Audio Vision
Cinema Vision	High Contrast Audio Vision
High Contrast Cinema Vision	3D Virtual Black®
High Contrast Cinema Perf	3D Virtual Grey
High Power®	Silver Lite 2.5

See pages 4-6 for surface descriptions.

Also available with T-Legs for portable applications.



Pro-Trim® fabric frame covering available to enhance appearance and absorb ambient light.



4:3 VIDEO

Viewing Area H x W	Nominal Diagonal
36" x 48"	60"
43" x 57½"	72"
50½" x 67"	84"
57½" x 77"	96"
60" x 80"	100"
72" x 96"	120"
90" x 120"	150"
108" x 144"	180"
120" x 160"	200"
144" x 192"	240"

16:9 HDTV

Viewing Area H x W	Nominal Diagonal
37½" x 67"	77"
40½" x 72"	82"
45" x 80"	92"
49" x 87"	100"
52" x 92"	106"
54" x 96"	110"
58" x 104"	119"
65" x 116"	133"
78" x 139"	159"
94½" x 168"	193"
108" x 192"	220"

16:10 WIDE

Viewing Area H x W	Nominal Diagonal
50" x 80"	94"
57½" x 92"	109"
60" x 96"	113"
65" x 104"	123"
69" x 110"	130"
72½" x 116"	137"
87" x 139"	164"
100" x 160"	189"
110" x 176"	208"
120" x 192"	226"

2.35:1 CINEMASCOPE

Viewing Area H x W	Nominal Diagonal
37½" x 88"	96"
40½" x 95"	103"
45" x 106"	115"
49" x 115"	125"
52" x 122"	133"
54" x 126"	138"
58" x 136½"	148"
65" x 153"	166"
78" x 183½"	199"
81½" x 192"	208"

To calculate overall frame dimensions, add 3" to viewing area height and width.



SMART Podium™ 500 series interactive pen display

The 500 series offers

- Your choice of an 18.5" (47 cm) or 24" (61 cm) widescreen high-definition (HD) display
- Native 16:9 aspect ratio with flexible scaling options to support 16:10 and 4:3 resolutions
- Revision 1.3 high-bandwidth digital content protection (HDCP) compliance
- DVI or VGA connections
- Four high-speed USB 2.0 ports to connect computers and peripheral devices
- The ability to write notes in digital ink and save everything to a single file
- The ability to write within Microsoft® Office applications and save notes in the original files

Create engaging presentations and dynamic collaboration sessions with the SMART Podium 500 series interactive pen display. You can display, interact with and write over digital content on SMART Podium, all while displaying that content on a larger screen in the same room or from a remote location.

Flexible and versatile

The versatile interactive pen display works as a powerful presentation tool and supports collaboration in virtually any learning space, from small classrooms or labs to large auditoriums. Open presentations, documents, applications, websites and multimedia files, write notes over them in digital ink and save your work for distribution or later reference. In rooms equipped with SMART Board® interactive whiteboards or displays, you can work with content from anywhere in the room and display it on the interactive whiteboard or display. And in distance education scenarios, teachers and students can share screens using SMART Bridgit® conferencing software and mark up documents and files as if they were in the same room.

Deliver powerful presentations

With the SMART Podium interactive pen display, you can create and deliver engaging, interactive, digital presentations. Because your course material is in front of you and displayed on a large screen, you can focus on keeping students engaged. The display's tethered pen acts as a mouse to navigate content on your screen – control computer applications and write notes in multiple digital ink colors over applications, slides, websites and videos. The Smooth Tilt Stand helps support a natural writing posture. The intuitive function buttons – illuminated for dimly lit rooms – enable you to change ink colors, erase, highlight and emphasize content, access the mouse function, and save and share your work.



- 1** USB 2.0 ports – high-speed connections for peripherals such as USB drives, document cameras or personal mobile devices
- 2** Application tool buttons – launch SMART software, capture screenshots
- 3** Pen tool buttons – launch the On-Screen Keyboard, pointer or right-click function and select the eraser or pen colors
- 4** Support tool buttons – launch help and orient the screen
- 5** Magnetic pen rest – rest the tethered pen here for easy access

Key features

DViT® (Digital Vision Touch) technology

SMART Podium features SMART's own DViT technology. With cameras incorporated in the bezel to detect pen touch and movement, DViT provides a responsive, accurate writing experience.

Widescreen HD interactive display

View your content in sharp detail with an 18.5" (47 cm) or 24" (61 cm) HD progressive-scan LCD display. The 18.5" display features 720p resolution. The 24" display features 1080p (full HD) resolution.

Elegant design

SMART Podium features a slim profile, a minimized bezel with a magnetic pen rest and a reduced overall footprint, complementing virtually any learning space.

Console buttons

Access the right-click button, select pen colors or the eraser, or launch the On-Screen Keyboard, Screen Capture tool or SMART Notebook™ collaborative learning software. The buttons are illuminated for use in dimly lit rooms. They are also preconfigured but can be programmed to suit the shortcuts you use most.

Tethered pen

Control your computer from SMART Podium and comfortably write over any application with the

battery-free tethered pen. Because the pen is the point of contact on the interactive screen, you can rest your hand on the screen while writing notes.

SMART Ink™

SMART Ink smooths out your handwriting to improve legibility. You can write notes over any application and save them into several common applications, including Microsoft Office 2010 programs or Adobe® Acrobat® Pro. You can also turn handwritten notes into text objects that you can manipulate.

Smooth Tilt Stand

Smoothly and easily adjust the position of your SMART Podium, so you can comfortably rest your hand on the display while you make notes and maintain eye contact with your students.

HDCP compliant

Ensures that HDCP-encrypted content can be displayed.

High-speed USB 2.0 ports

Access three high-speed USB 2.0 ports to connect peripherals such as a USB drive, document camera or personal mobile device. A fourth USB 2.0 on the rear connection panel is provided to connect a computer.

SMART Notebook software included

SMART Notebook software sets the standard for creating, delivering and managing interactive lessons within a single application. With all your instructional materials at your fingertips, you can save any notes or content you write during lessons to share with your students later. A powerful and easy-to-use application, SMART Notebook software enables you to readily deliver interactive presentations that will keep your students engaged and interested.

Kensington security lock slot

Secure SMART Podium by connecting a compatible lock and cable.

Future proof

Flexible video connection options (DVI or VGA), wide-format aspect ratio and scaling options ensure SMART Podium is compatible with existing and future technology investments.

Warranty

Receive a two-year limited warranty on your SMART Podium.

Technical specifications

Operating systems

The 500 series supports Microsoft Windows® and Mac OS operating systems.

SMART Podium	Size	Size with adjustable stand	Display area	Weight (with stand)
18.5" display	18 3/8" W × 13" H × 3" D (46.7 × 33 × 7.6 cm)	18 3/8" W × 12 5/8" H × 11 3/4" D (46.7 × 32.1 × 29.8 cm)	16 1/2" W × 9 1/2" H (41.9 × 24.1 cm) 18 1/2" (47 cm) diagonal	19 lb. 11 oz. (8.9 kg)
24" display	23 5/16" W × 15 13/16" H × 3" D (59.3 × 40.1 × 7.6 cm)	23 5/16" W × 15 3/8" H × 10 3/4" D (59.3 × 39 × 27.3 cm)	21 5/16" W × 12 3/16" H (54.1 × 30.9 cm) 24" (61 cm) diagonal	27 lb. 6 oz. (12.5 kg)

Authorized reseller:

SMART Technologies

Toll Free 1.866.518.6791 (U.S./Canada)

or +1.403.228.5940

smarttech.com

V-Panel™ 20" HD Touch Screen Display

- > High-Definition 20" widescreen touch display
- > Full HD 1920 x 1080 display resolution
- > Quick-response capacitive touch screen
- > Smooth, accurate on-screen writing using the included annotation pen
- > High contrast and accurate color reproduction
- > Ultra fast 5 ms speed response
- > Ultra wide 178 degree viewing angles
- > Fully HDCP compliant
- > Built-in speakers
- > Compatible with the DGE-2 Digital Graphics Engine or DVPHD Digital Video Processor^[1,6]
- > Compatible with DigitalMedia™ to support long wiring distances^[3,4]
- > Thin, lightweight design
- > VESA 100x100 mountable



The V-Panel™ TSD-2020 merges Crestron® touch screen control and high-definition video into one slim, lightweight touch screen display. Its 20" full HD 1080p display offers a spacious user interface for controlling AV, lighting, climate, and other technologies while simultaneously delivering excellent video performance as an HDTV or computer display. Its high-sensitivity capacitive surface affords exceptional touch response, whether using fingertip gestures or the included annotation pen.

The TSD-2020 is designed for use with a **DGE-2** Digital Graphics Engine^[1], providing an elegant and powerful touch screen control solution featuring advanced Smart Graphics™, dual-window HD video, high-performance H.264 streaming video, onboard multimedia and Web browsing, audio feedback, and built-in annotation. Together with the DGE-2, the TSD-2020 easily replaces separate touch screens, TV displays, and computer monitors to suit a broad range of residential and commercial applications. Its large screen makes it ideal as a home controller and television display in a kitchen or bedroom, as a presentation control panel for a university lecture hall, and as a video control surface for a corporate or government command center. For all kinds of uses, the TSD-2020 provides a perfect fit.

Advanced Touch Screen Control

A Crestron touch screen offers an ideal user-interface for controlling all the technology in your home, boardroom, classroom, courtroom, or command center. Touch screens do away with piles of remote controls, cluttered wall switches, and cryptic computer screens, simplifying and enhancing the way you use technology. For controlling audio, video, lighting, shades, HVAC, security, and other systems, Crestron touch screens are fully-customizable with easy-to-use controls and icons, true feedback and real-time status display, full-motion video windows, and advanced navigation of digital media servers, tuners, and other devices.

VESA Mounting

Its thin profile and VESA mount compatibility allow the TSD-2020 to be installed virtually anywhere using an off-the-shelf wall mounting bracket, desk stand, or articulating arm. In addition, the TSD-2020 ships with an easel-type stand for tabletop use, and includes a flip-out flap and tabs on its rear panel to allow for use as a low-angled or lay-flat tablet.

Digital Graphics Engine

For a typical control application using the TSD-2020, a **DGE-2** Digital Graphics Engine is also required.^[1] The DGE-2 can be installed near the TSD-2020 or tucked away at the central equipment location. It provides connectivity for interfacing with centralized AV sources, switchers, and the control network while simultaneously providing a streamlined, long-distance wiring solution for the touch screen.

HDMI® & DigitalMedia™

The TSD-2020 features an HDMI input and USB HID port, allowing for direct connection to a DGE-2 over short distances up to approximately 10 ft (3 m).^[2] A DigitalMedia 8G+™ **receiver** and **transmitter**^[1,3] may be used to extend the wiring distance between the touch screen and DGE-2 up to 330 ft (100 m).^[4]

DigitalMedia (DM®) connectivity also opens up more ways to configure a touch screen control system. For instance, using a DM switcher such as the **DM-MD8X8**^[1,3], multiple TSD-2020 touch screens can be connected to a single DGE-2, providing a simple, cost-effective way for multiple participants to view and control the same graphical interface. DigitalMedia also provides a versatile means for distributing touch screen content to additional display devices and sound systems to serve a larger audience.

TSD-2020 V-Panel™ 20" HD Touch Screen Display

Smart Graphics™

Crestron touch screens use Smart Graphics to deliver the ultimate user experience *and* the ultimate value by enabling the creation of dynamically rich user interfaces with incredible efficiency and unparalleled functionality. Using Smart Graphics, programmers can swiftly integrate fluid gesture-driven controls, animated feedback, metadata, embedded apps, and full-motion video for a deeply engaging and ultra-intuitive touch screen experience.

Crestron Smart Graphics include the following enhancements:

- Cool-looking graphical buttons, sliders, knobs, and gauges are intuitive and fun to use.
- Kinetic effects enhance the feeling of realism with lists and toolbars that scroll with momentum at the flick of a fingertip.
- Drag-and-drop objects snap into place offering an easy way to switch sources.
- Dashboard widgets personalize the touch screen with clocks, weather, news, and other information.
- Customizable themes allow a completely different look and feel for every user, event, or season.
- Fully-developed SmartObjects™ enable sophisticated control over complex devices with minimal programming.

Embedded PC Applications

In combination with a DGE-2 graphics engine, the TSD-2020 provides everything you need to enjoy online music and videos, browse the Internet, and even review digital documents without a separate computer. With Microsoft® Internet Explorer® embedded, you have full access to the entire World Wide Web including sites that use Flash® or Java®. Windows Media® Player ensures broad compatibility for playing most types of digital media. Adobe® Acrobat® Reader and Microsoft PowerPoint®, Word, and Excel® document viewers complete the online experience, allowing you to download and view documents and presentations.

In addition, VNC Viewer support delivers enhanced cross-platform interaction with computers over the network or Internet, allowing remote access and control of desktop applications to unleash a host of possibilities for system integration and multimedia presentation.

HD Streaming Video

High-definition streaming video capability makes it possible to view security cameras and other video sources over the network right on the touch screen. Native support for H.264 and MJPEG formats allows the TSD-2020 and DGE-2^[1] to display live streaming video from an IP camera, a streaming server (Crestron [CEN-NVS200](#) or similar^[1]), a [DigitalMedia](#) switcher, or a [Capture HD](#)® system. And, through the embedded Web browser and media player, they support a wide variety of other streaming and downloadable video formats, enabling access to all kinds of content from media servers and Web sites like YouTube® and Netflix®^[5].

Wired Video

In addition to handling streaming video, the TSD-2020 can simultaneously display up to two fully-scalable, full-motion video windows, each supporting HD or SD video and high-resolution computer signals from external sources. All connections are made at the DGE-2 using conventional HDMI, VGA, and BNC type cables.

HDCP Support

Industry-leading support for HDCP (High-bandwidth Digital Content Protection) ensures seamless compatibility with content-protected DVD, Blu-ray Disc®, digital HDTV, and multimedia computer sources.

On-Screen Keyboard

On-screen keyboard and mouse capabilities enable complete control of the embedded Web browser and other applications, and can also be used to control computers running TouchPoint® Virtual Mouse & Keyboard Software ([VMK-WIN](#)).

Real-Time Annotation

Whether conducting a high-level boardroom meeting, training seminar, or watching sports in your home theater, annotation helps put the fine point on any presentation. Built-in annotation provides the ability to illustrate your thoughts on-the-fly, letting you draw and write over high-definition video and computer images, and sketch out ideas on a whiteboard screen, without leaving the podium or your favorite chair while other viewers watch on the big screen.

Remote Annotation

Remote annotation capability allows multiple touch screen users to draw with their fingertips over the same video image or whiteboard screen, enabling enhanced interaction between several participants in a courtroom, classroom, or council chamber.

Annotation Pen

The TSD-2020 enables smooth, accurate on-screen writing and drawing using the included annotation pen. Palm cancellation technology affords a natural feel while writing on the touch screen surface.

Presentation Output

Through an HDMI or DigitalMedia connection at the DGE-2, the TSD-2020 screen image can be sent to additional display devices, allowing videos, PowerPoint presentations, annotation, and other on-screen media to be shared with a live audience.

DVPHD Integration

In addition to the DGE-2, the TSD-2020 is also compatible with the award-winning [DVPHD](#) High-Definition Digital Video Processor^[1], enabling the display of up to 8 simultaneous video windows along with HD touch screen graphics and annotation. The DVPHD supports high-definition video and computer signals from a wide variety of digital and analog sources.^[3,6]

SPECIFICATIONS

Touch Screen Display

Display Type: TFT active matrix color LCD

Size: 19.5 inch (495 mm) diagonal

Aspect Ratio: 16:9 Full HD

Resolution: 1920 x 1080 pixels

Brightness: 250 nits (cd/m²)

Contrast: 3000:1

Response Time: 5 ms G-to-G

TSD-2020 V-Panel™ 20" HD Touch Screen Display

Color Depth: 24-bit, 16.7M colors
Illumination: Edgelit LED
Viewing Angle: ±89° horizontal, ±89° vertical
Touch Screen: Capacitive

Annotation Pen

Wireless touch pen, 2 mm wide tip, palm cancellation technology

Buttons & Indicators

Power/Menu: (1) Pushbutton, press to turn power on, press (while power is on) to access the onscreen menu, press for ≥2 seconds to turn power off

Power/Signal: (1) Dual color LED, green indicates power is on and an input signal is present, orange indicates power is on and no input signal is present

Note: If power is lost while the TSD-2020 is powered on, it will automatically return to the powered on state when power is restored.

Communications

USB: USB 1.1 Human Interface Device

Video

Input Signal Types: HDMI®, DisplayPort

Input Resolutions: 640x480@60Hz, 800x600@60Hz, 720x480@60Hz, 720x576@50Hz, 1024x768@60Hz, 1280x720@50Hz, 1280x720@60Hz, 1920x1080@50Hz, 1920x1080@60Hz

Refer to DGE-2 or DVPHD specifications for additional information.

Audio

Input Signal Types: HDMI, DisplayPort

Hardware Features: Built-in rear-facing amplified speakers

Amplification: 1 Watt x 2 channels

Refer to DGE-2 specifications for additional information.

Connectors

Headphone: (1) 3.5mm TRS mini phone jack;
Unbalanced stereo line-level or headphone audio output

HDMI: (1) 19-pin Type A HDMI female;
HDMI digital video/audio input, also supports DVI^[7]

DisplayPort: (1) 20-pin DisplayPort female;
DisplayPort digital video/audio input^[8]

Micro-USB: (1) micro-USB type B, female;
USB 1.1 device port, 6 ft (1.8 m) micro-USB type B male to USB type A male cable included

DC-IN 19V: (1) DC power connector;
19 Volt DC power input, power pack included

Power Requirements

Power Pack: 19 Volts DC;
100-240 Volt AC, 50/60Hz power pack included

Environmental

Temperature: 32° to 95°F (0° to 35°C)
Humidity: 20% to 80% RH (non-condensing)
Heat Dissipation: 89 BTU/Hr

Enclosure

Plastic case, VESA 100x100 mm mountable (M4 screw size), 75° angled easel-type tabletop stand included, flip-out flap and tabs for 10° angled or lay-flat use

Dimensions

Height: 10.82 in (275 mm)
Width: 18.25 in (464 mm)
Depth: 1.00 in (26 mm)

Weight

5.1 lb (2.3 kg);
6.4 lb (2.9 kg) with tabletop stand

MODELS & ACCESSORIES

Available Models

TSD-2020-B: V-Panel™ 20" VESA Mount HD Touch Screen Display, Black

Available Accessories

DGE-2: Digital Graphics Engine w/HDMI® and DigitalMedia™ CAT Connectivity

CBL Series: Crestron® Certified Interface Cables

DM-RMC-SCALER-C: DigitalMedia 8G+™ Receiver & Room Controller w/Scaler

DM-TX-201-C: DigitalMedia 8G+™ Transmitter 201

DM-CBL-8G-NP: DigitalMedia 8G™ Cable, non-plenum

DM-CBL-8G-P: DigitalMedia 8G™ Cable, plenum

DM-8G-CONN: DigitalMedia 8G™ Cable Connector

DM-8G-CRIMP: Crimping Tool for DM-8G-CONN

DM-8G-CONN-WG: DigitalMedia 8G™ Cable Connector with Wire Guide

DM-8G-CRIMP-WG: Crimping Tool for DM-8G-CONN-WG

MP-WP181-C: Media Presentation Wall Plate - Crestron DigitalMedia 8G+™

MPI-WP181-C: Media Presentation Wall Plate - International Version - Crestron DigitalMedia 8G+™

TSD-2020 V-Panel™ 20" HD Touch Screen Display

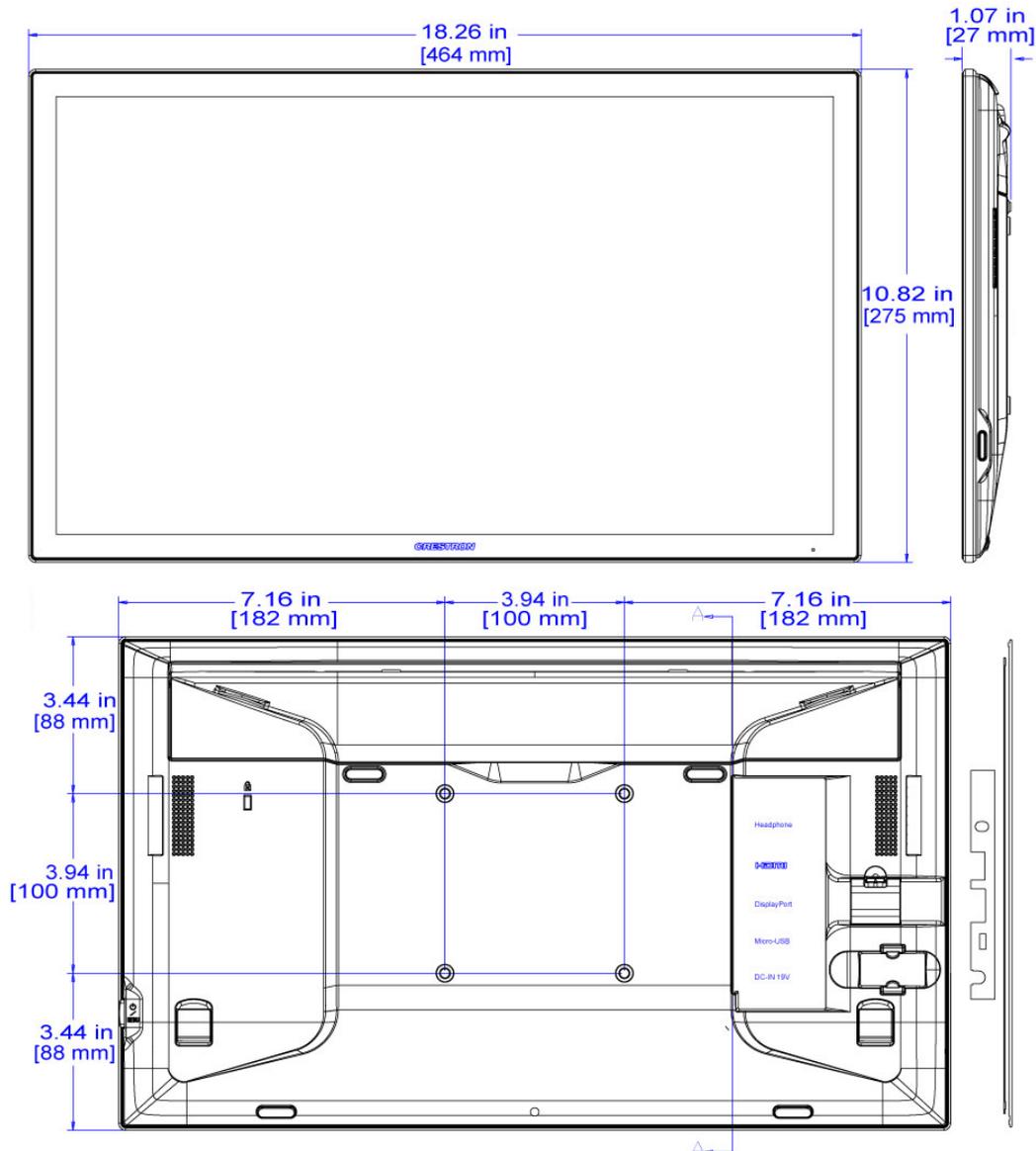
Notes:

1. Item(s) sold separately.
2. Ships with a 6 ft (1.8 m) USB cable only. HDMI cable sold separately.
3. For connection to a DGE-2 or DVPHD via DigitalMedia 8G+ (DM 8G+™), use a DM 8G+ receiver (DM-RMC-SCALER-C) at the touch screen location, and a DM 8G+ transmitter (DM-TX-201-C) at the DGE-2 or DVPHD. For connection to a DM switcher, any type of DM receiver may be used provided the receiver includes a USB HID host port. Besides DM 8G+, Crestron offers other ways to extend HDMI and USB signals. Consult the Crestron Website or contact a Crestron representative for additional options.
4. For DigitalMedia 8G+ (DM 8G+) wiring, use Crestron DM-CBL-8G DigitalMedia 8G™ Cable or third-party CAT5e (or better) UTP or STP. The maximum wire length for DM 8G+ is 330 ft (100 m). Refer to the [Crestron DigitalMedia Design Guide, Doc. #4546](#) for DM system design guidelines.
5. Accessing Netflix content requires an active Netflix account. See www.netflix.com for details.
6. DVPHD does not support audio, streaming media, Web browsing, or other embedded PC functionality.
7. The HDMI input requires an appropriate adapter or interface cable to accommodate a DVI signal. CBL-HD-DVI interface cables are available separately.
8. The DisplayPort input only supports native DisplayPort signals. To connect an HDMI source to this input, an active HDMI-to-DisplayPort converter must be used. The DisplayPort input automatically overrides the HDMI input when a DisplayPort signal is connected.

This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/salesreps or by calling 800-237-2041.

The specific patents that cover Crestron products are listed online at: patents.crestron.com.

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RoboSHOT™ HD PTZ Cameras

RoboSHOT 12 HD PTZ

High Definition PTZ Conferencing Camera Featuring Tri-Synchronous™ Motion and 12X Wide Angle Lens

The all-new RoboSHOT 12 HD PTZ Camera is a professional quality PTZ camera with super high quality imaging, fine detail and exceptional color reproduction. This camera offers integrators, dealers and end users with an incredible improvement over other conferencing cameras available today.

The RoboSHOT 12 is perfect for small to medium sized conference rooms, training rooms or classrooms and provides incomparable support for applications including, UC conferencing, videoconferencing, distance learning, lecture capture, telepresence and more!

The key features of the RoboSHOT cameras are Tri-Synchronous Motion, the silent direct drive pan/tilt motors, advanced Exmor® image sensor, multi-element lens and ISP (image signal processor) combination.



Image: RoboSHOT 12 HD PTZ Camera

The Tri-Synchronous Motion algorithm in the RoboSHOT cameras is capable of moving all three (pan, tilt and zoom) axes simultaneously. The algorithm calculates the position and velocity of the smooth, direct-drive motor movements between the presets so pan, tilt and zoom arrive at the preset subject simultaneously, which finally allows for smooth and manageable on-air camera movements. Yep, there's no more pan/tilt, then zoom like other PTZ cameras available today.

The lens, image sensor and ISP are the magic behind this camera's remarkable video performance characteristics. The lens is a multi-element, glass lens featuring a 12X optical zoom with a 73° wide horizontal field of view (wow). The latest generation Exmor® 1/2.8", 2.34 Megapixel, Full HD (1080p/60) high-speed, low noise CMOS image sensor combined with the new ISP produces vivid, realistic and accurate color with extremely fast, razor sharp automatic focus and iris routines.

The RoboSHOT 12 uses the Vaddio EZCamera™ System to transport HSDS™ differential video, power and control to and from the camera over Cat-5e cables. The proven Quick-Connect™ Interfaces immediately provide the ultimate in configuration flexibility. Five models of Quick-Connects are available including the Quick-Connect USB Mini, Quick-Connect SR, Quick-Connect DVI/HDMI Quick-Connect USB and the Quick-Connect Universal CCU.

The RoboSHOT 12 has an Ethernet port and a built-in web server, which allows the user to control the camera functions on a web page with any browser from anywhere in the world over the IP network. Telnet, IR Remote and RS-232 control for the camera are available to satisfy almost any, if not all, system control requirements.

The RoboSHOT cameras were designed for the times and represent a new era in specifying and integrating professional quality cameras into A/V and conferencing system configurations. In short, it has never been easier to integrate cameras into any small to medium room project than with the RoboSHOT 12.



Example: Built-in Camera Control Web Page

CAMERA SYSTEMS

The RoboSHOT 12 is paired with all five of the Vaddio Quick-Connect Interfaces and shipped as a complete camera system. The available systems are as follows:

- **RoboSHOT 12 QMini:** RoboSHOT 12X Camera & Quick-Connect USB Mini, PN: 999-9901-000 North America 999-9901-001 (Int'l)
- **RoboSHOT 12 QSR:** RoboSHOT 12X Camera & Quick-Connect SR, PN: 999-9905-000 North America 999-9905-001 (Int'l)
- **RoboSHOT 12 QDVI:** RoboSHOT 12X Camera & Quick-Connect DVI/HDMI SR, PN: 999-9906-000 North America 999-9906-001 (Int'l)
- **RoboSHOT 12 QUSB:** RoboSHOT 12X Camera & Quick-Connect USB, PN: 999-9909-000 North America 999-9909-001 (Int'l)
- **RoboSHOT 12 QCCU:** RoboSHOT 12X Camera & Quick-Connect CCU, PN: 999-9907-000 North America 999-9907-001 (Int'l)

Please see the System Manuals for more information on system contents at support.vaddio.com

Rear View of the RoboSHOT 12 HD PTZ Camera



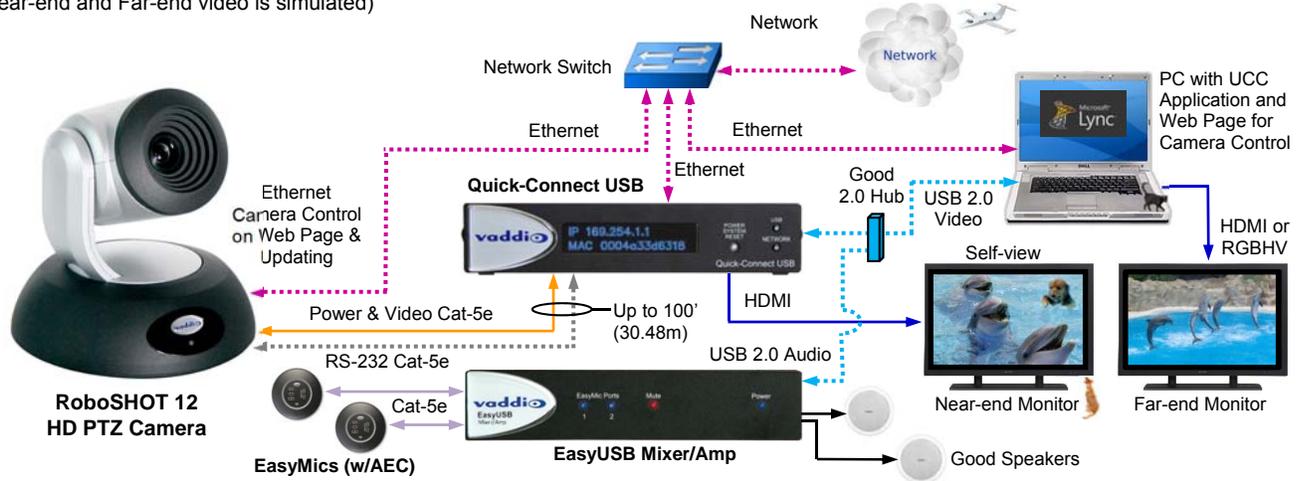
Rear Panel Connections (left to right):

- ① Ethernet 10/100 port on shielded RJ-45 for access to the built-in web pages, Telnet control or system updates/upgrades
- ② HD Video Select rotary switch for setting the cameras HD output resolution
- ③ Camera Settings DIP switches for 3-IR frequency, IR on/off, Image Flip (camera is invertible), Normal or Super-wide Mode
- ④ RS-232 port on shielded RJ-45 connector used with all Quick-Connect Interfaces
- ⑤ EZ-Power Video port on shielded RJ-45 for 24 VDC Quick-Connects (2-Cat-5 up to 100'/30.48m) or video only for the CCU systems
- ⑥ 36 VDC Port on shielded RJ-45 connector for power over Cat-5e up to 500' (152.4m), video from EZ-Power Video port

SYSTEM DRAWING

Configuration Example

RoboSHOT 12 with Quick-Connect USB, EasyUSB™ Mixer/Amp, EasyMics, UC Conferencing Application, Monitors and Speakers (Near-end and Far-end video is simulated)



GENERAL SPECIFICATIONS*

Image Sensor	Exmor 1/2.8", 2.34 Megapixel, Full HD (1080p/60 native) High-speed, Low Noise CMOS Image Sensor
Lens Characteristics (2 modes)	Super-Wide Mode: 12X Optical Zoom with 73.0° (wide end) to 6.6° (tele end), f=3.91mm to 47mm, F1.8 to F3.4 Normal Mode: 10X Optical Zoom with 67.3° (wide end) to 7.6° (tele end), f=3.8 to 38mm, F1.8 to F3.4
Supported Resolutions	HD Resolutions: 1080p/60/59.94/50/30/25, 1080i/60/59.94/50, 720p/60/59.94/50, 16:9 Format
Vaddio Special Features	Tri-Synchronous Motion: Concurrent PTZ motor movement and simultaneous PTZ arrival at a stored preset. Advanced ISP: Vivid and accurate color with extremely fast, razor sharp automatic focus and iris routines.
S/N Ratio	> 50 dB
Minimum Illumination	1.0 lux (F1.6, 50IRE), Recommended illumination >100 lux and above (Normal office lighting is 375-500 lux)
Minimum Distance	10mm (wide end) and 800m (tele end)
Pan & Tilt Angle/Speed	Pan/Tilt Angles: ±160°, Tilt: +90° to -30° Pan/Tilt Speeds: Both Axes 0.35°/sec to 120°/sec
Sync System	Internal
Control Methods	Ethernet for Internal Web Pages and Telnet, IR Remote Commander and RS-232 for external controllers.
Operating/Storage Temperature	0°C to +40°C (32°F to 104°F), 20% to 80% Humidity
Dimensions/Weight	6.942" (176.3mm) H x 7.056" (179.2 mm) W x 6.757" (171.6mm) D 4.85 lbs.(2.199923 kg) (About 2500 plain M&Ms)

*Specifications are subject to change and revision without notification or obligation.

IN-Wall™ Camera Mounts

IN-WALL RECESSED CAMERA MOUNTING SYSTEMS

Recessed Camera Mounting Systems for Vaddio™, Sony®, Polycom®, LifeSize® and Cisco® PTZ Cameras.



Images: IN-Wall Systems, Top Row (left to right) Vaddio RoboSHOT™ and HD-Series (HD-18/19/20/22/30/USB), LifeSize 10X and 4X, Cisco Precision 60 and PrecisionHD. Bottom Row (left to right): Polycom EagleEye and Sony EVI-D100, EVI-D70, EVI-HD1, BRC-Z330/Z700/H700 (select cameras shown).

The Vaddio IN-Wall camera mounting systems are an attractive way to mount PTZ cameras on a wall where room aesthetics are critical. These mounting systems use the depth of the wall cavity to minimize the camera's extension into the room while providing a finished look to the installation.

Cameras from Vaddio, Sony BRC series, Sony EVI series, Cisco (Precision HD, PrecisionHD 1080p, Precision60), Polycom (EagleEye, EagleEye 1080 HD and EagleEye IV) and LifeSize (4X and 10X) were selected and the camera enclosures were carefully designed and sized to fit the Vaddio EZCamera™ Interface Module (EZIM™) in the back of the box to enable use of the Vaddio Quick-Connect™ CCU and PRO Cat-5 cabling systems for applicable cameras (see below). For the EVI-D70/80/90 the Vaddio EZCamera Shoe is attached to the back of the camera. The in-wall mounting box can be installed during room build-out, and the camera platform and face frame can be added at a later time. All of the parts are powder coated in a white finish, but can be painted to match any décor.

WHAT'S INCLUDED

Each IN-Wall Recessed PTZ Camera Mounting System includes:

- Wall Box Enclosure for the Camera
 - Face Frame
 - Heavy Duty Camera Platform
 - Mounting Hardware
 - Documentation
- (Cameras not included)

TECHNICAL FEATURES

Deep Back Box Enclosure

The 3-15/16" deep metal wall box uses the maximum depth of a standard 2" x 4" framed wall cavity and minimizes the camera's protrusion into the room.

Cable Management

Each Enclosure is outfitted with three (3) conduit knockouts (2-sides, 1-top) for flexibility and easy access to cabling. The bottom of each wall box and platform has an additional cable slot for running standard cables to the cameras.

SUPPORTED CAMERA SYSTEMS

The Vaddio IN-Wall Enclosures are available for most of the best-selling cameras worldwide including Vaddio, Sony, Polycom, Cisco, LifeSize and Panasonic® cameras.

IN-WALL PART #S	SUPPORTED CAMERA PLATFORMS
999-2225-018	ClearVIEW™ and PowerVIEW™ HD-Series Cameras (HD-18/19/20/22/30 and HD-USB)
999-2225-118	Vaddio RoboSHOT 12 and 30 Models
999-2225-012	Vaddio ZoomSHOT and WideSHOT, Sony EVI-D70, Vaddio WallVIEW 70 System
999-2225-014	Sony EVI-HD1, Vaddio WallVIEW CCU or PRO HD1 PTZ System, WallVIEW EagleEye 1080 HD and Polycom EagleEye 1080 HD
999-2225-015	Polycom EagleEye and EagleEye IV, Vaddio WallVIEW PRO EagleEye, Cisco PrecisionHD, Cisco PrecisionHD 1080p and LifeSize 4X PTZ
999-2225-016	Sony BRC-H700, Vaddio WallVIEW CCU or PRO H700, Sony BRC-Z700, Vaddio WallVIEW CCU or PRO Z700, Sony BRC-H900 Vaddio WallVIEW CCU or PRO H900, PanasonicAW-HE120 and Vaddio CCU for AW-HE120
999-2225-019	Sony BRC-Z330, Vaddio WallVIEW CCU or PRO Z330, EVI-D80/D90/H100, WallVIEW 80/90
999-2225-020	Cisco Precision 60
999-2225-220	LifeSize 10X PTZ

See drawings at vaddio.com for dimensional information.

Digital Graphics Engine w/HDMI® and DigitalMedia™ CAT Connectivity

- > Touch screen graphics and HD video processing for V-Panels™
- > Also compatible with third-party touch screens [2]
- > High-definition 24-bit color graphics
- > Smart Graphics™ support
- > Onboard PC applications for Web browsing, playing digital media, and viewing digital documents
- > VNC viewer for remotely accessing and controlling external computers
- > Native H.264 streaming video display
- > Dual-window, full-motion HD video display
- > Allows touch screen viewing of HDCP protected content
- > Handles video sources up to HD 1080p60
- > Handles high-res computer up to UXGA/WUXGA
- > HDMI®, RGB, composite, S-Video, and component video inputs
- > Presentation output via HDMI or DigitalMedia™
- > Built-in annotation
- > Customizable audio feedback
- > Rava™ SIP intercom and phone technology [4]
- > Crestron® IP intercom and wired analog intercom capability [4]
- > HDMI output allows direct connection to a third-party display or touch screen [2]
- > Audio input and output via HDMI, DM®, and balanced line-level
- > Crestron Home® (CH) CAT5 bidirectional audio port
- > USB keyboard/mouse ports
- > Onscreen keyboard and mouse capability
- > High-Speed Ethernet and Cresnet®
- > One-wire DigitalMedia connection to V-Panel or DM switcher [2,3]
- > Two space rack-mountable



Designed for use with a Crestron® V-Panel™ HD Touch Screen Display^[1,2], the DGE-2 Digital Graphics Engine allows for a very streamlined touch screen installation by placing the bulk of the electronics out of sight at the central equipment location. Mounted within an equipment rack, the DGE-2 connects directly to the head end AV sources, switchers, and control network, while the touch screen display can be up to 300 feet (91 meters) away with just a single cable between them^[3].

The DGE-2 delivers the ultimate touch screen experience with advanced high-definition Smart Graphics™, high-performance H.264 streaming video, Rava™ SIP Intercom^[4], onboard multimedia and Web browsing, audio feedback, and built-in annotation. Extensive connectivity is provided for displaying HD video from external AV and computer sources via HDMI®, DigitalMedia™, Ethernet, and various analog connections. Support for HDCP ensures complete compatibility with today's digital sources!

Smart Graphics™

Crestron touch screens use Smart Graphics to deliver the ultimate user experience *and* the ultimate value by enabling the creation of dynamically rich user interfaces with incredible efficiency and unparalleled functionality. Using Smart Graphics, programmers can swiftly integrate fluid gesture-driven controls, animated feedback, metadata, embedded apps, and full-motion video for a deeply engaging and ultra-intuitive touch screen experience.

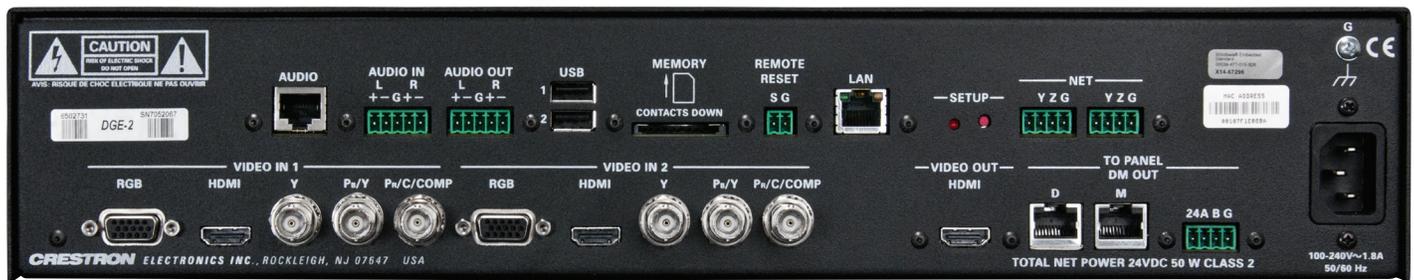
Crestron Smart Graphics include the following enhancements:

- Cool-looking graphical buttons, sliders, knobs, and gauges are intuitive and fun to use.
- Kinetic effects enhance the feeling of realism with lists and toolbars that scroll with momentum at the flick of a fingertip.
- Drag-and-drop objects snap into place offering an easy way to switch sources.
- Dashboard widgets personalize the touch screen with clocks, weather, news, and other information.
- Customizable themes allow a completely different look and feel for every user, event, or season.
- Fully-developed SmartObjects™ enable sophisticated control over complex devices with minimal programming.

Embedded PC Applications

The DGE-2 provides everything you need to enjoy online music and videos, browse the Internet, and even review digital documents, all on your touch screen display without a separate computer. With Microsoft® Internet Explorer® embedded, you have full access to the entire World Wide Web including sites that use Flash® or Java®. Windows Media® Player ensures broad compatibility for playing most types of digital media. Adobe® Acrobat® Reader and Microsoft PowerPoint®, Word, and Excel® document viewers complete the online experience, allowing you to download and view documents and presentations.

DGE-2 Digital Graphics Engine w/HDMI® and DigitalMedia™ CAT Connectivity



DGE-2 – Rear View

In addition, VNC Viewer support delivers enhanced cross-platform interaction with computers over the network or Internet, allowing remote access and control of desktop applications to unleash a host of possibilities for system integration and multimedia presentation.

HD Streaming Video

High-definition streaming video capability makes it possible to view security cameras and other video sources over the network right on the touch screen. Native support for H.264 and MJPEG formats allows the DGE-2 to display live streaming video from an IP camera, a streaming server (Crestron [CEN-NVS200](#)^[1] or similar), a [DigitalMedia](#) switcher, or a [Capture HD](#)® system. And, through its embedded Web browser and media player, it supports a wide variety of other streaming and downloadable video formats, enabling access to all kinds of content from media servers and Web sites like YouTube® and Netflix®^[5].

HDMI® and Analog Video

In addition to handling streaming video, the DGE-2 also provides extensive connectivity for more conventional types of sources including HDMI. The DGE-2 can simultaneously generate two fully-scalable, full-motion video windows, each supporting SD or HD video and high-resolution computer signals from external digital and analog sources.

Input connections include two HDMI, two RGB, and two multi-format analog video. The HDMI inputs support digital HD sources including HDMI, DVI, and DisplayPort Multimode^[6]. The RGB inputs handle high-resolution analog VGA computer sources, and the multi-format video inputs accept analog composite, S-Video, and component HD video sources. External audio signals are handled by the HDMI inputs, and by a single analog line input.

HDCP Support

Industry-leading support for HDCP (High-bandwidth Digital Content Protection) ensures seamless compatibility with content-protected DVD, Blu-ray Disc®, digital HDTV, and multimedia computer sources.

Rava™ SIP Intercom^[4]

[Rava SIP Intercom Technology](#) enables VoIP communication between any two Rava-enabled Crestron touch screens. Rava works over Ethernet, supporting 2-way intercom, video intercom^[7], and paging without requiring any special wiring. VoIP phone capability is also possible through integration with an SIP-compatible IP phone system or SIP server.

The DGE-2 also supports legacy Crestron IP Intercom and Crestron Home® (CH) CAT5 wired intercom. Crestron IP Intercom enables compatibility with older Crestron touch screens that do not support Rava. CH CAT5 wired intercom provides compatibility with the [C2N-IADS30X24](#)^[1] and other CH CAT5 based switchers and processors.

Keyboard/Mouse Options

On-screen keyboard and mouse capabilities enable complete control of the DGE-2's embedded Web browser and other applications, and can also be used to control computers running TouchPoint® Virtual Mouse & Keyboard Software ([VMK-WIN](#)). USB ports are also provided on the front and rear of the DGE-2, and on some V-Panel displays^[1], allowing for the connection of a physical keyboard and mouse.

Real-Time Annotation

Whether conducting a high-level boardroom meeting, training seminar, or watching sports in your home theater, annotation helps put the fine point on any presentation. Native to the DGE-2, annotation provides the ability to illustrate your thoughts on-the-fly, letting you draw and write over high-definition video and computer images, and sketch out ideas on a whiteboard screen, without leaving the podium or your favorite chair while other viewers watch on the big screen.

Remote Annotation

Remote annotation capability allows multiple touch screen users to draw with their fingertips over the same video image or whiteboard screen, enabling enhanced interaction between several participants in a courtroom, classroom, or council chamber.

Presentation Output

Through its HDMI output, or via a [DigitalMedia](#) system, the DGE-2 allows the touch screen image to be sent to additional display devices, allowing videos, PowerPoint presentations, annotation, and other on-screen media to be shared with a live audience.

DigitalMedia™

DigitalMedia (DM®) connectivity opens up new ways to configure a touch screen control system. For instance, using a DM switcher such as the [DM-MD8X8](#)^[1], multiple touch screens can be connected to a single DGE-2, providing a simple, cost-effective way for multiple participants to view and control the same graphical interface. DigitalMedia also provides a versatile means for distributing touch screen content to a larger audience, routing the DGE-2's DM output to feed additional video displays and sound equipment.

DGE-2 Digital Graphics Engine w/HDMI® and DigitalMedia™ CAT Connectivity

V-Panel Connectivity

The DGE-2 features a DM CAT type output, supporting the direct connection to a V-Panel touch screen model **V12** or **V15**^[1]. It can also connect to any DM switcher or receiver equipped with a DM CAT input. A single DigitalMedia cable carries all video, audio, Ethernet, USB, control, and power signals up to 300 ft (91 m) between the V-Panel and DGE-2.^[2,3]

The DGE-2 is also compatible with the **V24R-C** series of V-Panel 24" HD Touch Screen Displays^[1]. A DigitalMedia 8G+™ transmitter (**DM-TX-201-C** or equivalent)^[1] provides the interface between the DGE-2's HDMI output and the DM 8G+™ input of a V24R-C. Alternately, when feeding a V24R-C display through a DM switcher, the DM 8G+ transmitter is not required.

The DGE-2 is also compatible with the **TSD-2020** V-Panel 20" HD Touch Screen Display^[1]. The TSD-2020 can be connected directly to the DGE-2 via HDMI and USB, or through a DigitalMedia CAT Receiver (**DM-RMC-100** or **DM-RMC-100-1**^[1]) for longer wire runs.

SPECIFICATIONS

Graphics Engine

Supports Smart Graphics™ or "traditional" GUI projects

Embedded Applications

Microsoft® Internet Explorer® 7 w/Adobe® Flash® plug-in and Java® Runtime plug-in, Windows Media® Player, Remote Desktop, VNC Viewer, Adobe Acrobat® Reader, WordPad, MS Word Viewer 2007, Excel® Viewer 2007, PowerPoint® Viewer 2007

Languages

Arabic, Chinese Simplified, Chinese Traditional, Croatian, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hebrew, Hungarian, Icelandic, Indonesian, Italian, Japanese, Korean, Latvian, Lithuanian, Norwegian, Polish, Portuguese, Romanian, Russian, Serbian, Slovak, Slovenian, Spanish, Swedish, Turkish

Memory

SDRAM: 2 GB

Flash: 4 GB

Memory Card: Supports SD™ and SDHC™ cards up to 32 GB (not included)

Maximum Project Size: 240 MB

Communications

Ethernet: 10/100 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, DHCP, for control and console

Cresnet®: Cresnet slave mode for control and console

USB: USB 2.0 host, supports USB HID class devices, touch screens, and USB flash drives

DigitalMedia™: DM CAT, DMNet®, HDCP, EDID, 100 Mbps Ethernet

HDMI®: HDCP, EDID, CEC

Touch Screen Device Support

In addition to Crestron® V-Panel™, compatible touch screen products are offered by (but not limited to) the following manufacturers:

3M® Touch Systems

CyberTouch®

Elo® Touch Solutions

HP® Compaq®

PQ Labs®

Please contact the respective manufacturer for further details. For latest touchscreen and mouse device support information, refer to Crestron True Blue Online Help Answer ID 4666, or contact Crestron True Blue Support.

Video

Input Signal Types: HDMI, DVI^[6], DisplayPort Multimode^[6], RGB, component (YPbPr), S-Video (Y/C), composite

Output Signal Types: DM CAT, HDMI, DVI^[6]

Formats: HDMI, DVI, HDCP content protection support, computer up to UXGA/WUXGA, HD up to 1080p60, NTSC or PAL

Input Resolutions, HDMI, Progressive: 640x480@60Hz, 720x480@60Hz (480p), 720x576@50Hz (576p), 800x600@60Hz, 848x480@60Hz, 852x480@60Hz, 854x480@60Hz, 1024x768@60Hz, 1024x852@60Hz, 1024x1024@60Hz, 1280x720@50Hz (720p50), 1280x720@60Hz (720p60), 1280x768@60Hz, 1280x800@60Hz, 1280x960@60Hz, 1280x1024@60Hz, 1360x768@60Hz, 1365x1024@60Hz, 1366x768@60Hz, 1400x1050@60Hz, 1440x900@60Hz, 1600x900@60Hz, 1600x1200@60Hz, 1680x1050@60Hz, 1920x1080@24Hz (1080p24), 1920x1080@25Hz (1080p25), 1920x1080@50Hz (1080p50), 1920x1080@60Hz (1080p60), 1920x1200@60Hz

Input Resolutions, HDMI, Interlaced: 720x480@30Hz (480i), 720x576@25Hz (576i), 1920x1080@25Hz (1080i25), 1920x1080@30Hz (1080i30)

Input Resolutions, RGB: 640x480@60Hz, 720x480@60Hz (480p), 720x576@50Hz (576p), 800x600@60Hz, 1024x768@60Hz, 1280x720@50Hz (720p50), 1280x720@60Hz (720p60), 1280x768@60Hz, 1280x800@60Hz, 1280x960@60Hz, 1280x1024@60Hz, 1360x768@60Hz, 1400x1050@60Hz, 1440x900@60Hz, 1600x1200@60Hz, 1920x1080@50Hz (1080p50), 1920x1080@60Hz (1080p60), 1920x1200@60Hz

Input Resolutions, Component: 480i, 576i, 480p, 576p, 720p50, 720p60, 1080p24, 1080i25 (1125 lines), 1080i30, 1080p30, 1080p50 (1125 lines), 1080p60

Input Resolutions, Composite and S-Video: 480i, 576i

Output Resolutions, HDMI & DM: 800x600@60Hz, 1024x768@60Hz, 1280x720@50Hz (720p50), 1280x720@60Hz (720p60), 1280x768@60Hz, 1280x960@60Hz, 1280x1024@60Hz, 1600x1200@60Hz, 1920x1080@50Hz (1080p50), 1920x1080@60Hz (1080p60), 1920x1200@60Hz

Color Depth: 24-bit, 16.7M colors

Streaming/File Formats: H.264 (MPEG-4 part 10 AVC), MJPEG, plus other formats as supported by Windows Media Player

DGE-2 Digital Graphics Engine w/HDMI® and DigitalMedia™ CAT Connectivity

Audio

Features: Internal volume control and audio mixer, Rava™ SIP Intercom^[4], Crestron IP Intercom^[4]

Input Signal Types: HDMI, DisplayPort Multimode^[6], analog stereo, Crestron Home® (CH) CAT5

Output Signal Types: DM CAT, HDMI, analog line-level, CH CAT5
Formats, DM & HDMI: 2ch PCM

Formats, Analog: Stereo 2-Channel

A-D/DA Conversion: 24-bit 48 kHz

Streaming/File Formats: As supported by Windows Media Player

Audio Feedback: MP3 using Smart Graphics, WAV using “traditional” graphics

Connectors

AUDIO: (1) 8-pin RJ45 female, shielded;
Bidirectional CAT5 balanced stereo audio port;
Paralleled to AUDIO IN and AUDIO OUT connectors;
Connects to any other Crestron “CH” CAT5 balanced audio port via CresCAT® cable^[1];
Maximum Cable Length: 1000 feet

AUDIO IN: (1) 5-pin 3.5mm detachable terminal block;
Balanced/unbalanced stereo line-level input;
Input Impedance: 20k Ohms balanced, 10k Ohms unbalanced;
Maximum Input Level: 4 Vrms balanced, 2 Vrms unbalanced

AUDIO OUT: (1) 5-pin 3.5mm detachable terminal block;
Balanced/unbalanced stereo line-level output;
Output Impedance: 200 Ohms balanced, 100 Ohms unbalanced;
Maximum Output Level: 4 Vrms balanced, 2 Vrms unbalanced

USB 1 – 2: (2) USB Type A female;
USB 2.0 host ports for connection of USB HID-compliant mouse/keyboard, touch screen, or USB flash drives

MEMORY: (1) SD memory card slot;
Accepts one SD or SDHC card up to 32 GB for memory expansion

REMOTE RESET: (1) 2-pin 3.5mm detachable terminal block;
Contact closure sensing input for hardware reset

LAN: (1) 8-wire RJ45 female;
10Base-T/100Base-TX Ethernet port

NET: (2) 4-pin 3.5mm detachable terminal blocks;
Cresnet Slave Ports, paralleled

VIDEO IN 1 – 2, RGB: (2) DB15HD female, RGB (VGA) video inputs;
Formats: RGBHV, RGBS, RGsB;
Input Levels: 0.5 to 1.5 Vp-p with built-in DC restoration;
Input Impedance: 75 Ohms;
Sync Input Type: Autodetect RGBHV, RGBS, RGsB;
Sync Input Level: 3 to 5 Vp-p;
Sync Input Impedance: 1k Ohms

VIDEO IN 1 – 2, HDMI: (2) 19-pin Type A HDMI female;
HDMI digital video/audio inputs;
Also supports DVI and DisplayPort Multimode^[6]

VIDEO IN 1 – 2, Y,PB/Y,PR/C/COMP: (2) auto-sensing multi-format analog video inputs, each comprised of (3) BNC female;
Signal Types: Component (YPbPr), S-Video (Y/C), or composite;
Input Level: 1 Vp-p nominal;
Input Impedance: 75 Ohms nominal

VIDEO OUT, HDMI: (1) 19-pin Type A HDMI female;
HDMI digital video/audio output;
Also supports DVI^[6]
Carries same audio and video signals as DM OUT

TO PANEL, DM OUT, D & M: (1) DM CAT output composed of (2) 8-pin RJ45 female, shielded;
Connects to DM CAT input of a V-Panel display, DM switcher, DM receiver, or other DM device via DM-CBL cable^[2,3]

TO PANEL, DM OUT, 24 A B G: (1) 4-pin 3.5mm detachable terminal block, DMNet port;
Connects to DMNet port of a V-Panel display, DM switcher, DM receiver, or other DM device via DM-CBL cable^[2,3]

G: (1) 6-32 screw, chassis ground lug

100-240V~1.8A 50/60Hz: (1) IEC 60320 C14 main power inlet;
Mates with detachable power cord, included

USB (front): (1) USB Type A female;
USB 2.0 host port for connection of a USB HID-compliant mouse/keyboard, touch screen, or USB flash drive

DM CAT Cable Length

Maximum length without, between, before, or after repeater:

150 ft (45 m) for 800x600 @60Hz (V12)
150 ft (45 m) for 1024x768 @60Hz
150 ft (45 m) for 720p
150 ft (45 m) for 1280x768 @60Hz (V15)
150 ft (45 m) for 1280x1024 @60Hz
150 ft (45 m) for 1080p (TSD-2020)
150 ft (45 m) for 1920x1200 @60Hz (V24R-C)
125 ft (38 m) for 1600x1200 @60Hz

Maximum total length using 1 repeater:

300 ft (91 m) for 800x600 @60Hz (V12)
300 ft (91 m) for 1024x768 @60Hz
300 ft (91 m) for 720p
300 ft (91 m) for 1280x768 @60Hz (V15)
300 ft (91 m) for 1280x1024 @60Hz
300 ft (91 m) for 1080p (TSD-2020)
300 ft (91 m) for 1920x1200 @60Hz (V24R-C)
250 ft (76 m) for 1600x1200 @60Hz

Note: A DM 8G+ transmitter is required when used with a V24R-C touch screen display, supporting a maximum cable length of 330 ft (100 m). No repeaters are necessary when used with the V24R-C.

DGE-2 Digital Graphics Engine w/HDMI® and DigitalMedia™ CAT Connectivity

Controls & Indicators

PWR: (1) Green LED, indicates AC line power is connected
NET: (1) Amber LED, indicates communication with Cresnet system
RESET: (1) Recessed miniature pushbutton, resets the DGE
DM LINK: (1) Green LED, indicates connection to a V-Panel or other DM device
LAN (rear): (2) LEDs, green LED indicates Ethernet link status, amber LED indicates Ethernet activity
SETUP (rear): (1) Recessed miniature pushbutton and red LED for Ethernet auto-discovery and TSID

Power Requirements

Main Power: 1.8 Amps @ 100-240 Volts AC, 50/60 Hz
Power Consumption: 120 Watts maximum
Cresnet Power Usage: Does not draw Cresnet power
Available DMNet Power: 50 Watts (2.08 Amps) at 24 Volts DC

Environmental

Temperature: 32° to 113°F (0° to 45°C)
Humidity: 10% to 90% RH (non-condensing)
Heat Dissipation: 410 BTU/Hr

Enclosure

Chassis: Metal, black finish, vented sides, fan-cooled
Faceplate: Metal, black finish, polycarbonate label overlay
Mounting: Freestanding or 2U 19-inch rack-mountable (adhesive feet and rack ears included)

Dimensions

Height: 3.56 in (91 mm);
3.47 in (89 mm) without feet
Width: 17.03 in (433 mm);
19.00 in (483 mm) with ears
Depth: 12.19 in (310 mm)

Weight

8.6 lb (3.9 kg)

MODELS & ACCESSORIES

Available Models

DGE-2: Digital Graphics Engine w/HDMI® and DigitalMedia™ CAT Connectivity

Available Accessories

V12: V-Panel™ 12" VESA Mount HD Touch Screen Display, DM CAT
V12-TILT: V-Panel™ 12" Tilt HD Touch Screen Display, DM CAT
V12-WALL: V-Panel™ 12" Wall Mount HD Touch Screen Display, DM CAT
V15: V-Panel™ 15" VESA Mount HD Touch Screen Display, DM CAT
V15-TILT: V-Panel™ 15" Tilt HD Touch Screen Display, DM CAT
V15-WALL: V-Panel™ 15" Wall Mount HD Touch Screen Display, DM CAT
TSD-2020: V-Panel™ 20" HD Touch Screen Display (May requires a DM-RMC-100 or DM-RMC-100-1)
V24R-C: V-Panel™ 24" VESA Mount HD Touch Screen Display, DM 8G+ (Requires a DM-TX-201-C)
V24R-WALL-C: V-Panel™ 24" Wall Mount HD Touch Screen Display, DM 8G+ (Requires a DM-TX-201-C)
V24RL-C: V-Panel™ 24" Lectern Mount HD Touch Screen Display, DM 8G+ (Requires a DM-TX-201-C)
DM-TX-201-C: DigitalMedia 8G+™ Transmitter (Required for use with V24R-C displays)
DM-CBL-NP: DigitalMedia™ Cable, non-plenum
DM-CBL-P: DigitalMedia™ Cable, plenum-rated
DM-CONN-20: DigitalMedia™ Cable Connectors, 20-Pack
DM-DR: DigitalMedia™ CAT Repeater
CBL Series: Crestron® Certified Interface Cables
CRESNET-NP: Cresnet® Control Cable, non-plenum
CRESNET-P: Cresnet® Control Cable, plenum
CEN-NVS200: Network Video Streamer
SW-VMK-WIN: TouchPoint® Virtual Mouse & Keyboard Software for Windows®

Notes:

1. Item(s) sold separately.
2. The V-Panel touch screen must be equipped with a DM CAT type interface for direct connection to the DGE-2. V-Panel touch screens having a DM 8G+ type interface may be connected to the DGE-2 through a DM 8G+ transmitter ([DM-TX-201-C](#)) or DigitalMedia switcher. Other touch screens may be connected directly to the DGE-2 via HDMI and USB, or remotely through a DM CAT receiver ([DM-RMC-100](#) or [DM-RMC-100-1](#)) or DigitalMedia switcher. Contact your Crestron representative for additional design assistance.
3. For DigitalMedia CAT wiring, use [DM-CBL](#) DigitalMedia Cable. Maximum cable length is 300 ft (91 m). A single DM CAT Repeater (Model [DM-DR](#)) is required for lengths over 150 ft (45 m). All wire, cables, and repeaters sold separately. Refer to the [Crestron DigitalMedia Design Guide, Doc. #4546](#) for DM system design guidelines.
4. Supports [Rava SIP Intercom](#), as well as legacy IP Intercom and wired analog intercom. Supports push-to-talk mode only. Hands-free mode is not supported. Intercom is only supported using a V-Panel model [V12](#) or [V15](#). For Rava or IP Intercom, the V-Panel must connect directly to the DGE-2 via DM CAT with no repeaters or switchers in line.
5. Accessing Netflix content requires an active Netflix account. See www.netflix.com for details.
6. HDMI requires an appropriate adapter or interface cable to accommodate a DVI or DisplayPort Multimode signal. [CBL-HD-DVI](#) interface cables available separately.
7. H.264 compatible IP camera required.

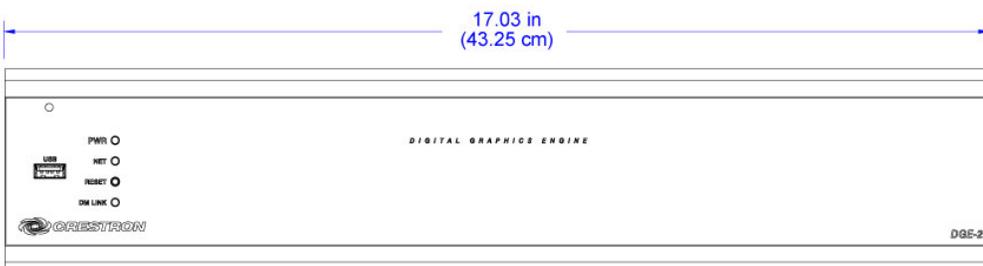
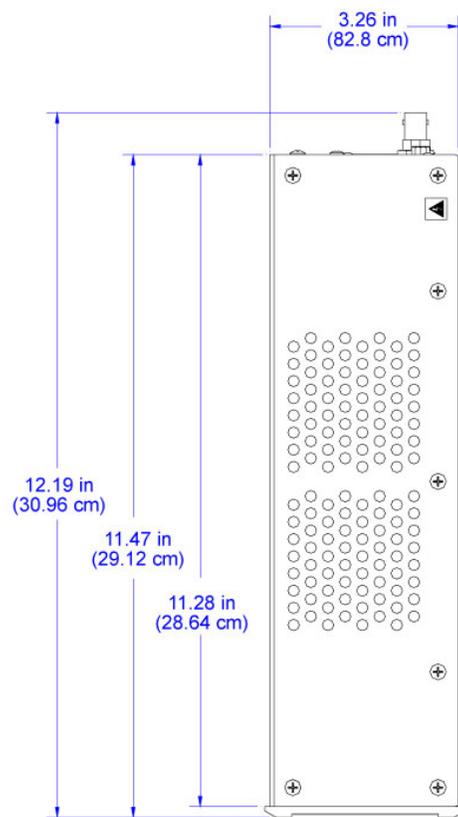
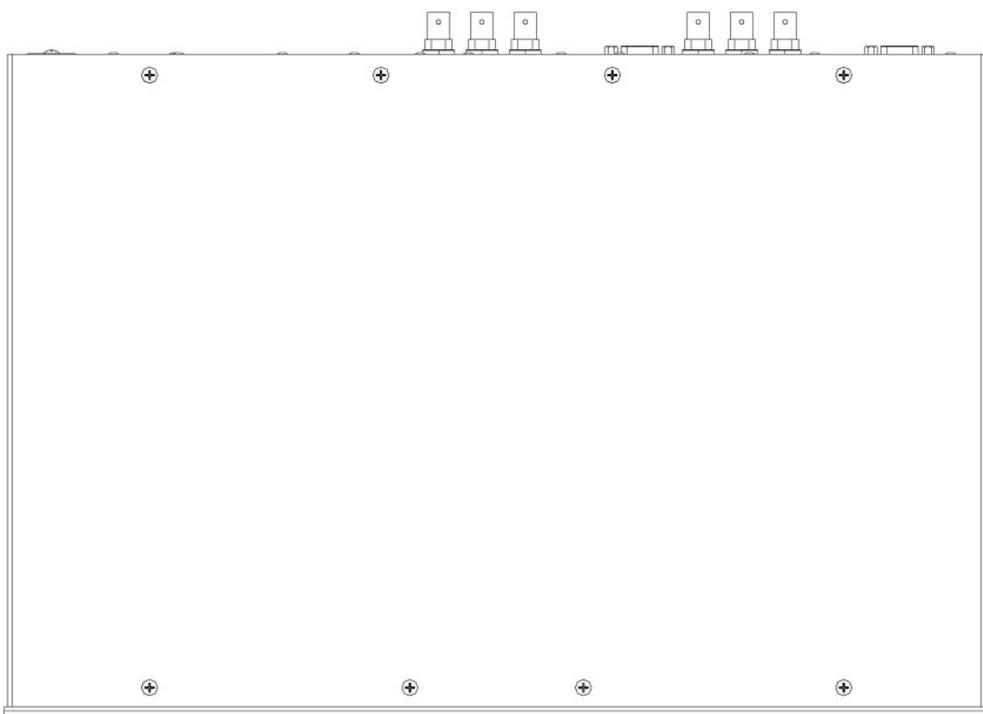
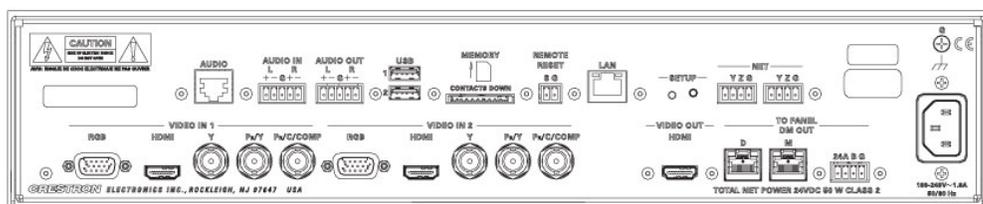
DGE-2 Digital Graphics Engine w/HDMI® and DigitalMedia™ CAT Connectivity

This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/salesreps or by calling 800-237-2041.

The specific patents that cover Crestron products are listed online at: patents.crestron.com.

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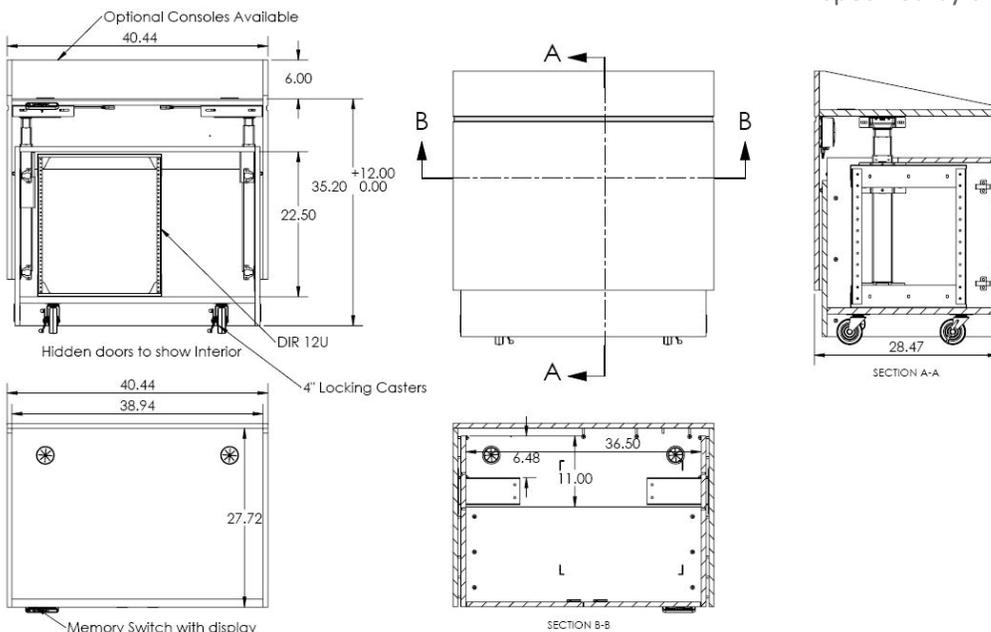
AVF's roll-about multimedia podiums are the ideal solution for distance education, electronic classrooms and corporate training sites. Extra charge for custom cutouts for electronics or other items specified by the customer.

Standard Features

- Roll-about multimedia podium
- Suitable for a tall or short person
- Silent lift mechanism raises the work surface from 36" to 50"
- Large surface to support monitors, laptops and room control systems
- Inside compartment with a 12U rack frame for additional electronic equipment and a PC/storage compartment
- Possibility to install different modules to fit your needs
- Highly resistant thermowrap surface/body finish
- 2 locking doors
- 4" heavy duty casters (2 locking)

Options

- **PLM1022** 10" - 22" Monitor mount
- **PB** Six outlet power bar with 10 ft. cord
- **FM3** Count down timer/ clock
- **MIC-18** MX418C Shure Gooseneck microphone
- **LIGHT-18** Littlite Gooseneck
- **PC-PATCH** 2x 110AC, RJ45, Phone, 2x USB
- **SF-PB3** Surface mounted 3-outlet 120V power bar with 10 ft. cord
- **CUB7** Table top cable well
- **CNL13** 13" Console
- **CNL26** 26" Console
- **Custom Cutout** Cutouts for electronics or other items specified by the customer



Specifications

Model: PDYZ35
Width: 41"
Depth: 28.47"
Height: 36" - 50"

Finishes



(Other colors available with a longer lead time)

AVF can build or modify stock configurations to suit customer specifications. Please contact us to discuss how this service can help meet your needs. Some quantity restrictions may apply. Specification subject to change without notice. Computers, cameras, monitors, etc. are shown to illustrate product usage and are not included unless otherwise noted.

AIR SR8

AIR® 8" 2-Way Surface Mount Outdoor Speakers

- > High-performance 2-way surface mount loudspeakers
- > Designed for high reliability in both indoor and outdoor applications
- > 8" polypropylene woofers for deep, solid bass
- > Optimized dual front ports for enhanced low-frequency response
- > Titanium dome tweeters for crisp, clear high-end extension
- > Rigid ABS plastic construction with powder coated aluminum grilles
- > Versatile and easy-to-install "QuickBall" mounting system
- > Allows 360° rotation and continuously variable positioning
- > 200 Watts program power handling
- > 50Hz-20kHz frequency range
- > 8 Ohms nominal impedance
- > Available in black or white
- > Paintable to blend with surroundings
- > Sold in pairs



AIR® speakers by Crestron® offer superior sound quality and flexible installation in a range of popular sizes for indoor and outdoor applications. Weatherized construction, high power handling, and extended frequency response make AIR speakers an ideal choice for enjoying music on the deck or around the pool. Their clean, contoured design also makes them a great fit for home theater and other interior applications.

The AIR SR8 model provides a pair of weatherized 2-way surface-mount loudspeakers featuring 8 inch woofers and 1 inch titanium dome tweeters. Power handling is an impressive 200 Watts (program), with a wide frequency range from 50 Hz to 20 kHz (-10 dB).

AIR SR8 speakers are smartly designed to deliver years of reliable performance and a professional appearance in any residential or small commercial environment. Featuring a unique "QuickBall" mounting system, the AIR SR8 can be mounted to any solid flat surface with the ability to orient and aim the speaker in virtually any position. The QuickBall bracket achieves a very clean and stable installation using a tool-free ball-and-socket mechanism. Simply position the speaker as desired and flip the clamp lever closed. A security screw is included to deter theft by preventing the lever from being released.

The QuickBall mounting bracket can be mounted over a 1-gang US, UK, or European electrical box, allowing wiring to be run through the wall and exit cleanly through the included cover plate. It can also be mounted to a light pole or post using pole-mounting straps (not included). A rear rigging point is also provided for securing the speaker using the optional safety tether kit (SPKA-ST-15¹¹).

Connecting the wire at the back of the speaker is facilitated using a detachable screw terminal block. A weather boot is included to protect the wiring connections from moisture.

AIR speakers are available in white or black, and can be painted to blend with the surrounding architecture. They are priced and sold in pairs.

SPECIFICATIONS

Features & Performance

Woofers: 8 inch (203 mm) polypropylene w/rubber surround & steel basket
Tweeter: 0.98 inch (25 mm) titanium dome
Crossover Frequency: 2 kHz
Impedance: 8 Ohms nominal
Frequency Response: 55 Hz to 20 kHz (± 3 dB)
Frequency Range: 50 Hz to 20 kHz (-10 dB)
Power Handling: 200 Watts program
Sensitivity: 89.5 dB @ 1W/1m

Connections

Input: (1) 4-pin 5mm detachable terminal block with screw-down flanges and weather boot;
Speaker input with parallel pass-thru;
Maximum Wire Size: 12 AWG

AIR SR8 AIR® 8" 2-Way Surface Mount Outdoor Speakers

Environmental

Temperature: -2° to 120°F (-19° to 49°C)

Humidity: 5% to 95% RH (non-condensing)

Construction

Enclosure: ABS plastic, textured finish, paintable

Grille: Aluminum, powder coated, paintable

Mounting: Surface mount to a solid flat surface with option to position over a flush-mounted 1-gang electrical box, 1-gang UK (BS 4662) electrical box, or 1-gang European (DIN 49073) electrical box; pole mount (straps not included); rigging point for safety tether (SPKA-ST-15 sold separately); theft-resistant security screw

Positioning

Yaw (Horizontal): ±30°

Pitch (Vertical): ±30°

Roll (Rotation): 360°

Dimensions

Height: 13.31 in (338 mm)

Width: 9.57 in (243 mm)

Depth: 6.94 in (177 mm);
9.05 in (230 mm) with mounting bracket

Weight

8.7 lb (4.0 kg) per speaker

MODELS & ACCESSORIES

Available Models

AIR SR8-B-T: AIR® 8" 2-Way Surface Mount Outdoor Speakers, Black Textured, Pair

AIR SR8-W-T: AIR® 8" 2-Way Surface Mount Outdoor Speakers, White Textured, Pair

Available Accessories

SPKA-ST-15: Safety Tether/Tie Down Kit

Notes:

1. Item(s) sold separately.

This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/salesreps or by calling 800-237-2041.

The specific patents that cover Crestron products are listed online at: patents.crestron.com.

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Black model – shown with cover removed



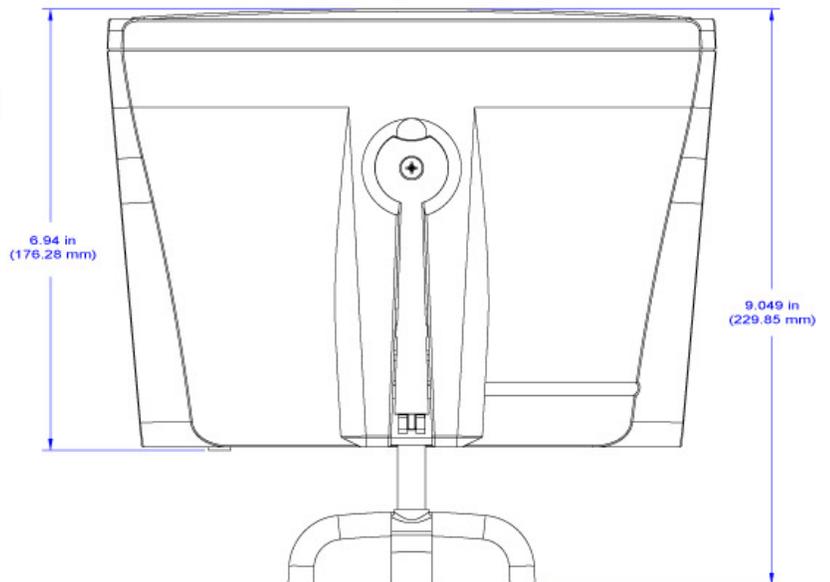
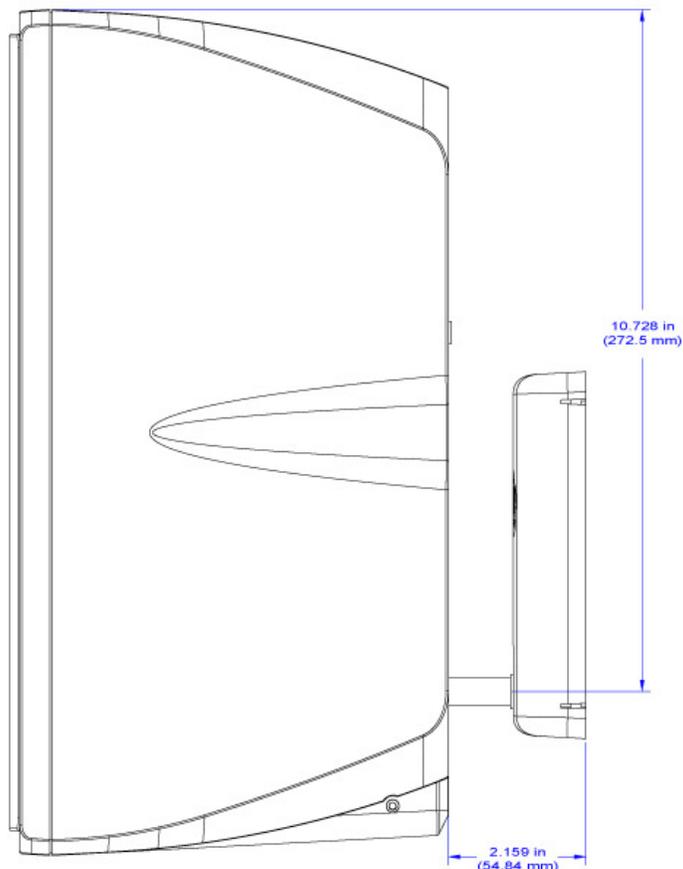
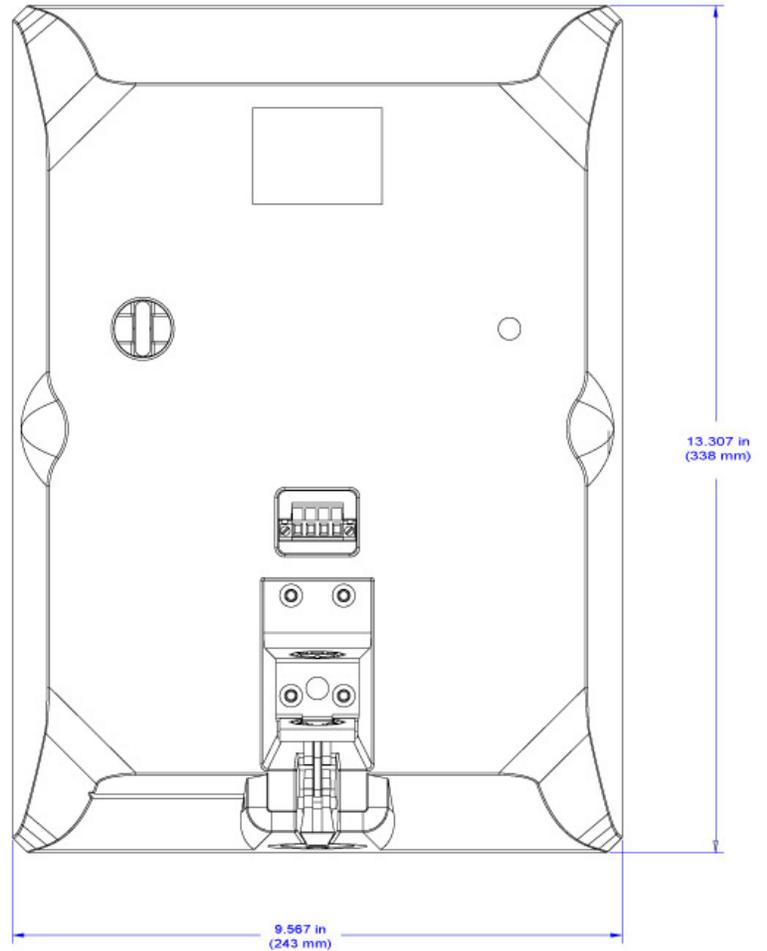
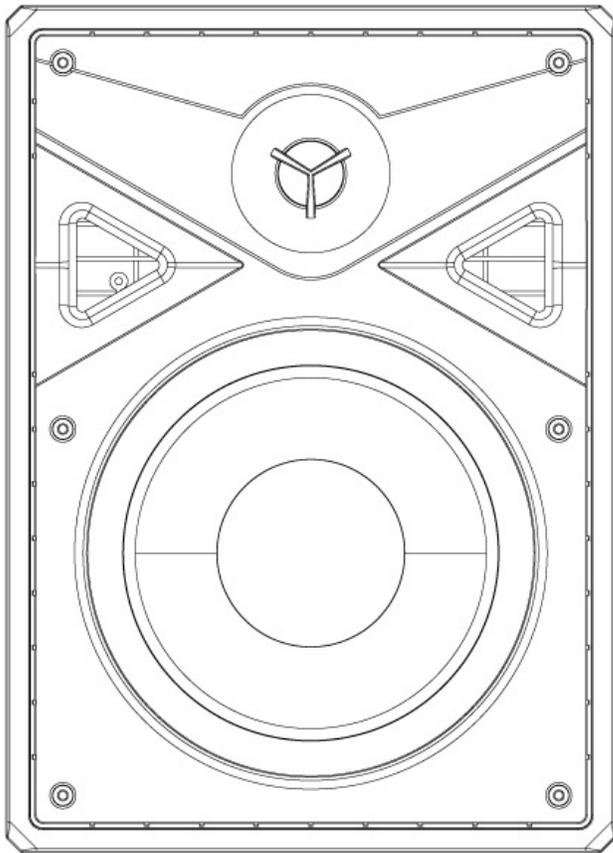
White model – shown with cover installed

QuickBall Mounting Bracket (included)



AIR SR8 – Shown in White

AIR SR8 AIR® 8" 2-Way Surface Mount Outdoor Speakers



TSW-1050

10.1" Touch Screen

- > Ultra clean, modern appearance
- > Thin profile and compact footprint
- > Affordable and easy to install
- > 10.1" widescreen active-matrix color display
- > 1280 x 800 WXGA display resolution
- > Capacitive touch screen technology
- > Smart Graphics™ support ^[1]
- > High-performance H.264 streaming video
- > Rava® SIP intercom and phone technology
- > Customizable audio feedback
- > Built-in microphone and speakers
- > 5 soft-touch capacitive buttons
- > Single-wire Ethernet connectivity
- > PoE network powered
- > Supports US or European electrical wall box mounting
- > Can be mounted directly to drywall or paneling over a cutout
- > Compatible with TSW-UMB Universal Mounting Bracket ^[2]
- > Compatible with TSW-RMB Retrofit Mounting Brackets ^[2]
- > Pre-construction and masonry mounting options available ^[2]
- > Available tabletop and swivel mount options ^[2]
- > Available in smooth black or white finish



Advanced Touch Screen Control

A Crestron® touch screen offers an ideal user-interface for controlling all the technology in your home, boardroom, classroom, courtroom, or command center. Touch screens do away with piles of remote controls, cluttered wall switches, and cryptic computer screens, simplifying and enhancing the way you use technology. For controlling audio, video, lighting, shades, HVAC, security, and other systems, Crestron touch screens are fully-customizable with easy-to-use controls and icons, true feedback and real-time status display, live streaming video, and advanced navigation of digital media servers, tuners, and other devices.

With its clean, contemporary design highlighted by edge-to-edge glass and stunning HD color graphics, the Crestron TSW-1050 touch screen makes an elegant statement on any wall, tabletop, or lectern. Perfectly at home in the most contemporary residence or modern office building, its high-tech good looks underline its power for simplifying everyday tasks and functions throughout any facility.

The TSW-1050 delivers the ultimate touch screen experience in an unobtrusive, space-saving design featuring a brilliant, high-definition 10.1 inch capacitive touch screen display and 5 soft-touch buttons. PoE connectivity and a range of mounting options make installation a breeze for both new and retrofit applications. Additional features include high-performance H.264 video, audio feedback, [Rava® SIP Intercom](#), and advanced Smart Graphics™.

Smart Graphics™^[1]

Crestron touch screens use Smart Graphics to deliver the ultimate user experience *and* the ultimate value by enabling the creation of dynamically rich user interfaces with incredible efficiency and unparalleled functionality. Using Smart Graphics, programmers can swiftly integrate fluid gesture-driven controls, animated feedback, rich metadata, embedded apps and widgets, and full-motion video for a deeply engaging and ultra-intuitive touch screen experience.

Crestron Smart Graphics offers these enhancements and more:

- Cool-looking graphical buttons, sliders, knobs, and gauges that are intuitive and fun to use
- Kinetic effects to enhance the feeling of realism, with lists and toolbars that scroll with momentum at the flick of a fingertip
- Drag-and-drop objects that snap into place, offering an easy way to switch sources
- Dashboard widgets to personalize the touch screen with clocks, weather, news, and other information
- Customizable themes allowing a completely different look and feel for every user, event, or season
- Fully-developed SmartObjects™ that enable sophisticated control over complex devices with minimal programming

Soft-Touch Buttons

The TSW-1050 includes five soft-touch capacitive buttons for quick access to commonly used functions. The buttons are pre-labeled with icons for “Power”, “Home”, “Lights”, “Up”, and “Down” functions. Each button is programmable via the control system for custom functionality.

TSW-1050 10.1" Touch Screen



TSW-1050-W-S – Shown in White

Streaming Video

High-performance streaming video capability makes it possible to view security cameras and other video sources right on the touch screen. Native support for H.264 and MJPEG formats allows the TSW-1050 to display live streaming video from an IP camera, a streaming server (Crestron [CEN-NVS200](#) or similar^[2]), or a [DigitalMedia™](#) switcher. Video is delivered to the touch screen over Ethernet, eliminating the need for any extra video wiring.

Rava® SIP Intercom

[Rava SIP Intercom Technology](#) enables hands-free VoIP communication with other Rava-enabled touch screens and door stations. Rava works over Ethernet, supporting 2-way intercom, video intercom^[3], and paging without any special wiring. VoIP phone capability is also possible through integration with an SIP-compatible IP phone system or SIP server, allowing hands-free telephone functionality complete with speed-dialing, caller ID, custom ringers, and other enhancements. Built-in echo cancellation affords full-duplex performance for clear, seamless voice communication using the TSW-1050's integrated microphone and speakers.

Audio Feedback

Customized audio files can be loaded to add another dimension to the touch screen graphics using personalized sounds, button feedback, and voice prompts.

Single-Wire Connectivity

A simple Ethernet LAN connection is all that is required to wire the TSW-1050, containing all control, video, intercom, and power signals within a single wire.

Power over Ethernet

Using PoE technology, the TSW-1050 gets its operating power right through the LAN wiring. PoE (Power over Ethernet) eliminates the need for a local power supply or any dedicated power wiring. A PoE Injector ([PWE-4803RU](#)^[2]) simply connects in line with the LAN cable at a convenient location. Crestron PoE switches ([CEN-SW-POE-5](#) or [CEN-SWPOE-16](#), or [CEN-SWPOE-24](#)^[2]) may also be used to provide a total networking solution with built-in PoE.



TSW-1050-B-S with TSW-1050-TTK TableTop Mounting Kit

Simple, Versatile Mounting

Using the bracket provided, the TSW-1050 installs easily over a 2-gang or 3-gang electrical box, or a 2-gang European electrical box. It can also be attached directly to drywall and other surfaces over the front of a 2-3/8" H x 3-3/8" W (60mm H x 86mm W) cutout. When installed, it protrudes just 1/2 inch from the mounting surface and is magnetically adhered to its mounting bracket, eliminating any visible screws for an ultra clean appearance.

Crestron also offers the [TSW-UMB](#) Universal Mounting Bracket^[2], which provides a post-construction wall mounting solution that can accommodate a variety of current and future Crestron devices including the TSW-1050. The TSW-UMB makes it easy to change devices at any time without having to cut or patch the wall, or order any additional mounting hardware. For a pre-construction mounting solution, the TSW-UMB can be used along with a [TSW-UMB-PMK](#) Pre-Construction Mounting Kit^[2]. Masonry and concrete applications can be accommodated using the TSW-UMB along with a [TSW-550-BBI](#) back box^[2].

Replacing an older Crestron touch screen with a new TSW-1050 can be made simple using a [TSW-RMB](#) Retrofit Mounting Bracket. A variety of adapter brackets are available to enable easy installation of the TSW-1050 right over the existing back box, mounting kit, or cut-out.

Tabletop Option

Using the optional Tabletop Kit ([TSW-1050-TTK](#)^[2]), the TSW-1050 becomes a stylish, freestanding touch screen that fits perfectly on a table, desk, or countertop. It can even be permanently attached to the surface using the optional Swivel Mount Kit ([TSW-550/750/1050-SMK](#)^[2]).

SPECIFICATIONS

Touch Screen Display

Display Type: TFT Active matrix color LCD

Size: 10.1 inch (257 mm) diagonal

Aspect Ratio: 16:10 WXGA

TSW-1050 10.1" Touch Screen

Resolution: 1280 x 800 pixels
Brightness: 400 nits (cd/m²)
Contrast: 800:1
Color Depth: 24-bit, 16.7M colors
Illumination: Edgelit LED
Viewing Angle: ±80° horizontal, ±80° vertical
Touch Screen: Projected Capacitive

Buttons

Hard Keys: (5) Projected capacitive pushbuttons, programmable, pre-labeled with icons for "Power", "Home", "Lights", "Up", and "Down"
Reset: (1) Miniature pushbutton on rear panel for hardware reset

Memory

LPDDR2 RAM: 1 GB
Flash: 4 GB
Maximum Project Size: 512 MB

Graphics Engine

Supports Smart Graphics™^[1]

Communications

Ethernet: 10/100 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, DHCP, IEEE 802.3af and 802.3at Type 1 compliant

Video

Streaming Formats: H.264 (MPEG-4 part 10 AVC), MJPEG

Audio

Features: Built-in microphone and speakers, Rava® SIP Intercom
Audio Feedback Formats: MP3

Connectors

LAN PoE: (1) 8-wire RJ45 with 2 LED indicators;
10Base-T/100Base-TX Ethernet port, Power over Ethernet compliant;
Green and yellow LEDs indicate Ethernet port status

Power Requirements

Power over Ethernet: IEEE 802.3at Type 1 (802.3af compatible) Class 3 (12.95W) PoE Powered Device

Environmental

Temperature: 32° to 112°F (0° to 45°C)
Humidity: 10% to 90% RH (non-condensing)
Heat Dissipation: 44 BTU/hr

Enclosure

Construction: Plastic, smooth black or white finish
Mounting: Surface mount over a 2 or 3-gang electrical box, 2-Gang

European (DIN 49073) electrical box, or 2-3/8" H x 3-3/8" W (60mm H x 86mm W) cutout; additional wall mount and tabletop options available separately

Dimensions

Height: 6.46 in (164 mm)
Width: 10.12 in (257 mm)
Depth: 2.03 in (52 mm)

Weight

23.9 oz (675 g)

MODELS & ACCESSORIES

Available Models

TSW-1050-B-S: 10.1" Touch Screen, Black Smooth
TSW-1050-W-S: 10.1" Touch Screen, White Smooth

Available Accessories

TSW-1050-TTK: Tabletop Kit for TSW-1050 [specify color]
TSW-550/750/1050-SMK: Swivel Mount Kit for TSW-1050-TTK
TSW-UMB: Universal Mounting Bracket
TSW-UMB-PMK: Pre-Construction Mounting Kit for TSW-UMB
TSW-550-BBI: Wall Mount Back Box for TSW-UMB – International Version
TSW-RMB: Retrofit Mounting Brackets
PWE-4803RU: PoE Injector
CEN-SW-POE-5: 5-Port PoE Switch
CEN-SWPOE-16: 16-Port Managed PoE Switch
CEN-NVS200: Network Video Streamer
SW-VMK-WIN: TouchPoint® Virtual Mouse & Keyboard Software for Windows®

Notes:

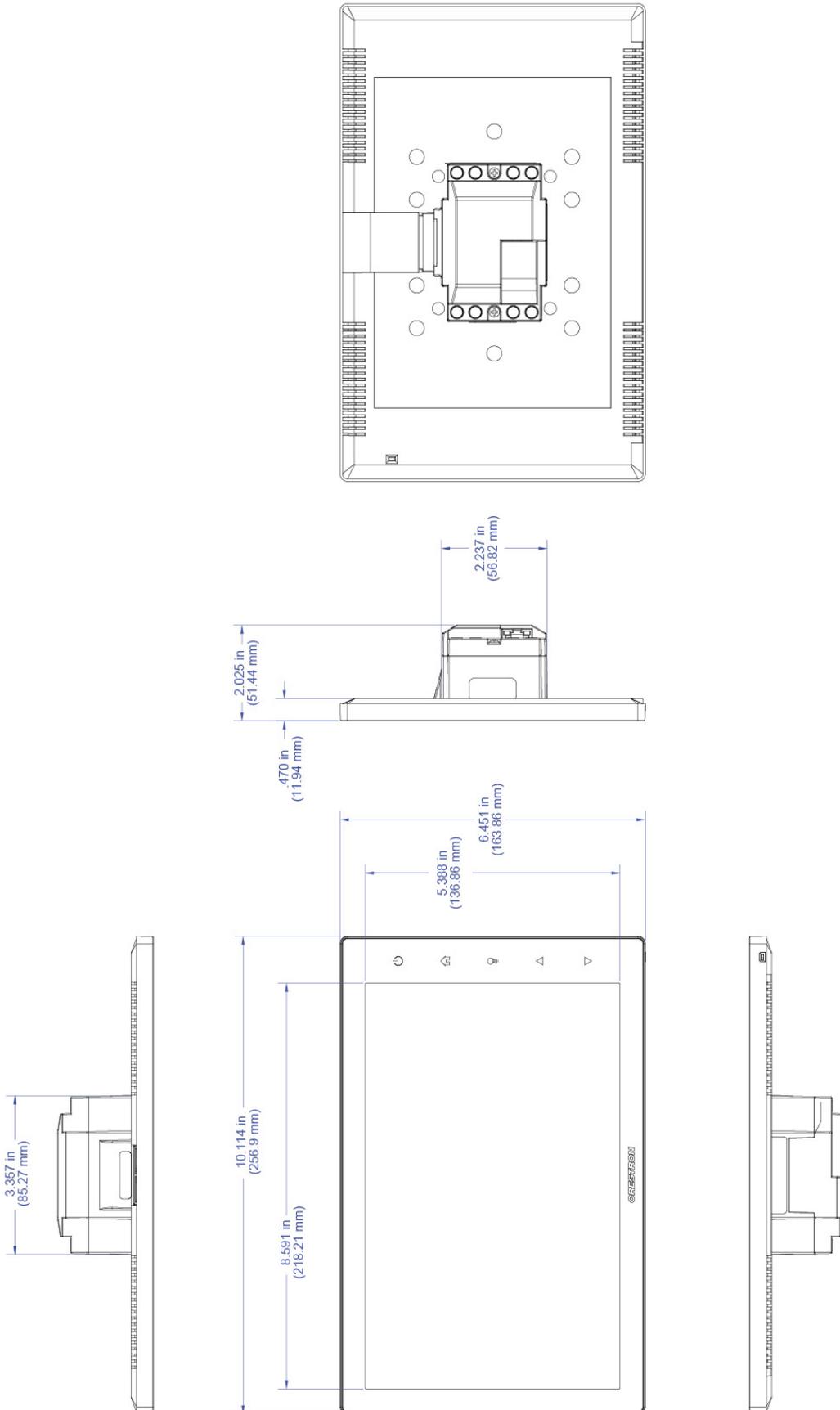
1. Supports Smart Graphics only. Not compatible with "traditional" UI projects.
2. Item(s) sold separately.
3. H.264 compatible IP camera required.

This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/salesreps or by calling 800-237-2041.

The specific patents that cover Crestron products are listed online at: patents.crestron.com.

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TSW-1050 10.1" Touch Screen



TPMC-4SMD

4.3" Designer Touch Screen

- > Modern, contoured appearance
- > Thin profile and small footprint
- > Affordable and easy to install
- > 4.3" widescreen active-matrix color touch screen
- > 800 x 480 WVGA display resolution
- > Smart Graphics™ support
- > High-performance H.264 streaming video
- > Crestron IP intercom
- > Customizable audio feedback
- > Built-in microphone and speaker
- > Built-in proximity sensor
- > 10 optional "hard key" pushbuttons
- > White LED button backlighting and feedback
- > Custom engravable button text
- > Room occupancy sensor option⁽¹⁾
- > Single-wire Ethernet connectivity
- > PoE network powered
- > Versatile wall, surface, and tabletop mounting options
- > Available with black or white smooth finish

With its clean, contoured appearance, the TPMC-4SMD Designer Touch Screen from Crestron® makes an elegant statement in any environment. Perfectly at home in the most contemporary residence or modern office building, its high-tech good looks underline its power for simplifying everyday tasks and functions throughout any facility, all in a very affordable device that's versatile and easy to install.

An incredibly thin profile and small footprint allow the TPMC-4SMD to be installed in places other touch screens just can't go, providing the choice of mounting to a standard electrical box or to virtually any flat surface — even glass, granite, or marble. A table top enclosure is also available, affording a very stylish, space-saving solution for placement on a desktop or bedside table. Complete connectivity is provided through a single high-speed Ethernet connection, containing all control, video, intercom, and power signals within a single wire.

The TPMC-4SMD provides a customizable touch screen controller featuring Smart Graphics™, H.264 streaming video, audio feedback, and 2-way IP intercom, cohesively merged into one seamless user interface. Additional features include white LED backlit buttons, a built-in proximity sensor, PoE network power, and occupancy sensor inputs.

Advanced Touch Screen Control

A Crestron touch screen offers an ideal user-interface for controlling all the technology in your home, boardroom, classroom, courtroom, or command center. Touch screens do away with piles of remote controls, cluttered wall switches, and cryptic computer screens, simplifying and enhancing the way you use technology. Crestron touch screens are fully-customizable for controlling audio, video, lighting, shades, HVAC, security, and other systems — with easy-to-use controls and icons, true feedback and real-time status



display, live streaming video, and advanced navigation of digital media servers, tuners, and other devices.

Smart Graphics™

Crestron touch screens use smart graphics to deliver the ultimate user experience *and* the ultimate value by enabling the creation of dynamically rich user interfaces with incredible efficiency and unparalleled functionality. Using Smart Graphics, programmers can swiftly integrate fluid gesture-driven controls, animated feedback, metadata, and video for a deeply engaging and ultra-intuitive touch screen experience.

Crestron smart graphics include the following enhancements:

- Cool-looking graphical buttons, sliders, knobs, and gauges are intuitive and fun to use.
- Kinetic effects enhance the feeling of realism with lists and toolbars that scroll with momentum at the flick of a fingertip.
- Drag-and-drop objects snap into place offering an easy way to switch sources.
- Dashboard widgets personalize the touch screen with clocks, weather, news, and other information.
- Customizable themes allow a completely different look and feel for every user, event, or season.
- Fully-developed SmartObjects™ enable sophisticated control over complex devices with minimal programming.

White Backlit Buttons

The TPMC-4SMD comes standard with 10 programmable "hard key" pushbuttons for quick access to commonly used functions. Each button features a translucent button cap with white LED backlighting. The backlighting is fully dimmable, either globally or separately for the left side and right side. Alternately, each button LED can be programmed to provide discrete feedback, affording clear indication of the status of each individual button.

TPMC-4SMD 4.3" Designer Touch Screen



TPMC-4SMD-B-S with "No-Button" Covers



TPMC-4SMD-B-S with WMKU-4SM Universal Wall Mount Kit



TPMC-4SMD-W-S with "No-Button" Covers and TTK-4SM TableTop Kit



TPMC-4SMD-W-S with "No-Button" Covers and MSMK-4SM Multi-Surface Mount Kit (Shown w/optional angle bracket)

The TPMC-4SMD comes standard with its buttons pre-labeled for typical room control functions. Customized labeling can be attained using Crestron Engraver software. Or, for a clean appearance, either column of buttons may be removed and covered using the no-button covers provided.

Proximity Sensor

The TPMC-4SMD senses as you approach it, waking its display automatically without having to touch the screen so it's always ready for use.

Streaming Video

High-performance streaming video capability makes it possible to view security cameras and other video sources over the network right on the touch screen. Native support for H.264 and MJPEG formats allows the TPMC-4SMD to display live video images from IP cameras and servers such as the Crestron [CEN-NVS200 Network Video Streamer^{\[1\]}](#).

IP Intercom

Built-in IP intercom capability facilitates direct touch screen-to-touch screen intercom and monitoring right over the LAN without requiring any additional AV wiring. The TPMC-4SMD features an integrated microphone and speaker for clear speech communication.

Audio Feedback

Customized audio files can be loaded on the TPMC-4SMD to add another dimension to its touch screen graphics using personalized sounds, button feedback, and voice prompts.

Single-Wire Connectivity

A simple Ethernet LAN connection is all that is required to wire the TPMC-4SMD, containing all control, video, intercom, and power signals within a single wire.

Power over Ethernet

Using PoE technology, the TPMC-4SMD gets its operating power right through the LAN wiring. PoE (Power over Ethernet) eliminates the need for a local power supply or any dedicated power wiring. A PoE Injector ([PWE-4803RU^{\[1\]}](#)) simply connects inline with the LAN cable at any convenient location. Crestron PoE switches ([CEN-SW-POE-5](#), [CEN-SW-POE-16](#), or [CEN-SW-POE-24^{\[1\]}](#)) may also be used to provide a total networking solution with built-in PoE.

Occupancy Sensing

Crestron [GLS-series](#) room occupancy sensors can be connected directly to the TPMC-4SMD to allow automation of the room's lighting, climate control, and other devices.

TPMC-4SMD 4.3" Designer Touch Screen

Simple, Versatile Mounting

The TPMC-4SMD installs easily on virtually any mounting surface. As standard, it mounts directly to a single-gang electrical box (horizontally oriented) or European electrical box, requiring just 1/2-inch mounting depth while protruding less than 3/4-inch from the wall surface. It can also be adapted for mounting to a vertically-oriented 1-gang or 2-gang electrical box, or a 2-gang UK electrical box, using the optional [WMKU-4SM](#) Universal Wall Mount Kit^[1], which can also be used without an electrical box for a low-profile surface-mount solution^[2].

For impenetrable surfaces, such as decorative glass, granite, marble, plaster, smooth stone and masonry, Crestron offers the [MSMK-4SM](#) Multi-Surface Mount Kit^[1], which provides a very versatile mounting solution complete with a low-profile rear shell enclosure, adhesive mounting plate, optional angle bracket, and wire raceway. And finally, the [TTK-4SM](#) Table Top Kit^[1] converts the TPMC-4SMD into a stylish, compact tabletop touch screen, perfect for free-standing use or permanently-mounted on a tabletop or counter surface.

SPECIFICATIONS

Touch Screen Display

Display Type: TFT Active matrix color LCD
Size: 4.3 inch (109 mm) diagonal
Aspect Ratio: 16:9 WVGA
Resolution: 800 x 480 pixels
Brightness: 270 nits (cd/m²)
Contrast: 300:1
Color Depth: 16-bit, 64k colors
Illumination: Backlit LED
Viewing Angle: ±80° horizontal, ±80° vertical
Touch Screen: Resistive membrane

Buttons

Hard Keys: (10) Optional programmable pushbuttons, translucent backlit
Feedback/Backlight: (1) white LED per hard key, programmable for feedback and backlighting
Reset: (1) Recessed pushbutton behind pinhole for hardware reset

Proximity Sensor

Type: Active infrared beam and receiver
Range: 3-4 feet
Wakes the touch screen and backlight

Memory

SDRAM: 256 MB
Flash: 2 GB
Maximum Project Size: 60 MB

Graphics Engine

Supports Smart Graphics™ or “traditional” GUI projects

Communications

Ethernet: 10/100 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, DHCP, IEEE 802.3af and 802.3at compliant

Video

Streaming Formats: H.264 (MPEG-4 part 10 AVC), MJPEG

Audio

Features: Built-in microphone and speaker, Crestron IP Intercom
Amplification: Mono, 0.5 Watts
Audio Feedback Formats: MP3 using Smart Graphics, WAV using “traditional” graphics

Connectors

LAN PoE: (1) 8-wire RJ45 with 2 LED indicators; 10Base-T/100Base-TX Ethernet port; Power over Ethernet compliant; Green and yellow LEDs indicate Ethernet port status

Occupancy Sensor Input: (4) captive screw terminals comprising (2) voltage sensing inputs (referenced to GND) with 24 Volt DC power output; Input Voltage Range: 0-30 Volts DC; Sensing Threshold: ≥4.5 Volts DC active, ≤1 Volt DC inactive; Maximum DC Load: 4 Watts @ 24 Volts DC, provides operating power for up to (4) Crestron GLS Series occupancy sensors

Power Requirements

Power over Ethernet: IEEE 802.3af (802.3at Type 1) Class 3 PoE Powered Device

Environmental

Temperature: 32° to 104°F (0° to 40°C)
Humidity: 10% to 90% RH (non-condensing)
Heat Dissipation: 14 BTU/Hr

Enclosure

Construction: Plastic, black or white, smooth finish
Front Bezel: Plastic, hard buttons installed with pre-labeled button covers, custom engraving sold separately, “no-button” covers also included
Mounting: Requires a horizontally-oriented 1-Gang electrical box or plaster ring, or a 1-Gang European (DIN 49073) electrical box; choice of standard or security screws provided; optional universal wall, multi-surface, and table top mounting kits sold separately

Dimensions

Height: 3.47 in (89 mm)
Width: 6.20 in (158 mm)
Depth: 1.21 in (31 mm)

TPMC-4SMD 4.3" Designer Touch Screen

Weight

8.8 oz (249 g)

MODELS & ACCESSORIES

Available Models

TPMC-4SMD-B-S: 4.3" Designer Touch Screen, Black Smooth

TPMC-4SMD-W-S: 4.3" Designer Touch Screen, White Smooth

Available Accessories

4SM-BTNO: Engravable Button Covers, Set of 2

WMKU-4SM: Universal Wall Mount Kit

MSMK-4SM: Multi-Surface Mount Kit

TTK-4SM: TableTop Kit

SMK-4SM/730: Swivel Mount Kit for TTK-4SM

PWE-4803RU: PoE Injector

CEN-SW-POE-5: 5-Port PoE Switch

CEN-SWPOE-16: 16-Port Managed PoE Switch

CEN-SWPOE-24: 24-Port Managed PoE Switch

GLS-ODT-C Series: Crestron Green Light® Dual-Technology Ceiling Mount Occupancy Sensors

GLS-ODT-W Series: Crestron Green Light® Dual-Technology Wall Mount Occupancy Sensors

GLS-OIR-C Series: Crestron Green Light® Passive Infrared Ceiling Mount Occupancy Sensors

GLS-OIR-W Series: Crestron Green Light® Passive Infrared Wall Mount Occupancy Sensors

CEN-NVS200: Network Video Streamer

SW-VMK-WIN: TouchPoint® Virtual Mouse & Keyboard Software for Windows®

Notes:

1. Item(s) sold separately.
2. WMKU-4SM mounting option requires a minimum surface cut-out or wall box opening of 1.7" high x 2.0" wide.

This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/salesreps or by calling 800-237-2041.

The specific patents that cover Crestron products are listed online at: patents.crestron.com.

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TPMC-4SMD 4.3" Designer Touch Screen

