



AGENDA ITEM EXECUTIVE SUMMARY

Agenda Item:	Consider draft resolution awarding bid for the Electric Utility Electronic Display Wall.		
Presenter & Title:	Aaron Holton – Manager Electric Operations		
Date:	October 21, 2019		
Please Check Appropriate Box:			
<input checked="" type="checkbox"/>	Committee of the Whole Meeting	<input type="checkbox"/>	Special Committee of the Whole Meeting
<input checked="" type="checkbox"/>	City Council Meeting	<input type="checkbox"/>	Special City Council Meeting
<input type="checkbox"/>	Public Hearing	<input type="checkbox"/>	Other -
Associated Strategic Plan Goal/Objective: EMS - II			
Estimated Cost: \$75,622.94	Budgeted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Other Funding? <input type="checkbox"/> Yes <input type="checkbox"/> No	
<i>If "Other Funding," please explain how the item will be funded:</i>			
Executive Summary:			
<p>The display wall is the third phase of the Electric Division GIS upgrade project. Upon completion of this phase, all the Electric Division's GIS data will be available in electronic form and displayed in the Dispatch/SCADA Room, eliminating the need to build and maintain paper switching maps.</p> <p>Three companies responded to the bid for the display wall system:</p> <p style="text-align: center;">Livewall Media \$79,952.00 AVI-SPL \$76,869.09 Orbis Solutions \$75,622.94</p> <p>Orbis Solutions was the overall lowest bidder.</p>			
Attachments: <i>(please list)</i>			
<ul style="list-style-type: none"> • Resolution • Memo from Superintendent Wright • Orbis Solutions proposal 			
Voting Requirements:			
<i>This motion requires <u>6</u> affirmative votes for passage.</i>			
<i>The Mayor may vote on three occasions: (a) when the vote of the aldermen or trustees has resulted in a tie; (b) when one half of the aldermen or trustees elected have voted in favor of an ordinance, resolution, or motion even though there is no tie votes; or (c) when a vote greater than a majority of the corporate authorities is required by state statute or local ordinance to adopt an ordinance, resolution, or motion.</i>			
Recommendation / Suggested Action: <i>(how item should be listed on agenda)</i>			
Recommend approval of Resolution No. 2019-xx Authorizing Execution of Bid Award to Orbis Solutions for the purchase and installation of a Display Wall in the Electric Division in the amount of \$75,622.94.			

RESOLUTION NO. 2019-; 5

**RESOLUTION AUTHORIZING EXECUTION OF
Bid Award to Orbis Solutions for the purchase and installation of a Display Wall for
the Electric Division in an amount of \$75,622.94.**

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF GENEVA, KANE COUNTY, ILLINOIS, as follows:

SECTION 1: That the City Administrator is hereby authorized to award, on behalf of the City of Geneva, the bid to Orbis Solutions for the purchase and installation of a Display Wall for the Electric Division, the form attached hereto.

SECTION 2: This Resolution shall become effective from and after its passage as in accordance with law.

PASSED by the City Council of the City of Geneva, Kane County, Illinois, this 4th day of November 2019

AYES: __ NAYS: __ ABSENT: __ ABSTAINING: __ HOLDING OFFICE: __

Approved by me this 4th day of November 2019.

Mayor

ATTEST:

City Clerk



PUBLIC WORKS DEPARTMENT MEMORANDUM

October 21, 2019

Memo To: Mayor Burns and the Committee of the Whole
From: Aaron Holton – Manager of Electric Operations
Re: Recommendation for awarding bid for the Electric Utility Electronic Display Wall.

The Electric Division previously set a goal of digitizing the system information and changing the way this information is used and displayed for Electric Division staff, other users in City Government and the Public.

The first phase of this plan was to procure a Geographical Information System (GIS) and build a network model. This work was completed in 2018 with the delivery of Milsoft Utility Solutions WindMilMap product.

The second phase in the plan was to purchase and integrate an Outage Management System or OMS. This phase was completed in the Spring of 2019

The Third phase of the Electric Division's GIS upgrade project encompasses a video display wall. The video display wall will allow city staff to maintain the electronic model and maps of the electric system in near real time. System configuration information will be displayed, and the electric system will be modeled as switching and work is performed. This will have the advantage of reducing the amount of time and manpower required to keep the maps updated, increasing the accuracy of outage counts and giving linemen more information regarding an outage in a shorter time frame.

Bids were solicited to design, install and support a video display wall in the Electric Division "War Room". Staff evaluated the bids based on the bid opening and over-all costs for the first year. The following bid tab shows the total first year costs from each bidder and the Bid Opening price.

	Live-Wall Media	AVI-SPL	Orbis Solutions
System design	Included	\$2,000.00	\$4,750.00
Hardware/Servers	\$63,314.00	\$58,273.54	\$57,022.94
Customization	Included	Included	\$2,250.00
Development/testing	Included	Included	\$2,250.00
Deployment	\$12,385.00	\$10,406.00	\$9,350.00
Travel	Included	\$4,528.24	\$0.00
Year 1 Support	\$4,253.00	\$4,962.12	Included
Total Year 1 cost	\$79,952.00	\$80,169.90	\$75,622.94
Bid Opening	\$79,952.00	\$76,869.09	\$75,622.94

Orbis Solutions was the lowest price at bid opening and lowest over-all cost.

Staff Recommendations:

Based on the above requirements, it is staff's recommendation to award the bid to Orbis Solutions for the purchase and installation of a Display Wall for the Electric Division in an amount of \$75,622.94.

Cc: Stephanie Dawkins, City Administrator
Rich Babica, Director of Public Works
Hal Wright, Superintendent Electric Services
Jennifer Hilkemann, Manager of Distribution Construction & Maintenance
Kirk Landberg, Purchasing & Inventory Coordinator

PROPOSAL FOR DISPLAY WALL FOR ELECTRIC DIVISION GIS SYSTEM

Response to City of Geneva RFP

Provided by



Orbis Solutions
Proposal for Display Wall for Electric Division GIS System

Cover Letter

September 16, 2019

City of Geneva
Aaron Holton
Manager of Electric Operations
City of Geneva Electric Department
1800 South Street
Geneva, IL 60134
630-232-1503

RE: City of Geneva RFP for Display Wall for Electric Division GIS System

Mr. Holton,

Thank you for the opportunity to provide the City of Geneva with a comprehensive proposal for a display wall for electric division GIS system.

Please see the enclosed proposal and cost schedule. We hope to be able to have the opportunity to prove how our expertise is unparalleled in the industry. Please contact me at any time with any questions or items you'd like to discuss in more detail.

Regards,



Brad Miller
President
Office: 630-658-1004
Cell: 630-816-7143
Email: bmiller@orbis-it.com

Orbis Solutions
Proposal for Display Wall for Electric Division GIS System

Executive Summary

Thank you for the opportunity to provide the City of Geneva with a proposal for the purchase and installation of a display wall for the Electric Division's GIS System. As a leading provider of IT & A/V services in Chicagoland, we have partnered with many other municipalities and businesses to support their needs over the past 15 years.

Just a few of these clients include The Village of Burr Ridge, Resurrection University (Chicago, IL), Phillips Chevrolet (Frankfort, Lansing, & Bradley, IL), Soaring Eagle Academy (Lombard, IL), & Iroquois Mental Health Center (10 clinics throughout Iroquois County, IL).

Orbis Solutions is uniquely qualified to support the City of Geneva on this project:

- **Local & Relevant Experience:** Orbis Solutions' headquarters in Aurora, IL is home to a staff of high-level technicians & engineers with qualifications and experience in a range of areas. We also have exposure to multiple businesses outside of your organization, so we gain real world experience amongst your peer group as well as across industries.
- **Industry & Marketplace Knowledge:** In an industry with rapid changes in the marketplace, it is imperative that we stay on top of trends, new technologies & products. Orbis constantly invests in continuing education and training for all our technicians. We review, partner, and curate best of breed vendors and products in industry categories to help us provide you with the best selection of services and products to meet your goals.
- **Real References:** With our headquarters in Aurora, we support many clients in the western suburbs. We recommend contacting our references so you can hear firsthand from several of our clients.
- **Ongoing Support:** With our local presence, we are available for ongoing technical support even after the project is completed. Orbis Solutions is also available after-hours including weekends, nights, and even holidays for approved, emergency support work.

CITY OF GENEVA ELECTRIC DEPARTMENT
1800 SOUTH STREET
GENEVA, IL 60134

SPECIFICATIONS AND CONTRACT DOCUMENTS
DISPLAY WALL FOR ELECTRIC DIVISION GIS SYSTEM

Bid Opening: 10:00 A.M. MONDAY, SEPTEMBER 16, 2019

Bid Deposit: NOT REQUIRED

Performance Bond: NOT REQUIRED

Specifications: Attached

Return Bids To: City Administrator
City of Geneva
22 South First Street
Geneva, IL 60134

Please Mark the Return Envelope and specify the:

1. Bid Opening Date & Time
2. Title of Job

For Additional Information regarding bid, contact:

Aaron Holton
Manager of Electric Operations
City of Geneva Electric Department
1800 South Street
Geneva, IL 60134
630-232-1503

Please submit entire document in duplicate intact.

Thursday, August 22, 2019

NOTICE

DUPLICATE sealed BIDS submitted in a sealed envelope with the words "Proposal Display Wall for Electric Division GIS System" marked on it, will be received by the City of Geneva , Illinois, until 10:00 A.M. , Monday, September 16, 2019, at the Office of the Administrator, City of Geneva, 22 South First Street, Geneva, Illinois, 60134.

This project shall consist of the design and installation of a video display wall to be installed at the City of Geneva Public Works facility.

This work shall be done in accordance with the specifications of the City of Geneva.

Contractors and Subcontractors shall pay not less than the prevailing Rate of Wages as found by the Department of Labor or as are determined by the Court of Appeal , Kane County, to all laborers, workman, and mechanics performing work under the Contract. A signed certification stating the above as well as the fact that the bidder is not barred from bidding as a result of a violation of either Section 33E-3 or 33E-4 of Chapter 720, Illinois Compiled Revised Statutes, [720 ILCS 5/33E-3 and 5/33E4 (2009)].

The City reserves the right to defer acceptance of any proposal for a period not to exceed (60) days after the date bids are received.

The City of Geneva reserves the right to reject any or all bids and waive technicalities.

Bid packages can be downloaded from the city's website at www.geneva.il.us/bids.aspx.

To be published in the Kane County Chronicle on the following date:

Thursday, August 22, 2019

CITY OF GENEVA

BID PROPOSAL NO.

OPENING DATE: 12-23-2019

FOR: DISPLAY WALL FOR ELECTRIC DIVISION GIS SYSTEM

OPENING TIME: 10:00 AM

DEPARTMENT: PUBLIC WORKS

QUANTITIES

SPECIFIC QUANTITIES

ESTIMATED QUANTITIES

BID DEPOSIT REQUIREMENTS

NOT REQUIRED

CHECK OR BID BOND \$1000.00

PERFORMANCE BOND

NOT REQUIRED

TO BE SUBMITTED
IN AMOUNT OF
OF CONTRACT TOTAL-----
SAMPLES

NOT REQUIRED

TO BE SUBMITTED
WITH BID-----
DESCRIPTIVE LITERATURE & TECHNICAL DATA

REQUIRED

TO BE SUBMITTED WITH BID

INSTRUCTIONS TO BIDDERS

Bids shall be submitted to the City Administrator, City of Geneva, 22 South First Street, Geneva, IL 60134.

Bids shall be in sealed envelopes clearly marked as to what the bid pertains to as well as time and date of bid opening. Return address should be on outside of bid envelope.

Bids shall be submitted in DUPLICATE AND UNBOUND to the City of Geneva.

Bids shall be received on or before the time specified at which time the bids will be publicly opened and read aloud at the office of the City Administrator. Bids received after the specified time and date will be returned to the bidder unopened.

BIDS SHALL BE SUBMITTED ON CITY OF GENEVA BID FORMS INCLUDED IN THE CONTRACT DOCUMENT (BID PACKAGE).

The manufacture or assembly of equipment shall be commenced within ten (10) calendar days after written notice to proceed and shall be completed by April 30, 2020.

The City reserves the right to consider such factors as time of completion or delivery, materials, method of construction, experience, and responsibility of the bidder and similar factors in determining which bid it deems to be in the City's best interest.

The City reserves the right to reject any or all of the bids, to waive informalities or technicalities in any bid and to accept the bid which it deems to be in the best interest of the City of Geneva.

A bid deposit will be required if indicated on the "NOTICE TO BIDDERS" form. Each bid MUST be accompanied by a Bid Bond signed by a surety company authorized to do business in Illinois, or by a cashier's check or certified check in the amount of \$1000.00. Any bid not accompanied by a required bid deposit may be rejected.

All bid deposits (except that of the lowest responsible bidder) will be returned after the lowest responsible bidder is determined by the City Council. The return of the bid deposit to the successful bidder or awardee will be contingent upon that bidder's execution of a written contract with the City.

Any bidder may withdraw his or her bid by letter or telegraphic request or, with proper identification, by personally securing the bid proposal at any time prior to the time fixed for opening of bids and provided that written confirmation of any telegraphic withdrawal over the

signature of the Bidder is placed in the mail and postmarked prior to the time set for bid opening. Telephonic request to withdraw a bid will not be considered.

The City of Geneva is exempt from the Illinois Retailers Sales and Occupation Tax. An exemption certification will be furnished upon request.

Delivery of Goods F.O.B. Point- City of Geneva ELECTRIC UTILITY, 1800 South Street, Geneva, IL 60134 may be indicated in City's Purchase Order or Notice to Proceed. Should any goods be damaged during shipment, bidder shall repair or replace and damaged equipment or materials. Bidder shall negotiate on the City's behalf, at no cost to the City, with the carrier or other persons as required, to obtain compensation for such repair or replacement.

The City shall be notified 24 hours prior to any shipment of materials or equipment. Please call Kirk Landberg at (630) 232-1503 during the hours of 7:00 AM to 3:00 P.M.

All deliveries are to be made during City of Geneva Electric Utility business hours of 7:00 AM to 11:30 A.M. and 12:30 P.M. to 3:00 P.M.

Each bidder shall submit a lump sum price for material or equipment covered by the specifications, together with any prices for alternate materials or equipment or other prices or data listed in the Form of Proposal or as specified.

ESCALATION CLAUSES ARE NOT ACCEPTABLE.

The bidder may at his option, base quotes on furnishing substitutions that are equivalent of any item described, named, or specified, provided the selection meets the quality and are direct equals to the item specified. Burden of proof that proposed substitutions are equivalent, rests with the bidder.

Submit separate prices, alternate prices, or adjusted prices for materials or equipment as requested in the Form of Proposal. Bidders may in addition, submit prices for a combination of these separately priced schedules. If submitting combination quotes, bidders must submit separate schedule bids. Each schedule will be independent and subject to acceptance or rejection without alteration or qualification.

The City may award Purchase Order on basis of separate quotes or combination bids.

Prepare bids in duplicate on Form of Proposal included herewith, one copy submitted to the City, one copy to be retained by the bidder.

A legally authorized representative of bidder shall sign the bid.

Submit manufacturer's specifications and descriptive data on proposed materials.

All laborers, workers, mechanics, etc., employed in any public work under this contract shall be paid in accordance with the Prevailing Wage Rates approved by the City of Geneva, Kane County, as attached to the project specifications.

A statement certifying that the bidder is not barred from bidding on the Project Specifications as a result of a violation of either Section 33E-3 or 33E-4 of Chapter 720, Illinois Compiled Statutes [720 ILCS 5/33E-3 and 5/33E-4 (2009)]. The certificate form is attached to the Project Specifications.

Bidders must supply a self addressed, stamped envelope for bid results.

Absolutely no results will be given out over the telephone.

Questions regarding this Legal Notice, Instructions to Bidders, and Specifications should be directed to Aaron Holton, Manager of Electric Operations, Geneva Electric Division at (630) 232-1503.

USE FORM OF PROPOSAL INCLUDED HEREIN

CERTIFICATION OF COMPLIANCE

The undersigned hereby certifies as follows:

1. That he has the authority and consent to make this certification on behalf of the bidder,

Orbis Solutions

 (Name of Company)
2. That he has knowledge of the City of Geneva Codes pertaining to the disqualification of certain bidders.
3. That he knows that the bidder listed above is not disqualified from bidding under the aforementioned sections.
4. That he has knowledge of the City of Geneva ordinances relating to Fair Employment Practices and knows and understands the contents thereof; he certifies hereby that it is the policy of the bidder to recruit, hire, train, upgrade, promote, and discipline its employees without regard to race, creed, color, religion, age, sex, or physical or mental impairment.
5. That said bidder is not barred from bidding on the aforementioned contract as a result of a violation of Sections 33E-3 or 33E-4 of Chapter 720, Illinois Compiled Statutes, [720 ILCS 5/33E-3 and 33E-4 (as amended)].
6. That pursuant to Chapter 65, Section 11-42.1-1 [65ILCS 5/11-42.1-1] of the Illinois Revised Statutes, the bidder is not delinquent in the payment of any taxes administered by the Department of Revenue.
7. That the contractor (either as an individual or company) agrees to provide a drug free workplace as provided for by the "30 ILCS 580/1 et. seq."
8. That all work under this contract shall comply with the Occupational Safety and Health Act (OSHA) of 1975 as amended, and all other Federal, State, or Local statutes, rules, or regulations including all City of Geneva Safety Procedures affecting the work done under the contract.
9. That all work done under this contract shall comply with the Prevailing Wage Rate Act of the State of Illinois [820 ILCS 130/1 et. seq.] County of Kane, Illinois in effect at the time the work is performed.
10. Contractor acknowledges that the Freedom of Information Act, 5 ILCS 140/1 et seq. (the "ACT") places an obligation on the City of Geneva to produce certain records that may

be in possession of the Contractor. Contractor shall comply with the record retention and documentation requirements of the Local Records Retention Act, 50 ILCS 205/1 et seq. and the Act and shall maintain all records relating to this Agreement in compliance with the Local Records Retention Act (complying in all respects as if the Contractor was, in fact, the City). Upon notice from the City, Contractor shall review its records promptly and produce to the City within two business days of said notice from the City the required documents which are responsive to a request under the Act. If additional time is necessary to comply with the request, the Contractor may request the City to extend the time to do so, and the City will, if time and a basis for extension under the Act permits, consider such extensions. In the event Contractor fails to produce the requested records or fails to produce the requested records within the time period required above and the City is assessed a fine, fee or penalty for failure to timely comply with Act do to Contractor's actions, Contractor shall reimburse City for all fines, fee or penalties, including reasonable attorney's fees, paid by the City.

By submission of this bid, I certify that the bid has been arrived at independently and has been submitted without collusion between or among any vendor of materials, supplies, equipment, or services.

Orbis Solutions
Name of Corporation, Partnership, or Proprietor

1585 Beverly Court, Suite 123
Address

Aurora IL 60502
City State Zip

630-658-1004
Telephone

Sara Hasselmann
Authorized Signature/Title

SUBSCRIBED AND SWORN to before me

this 10th day of September, 2019.

Jessica B. Pasia Notary Public

My commission expires: July 1, 2023



FORM OF PROPOSALName of Bidder Orbis SolutionsAddress of Bidder 1585 Beverly Court, Suite 123, Aurora, IL 60502Telephone No. of Bidder 630-658-1004

To: City Administrator

City of Geneva
22 South First Street
Geneva, IL 60134

The undersigned bidder, having examined the specifications of the following proposal, hereby proposes to provide the required labor, services, and materials described in this Form of Proposal, the Instruction to Bidders, and Specifications for the sum or sums stated hereinafter:

I. DISPLAY WALL for ELECTRIC DIVISION GIS SYSTEM

FURNISH, DELIVER AND INSTALL Jupiter Catalyst 4K Display Wall Processor; (6) 55" Full HD 1.8mm Extreme Narrow Bezel Flat Panels; Remote Control; SmartMount® Modular Video Wall Pedestal Mount

AS SPECIFIED FOR THE SUM OF: \$75,622.94 (DOLLARS)TO BE DELIVERED ON: to be determined; product available 45 days from receipt of orderPrices contained herein are firm through November 3, 2019

The undersigned bidder states that this proposal is made in conformity with the specifications and agrees that, in the event of any discrepancies between any conditions of this proposal and the specifications prepared by the City of Geneva, the provisions of the latter shall prevail.

The undersigned bidder certifies that this proposal is made in good faith, without collusion or connection with any other person or persons bidding for these services, labor and materials.

Signed by :

BIDDER: Orbis SolutionsBY: Sara HasselmanTITLE: Director of MarketingDATE: 9/16/19

NOTICE : SUBMIT PROPOSALS ON PROPOSAL FORM ONLY

Request for Proposal

Video Display Wall for GIS System

For

City of Geneva Electric Division

August 22, 2019

Request for Proposal

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Request for Proposal

Background

City of Geneva Electric Division is seeking to deploy a state of the art Video Wall for displaying its Geographic Information System (GIS) application to improve the Electric Division's procedures and to enhance system reliability and efficiency.

City of Geneva Electric Division – Facts and Figures

- Include:
 - Approximately 11,000 meters
 - 9 Distribution substations and 35 feeders
 - 6 square mile service territory, encompassing the entirety of the corporate city limits of the City of Geneva.

Notice

City of Geneva reserves the right to accept or reject any proposal submitted in response to this RFP, and the right to award a contract to the non-lowest bidder.

Request for Proposal

Proposal Guidelines and Schedule

Questions

Any questions associated with this RFP must be submitted via e-mail to Aaron Holton at aholton@geneva.il.us.

Please note, all questions and responses will be shared with all respondents to this RFP.

Format of Response

Proposals must following the following outline.

<i>Proposal Section Number</i>	<i>Description</i>
1	Response to Section 3 – Company Information
2	Response to Section 4 – Functional Requirements
3	Response to Section 5 – System Infrastructure Requirements
4	Response to Section 6 – System Deployment
5	Response to Section 7 – Resource and Training Requirements
6	Response to Section 8 – Product Information
7	Response to Section 9 – Pricing
8	Response to Section 10 - References

Response packages to this RFP must contain the following:

1. Two (2) printed copies of your organization's proposal.

The proposal package must arrive at the following address on or before 10:00 am September 16, 2019. Proposals received after that time will be returned unopened.

**City Administrator
City of Geneva
22 South First Street
Geneva, IL 60134**

Request for Proposal

Schedule

<i>Item</i>	<i>Date</i>
RFP issued to prospective bidders.	22 August 2019
Deadline for submitting written questions.	11 September 2019
Deadline for submitting proposal.	16 September 2019
Oral interviews and on-site product demonstrations (if required).	N/A
Notification of intent to award.	TBD
Initiation of project.	TBD

Additional Information

The evaluation and selection of proposed solutions and any subsequent contract award will be based on the information submitted in the vendor's proposal. Failure to respond to each of the requirements in the RFP may be the basis for rejecting a response.

Please note: In order to effectively evaluate each proposed solution vendors are encouraged to present a proposal that is both concise and free of excessive “boiler plate” materials.

Request for Proposal

Company Information

Please provide the following information about your company.

1. Legal company name.

Orbis Solutions

2. Location of headquarters and satellite offices that may be utilized during the project.

Orbis Solutions is a local company with headquarters located in Aurora at 1585 Beverly Court, Suite 123, Aurora, IL.

3. Brief description of company history, in particular in the electrical utility marketplace.

Orbis Solutions was founded in 2003 and has been in business for 16 years. We are the leading provider of IT & A/V solutions and equipment specializing in design, implementation and support for small to municipalities, medium-sized businesses, schools & residences in the western suburbs of Chicago. We aim to work with you through all phases of the technology lifecycle, providing offerings focused on the three phases of IT; Design, Execution and Support.

Orbis Solutions has many clients in the public sector including:

- Village of Burr Ridge
- Burr Ridge Police Department
- Village of Hinsdale
- Village of Bradley
- Village of Prairie Grove
- Illinois Tollway
- Kankakee Public Library
- Huntley Fire Department

It is our goal to become your technology partner working with you to provide service and expertise unparalleled in the industry. To meet this goal, Orbis has invested heavily in human capital and vendor relationships to ensure that we have the level of technical expertise and marketplace knowledge required for the job at hand.

Service Offerings Include:

- Audio Visual Consulting, Installation, & Support
- Surveillance Video
- Application & PC Support
- Network Design, Installation, & Maintenance
- Low Voltage Wiring
- Data Backup & Disaster Recovery
- Documentation
- Hardware
- Off-Site Data Storage
- On-Site/Off-Site Troubleshooting
- Provisioning Management
- Phone Systems

4. Number of employees.

Orbis Solutions currently has 9 employees.

5. Number of employees dedicated to the development and deployment of the products being offered as part of the proposed solution.

Primary personnel to support this project are listed below along with highlights of their qualifications and experience.

Brad Miller

Title: President / Lead Consultant

Education: BS in Computer Science, CCNA, CCDA, CCNP CCDP, MSCE

Summary of Experience:

- 20 years in IT, 13 years running Orbis Solutions
- 10 years managing the network / IT Systems of a municipality
- Enterprise Network design and implementation
- Enterprise Wireless design and implementation, indoor and outdoor
- Design and Installation of IP phone systems, specifically Cisco
- Move, adds, and changes to traditional phone systems and related wiring
- Support and install Sensus meter reading software
- Support and install Laserfiche
- GIS systems installation and support
- Filemaker
- Supporting many of the State and County Police systems such as LEADS 2000, CJIS, Live Scan Etc.
- Supporting Police MDC's and their CAD programs.
- Implementing and supporting E-Ticket
- Working with State and County agencies to resolve interagency IT issues related to interagency systems
- Skilled in dealing with decision makes and effectively communication technical issues in easy to understand language
- Install, configure and troubleshoot Windows Server 2003, 2008, 2012
- Install, configure, and troubleshoot Exchange Servers
- Active Directory configuration
- Group Policy Management
- Virtualization using Hyper-V
- Virtualization using VMWare
- Mobile device support for Android/Apple
- Troubleshooting Windows XP/ Vista/ 7 / 8
- Install and configure Microsoft Office 2007, 2010, 2013
- Experience working with Google Apps, IIS, SQL, VoIP
- Configuring network services (DHCP/DNS/SMTTP/IPSEC/QoS/WiFi/NAT/etc)
- Installing and configuring routers and firewalls
- Skilled with virus removal and network security
- Regulatory Compliance Issues
- Manage user accounts in Active Directory and within other business applications
- Maintain and configure networking systems (HP switches, Cisco Pix and Juniper SRX firewalls)

- Experience with Acronis and Symantec Backup Exec daily/weekly backups.
- Administer SIP based phone system using FreePBX
- Consulted with CEO's/Managers on hardware/software solutions for their business needs
- Installed Domain Controllers, Virtual Servers, Exchange Servers, SQL Servers
- Installed Cisco/Fortinet firewalls, Cisco/Fortinet routers
- Set up DHCP, DNS, WIFI, network security
- Desktop, Tablet and Mobile Device support for Windows, Android and Apple
- Experience managing implementation projects
- Installation of cabling and network infrastructure
- Board room technology design and implementation
- Audio / Video technologies implementation
- Security / surveillance systems installation and support
- Entry and control systems installation and support

Justin Tamm

Title: Lead Field Technician

Education: Associates in Business, MSCE

Summary of Experience:

- 8 years in IT
- Install, configure and troubleshoot Windows Server 2003, 2008, 2012
- Active Directory configuration
- Group Policy Management
- Virtualization using Hyper-V
- Mobile device support for Android/Apple
- Troubleshooting Apple Mac products
- Troubleshooting Windows XP/ Vista/ 7 / 8
- Install and configure Microsoft Office 2007, 2010, 2013
- Install and configure Cisco VoIP systems
- Installation of WiFi Devices, Motorola, Camdium
- Configuring network services (DHCP/DNS/SMTP/IPSEC/QoS/WiFi/NAT/etc)
- Installing and configuring routers and firewalls
- Skilled with virus removal and network security
- Manage user accounts in Active Directory and within other business applications
- Maintain and configure networking systems Cisco switches, Cisco Pix and Fortinet firewalls)
- Experience with Acronis daily/weekly backups.
- Installed Domain Controllers, Virtual Servers, Exchange Servers, SQL Servers
- Experience with setting up enterprise WiFi, specifically Ubiquity and Packedge
- Desktop, Tablet and Mobile Device support for Windows, Android and Apple
- Experience managing implementation projects
- Installation of cabling and network infrastructure
- Board room technology design and implementation
- Audio / Video technologies implementation
- Security / surveillance systems experience
- Entry and control systems experience
- Network troubleshooting experience
- Experience with Laserfiche
- Move, adds, and changes to traditional phone systems and related wiring

Michal Fira**Title: Field Technician****Education: Engineer's Degree, Electrotechnics****Summary of Experience:**

- 15 years experience in IT
- MVA – Windows Server Fundamentals Certificate
- MVA – Networking Fundamentals Certificate
- CompleteView Video Management System v4 Training
- Network systems
- Virtualization (Hyper-V, VMware)
- Server systems (Windows Server platforms)
- Switching and routing (Cisco)
- Salient Systems solutions based on Windows server 2012
- Ubiquiti-based network solutions
- Cisco IP phones (UC560)
- Bosch, Axis, GeoVision cameras systems
- Skills include: Electrical Design, Lighting Design, AutoCAD, Wireless Networking, NAS, Electrical Troubleshooting, Virtualization, LAN networks & switching, File recovery
- Technology experience includes: Microsoft Office, VMware, Windows Server, Group Policy, Windows, Hyper-V, VMware vSphere, Salient Systems, Ubiquiti Networks, Active Directory, Veeam, Cisco Networking, Dell Switches, DIALux, Axis cameras, Catalyst switches, Dell PowerEdge servers

Jared Baker**Title: Field Technician****Education: BA, Lincoln Christian University****Summary of Experience:**

- 10 years experience in IT
- Expertise in installation of and operating of AVL equipment, including, tv's, projectors, speakers, monitors, microphones, direct boxes.
- Experience in technology repair, including computers, ipads, phones, cable repair, and soldering.
- Experience with Adobe Photoshop & Illustrator.
- Design & installation of Audio, Video, and Network equipment for a 20,000 sq. ft building with complete stage lighting setup with a sophisticated DMX universe.
- Sound Technician (10+ years), Video Editing (10+ years), Microsoft Office (10+ years), Lighting, DMX (10+ years), Management (10+ years), Installation (10+ years) Leadership (10+ years)

Chris Wolf**Title: Lead Desktop Technician****Education: BS, Illinois State University****Summary of Experience:**

- 20 years experience in IT
- Ten years hands-on experience configuring desktops, laptops, mobile devices, servers, routers, switches, and rack & stack
- Experience managing deployment projects encompassing all major hardware technologies: end-user compute, mobile, server, storage network.
- A+ Certified
- IT and technical skills – including research, project and records management
- Mobile device support for Android/Apple

- Troubleshooting Windows XP/ Vista/ 7 / 8
- Install and configure Microsoft Office 2007, 2010, 2013
- Installing and configuring routers and firewalls
- Skilled with virus removal and network security
- Manage user accounts in Active Directory and within other business applications
- Maintain and configure PC/Server operating systems (Windows Server, Linux Distros)
- Maintain and configure networking systems (HP switches, Cisco Pix and Juniper SRX firewalls)
- Experience with Acronis and Symantec Backup Exec daily/weekly backups.
- Desktop, Tablet and Mobile Device support for Windows, Android and Apple
- Experience managing implementation projects

John Hedley

Title: Network Administrator

Education: BA, Hillsdale College

Summary of Experience:

- 20 years experience in IT
- Desktop/Server OS: Windows 7/8/10, Windows Server 2008, 2012, MacOS, Linux (Debian/Wheezy Ubuntu MATE)
- Mobile Devices: Window 10 Mobile, iOS, Android
- Mobile Device Management: Meraki, CasperSuite/JAMF, Apple Configurator, C2DM,
- Programming: Scripting: Visual Basic & Python, Java, HTML, Crystal Reports/SQL
- Server/Software/Technologies: Active Directory, Microsoft SMS/SCCM, MS Exchange, MS Terminal Server, Citrix, VMware, HyperV, SQL Server, MongoDB, Apache, Tomcat, Adobe Creative Suite, Microsoft Office, Office 365, Google Apps for Business, Google Classroom, Papercut, Atrium, iCloud, OneDrive, Google Drive, MyCloud, Azure, VPN, PowerShell
- Administrator for CRM, ERP, Accounting and LMS systems
- Hardware Platforms: Barracuda, HP/Hewlet Packard, 3Com, Ecessa, Unifi, SonicWall, Areohive, Netgear, Ruckus, Cisco, Brocade, D-Link, TRENDnet, APC, Tripp Lite, Apple, Dell, Samsung, Microsoft Surface, Chromebook
- Certifications
 - Microsoft – Microsoft Certified Professional, MCSA
 - ABYC - Marine Electrical, Marine Diesel Engines
 - Virtus/Protecting God's Children (Dioceses of Chicago and Rockford, 2004,2013)
 - Catechesis of the Good Shepard – Level 1
 - IL Dept of Education – CTE Career Technical Educator license (in process Fall 2018)
 - PMI – PMP Project Management Professional (in process Fall 2018)

6. Describe any mergers and/or acquisitions that your company has been party to within the last three years.

None

Indicate the proposed applications compliance or non-compliance with each requirement, and provide comments.

VIDEO WALL	Complies Y/N	EXPLANATIONS and CLARIFICATIONS
Wall size 144" wide, 54" high	Y	
Purpose built for video wall application		Mitsubishi Video Walls are built specifically for 24/7 Command & Control applications.
<ul style="list-style-type: none"> Ultra-Thin Bezel 3.5mm total bezel between adjacent panels 	Y	No physical bezel. Image to image gap is 1.8mm
<ul style="list-style-type: none"> Inputs - HDMI, DVI, DP 	Y	
<ul style="list-style-type: none"> HD Native Resolution 1920 x 1080 	Y	
<ul style="list-style-type: none"> LED back lit only (no edge light technology) 	Y	
<ul style="list-style-type: none"> Active backlighting 	Y	
<ul style="list-style-type: none"> ISP technology 	Y	
<ul style="list-style-type: none"> On board power supply 	Y	
<ul style="list-style-type: none"> Overheating prevention technology 	Y	
<ul style="list-style-type: none"> 500nit brightness 	Y	Our panel can achieve 700 nit brightness in Bright mode.
<ul style="list-style-type: none"> 3,000:1 contrast 	Y	All mfgs. Measure contrast by different standards. Mitsubishi is 1200:1 to 240,000:1 (True dimming).

Request for Proposal

<ul style="list-style-type: none"> • 60,000MTBF typical 	Y	True 60,000 hour MTBF
<ul style="list-style-type: none"> • OSD control by IR Hub 	Y	
<ul style="list-style-type: none"> • Auto condition reporting via IP, monitors displays vital statistics such as voltages and temperature 	Y	
<ul style="list-style-type: none"> • All metal construction 	Y	
VIDEO WALL MOUNT		
<ul style="list-style-type: none"> • Single structure made of aircraft quality extruded aluminum 	Y	
<ul style="list-style-type: none"> • 3 axis adjustment 	Y	Tool-less micro-adjustment at 8 points seamlessly align the displays
<ul style="list-style-type: none"> • Side panels trim kit included 	Y	
ACTIVE OPTICAL CABLES		
<ul style="list-style-type: none"> • HDMI Connections 	Y	
<ul style="list-style-type: none"> • EDID and HDCP compliant 	Y	
<ul style="list-style-type: none"> • Single direction signal flow 	Y	
<ul style="list-style-type: none"> • Signal transmitted optically 	Y	

VIDEO PROCESSOR			
DISPLAY OUTPUTS (8)			
<ul style="list-style-type: none"> Output resolution per display DVI or VGA - 1920 x 1080 	Y		
VIDEO CAPTURE INPUTS DVI or VGA (4)			
<ul style="list-style-type: none"> DVI input resolution - 1920 x 1200 VGA input resolution - 2048 x 1536 	Y	Adapters can be used to support other formats	
CHASSIS			
<ul style="list-style-type: none"> 19" 4U Industrial PC chassis Intel i7 3.2 GHz SBC 16GB DDR2 system memory 	Y		Up to 96GB available
<ul style="list-style-type: none"> Must have optional ability to decode at least 12 video streams at FHD 30 FPS internally 	Y		Can support more than 30 streams at full HD @ 30fps
<ul style="list-style-type: none"> High speed PCI Express backplane matched to input/output/decoder cards 	Y		Dedicated in/out/decoder cards available.
<ul style="list-style-type: none"> Input and Output cards must handle all video processing, main system CPU to only run operating system 	Y		

Request for Proposal

and local applications			
<ul style="list-style-type: none"> • Input, Output cards and backplane must come from the same manufacture 	Y		
<ul style="list-style-type: none"> • Complete HDCP support with unlimited number of inputs and outputs 	Conditional		Canvas supports HDCP. Unlimited is not applicable to processors.
<ul style="list-style-type: none"> • Two 750GB removable hard drives, RAID1 	Y		500GB however additional drives can be added for storage
<ul style="list-style-type: none"> • One DVD/RW combo drive 	Y		
<ul style="list-style-type: none"> • Two Gigabit Ethernet ports 	Y		
<ul style="list-style-type: none"> • Dual Redundant PSU's 	Y		
<ul style="list-style-type: none"> • Includes keyboard and mouse 	Y		
<ul style="list-style-type: none"> • Windows® 7 64bit operating system 	Y		Windows 10 is used offering current security patches issued by Microsoft. Windows 7 will be discontinued shortly.
WALL CONTROL and REMOTE SOFTWARE			
<ul style="list-style-type: none"> • Open multiple content windows 	Y		
<ul style="list-style-type: none"> • Content windows can be any size across entire video wall 	Y		
<ul style="list-style-type: none"> • Easy to Use, Intuitive Web-GUI 	Y		
<ul style="list-style-type: none"> • Load, Save, & Autostart Layouts 	Y		

Request for Proposal

<ul style="list-style-type: none"> • Sub-region Management (Useful for non-square videowalls.) • ThirdParty devices API (for Crestron, AMX, etc...) 	<p>Y</p>	
<ul style="list-style-type: none"> • Manage Local Applications 	<p>Y</p>	
<ul style="list-style-type: none"> • Universal Viewer (example: Picture, Websites, Video files) 	<p>Y</p>	
<ul style="list-style-type: none"> • Manage Input Sources 	<p>Y</p>	
<ul style="list-style-type: none"> • Hardware & Software Decoding 	<p>Y</p>	
<p>CABLES, CONNECTORS and ADAPTERS</p>		
<ul style="list-style-type: none"> • Power Cables 	<p>Y</p>	
<ul style="list-style-type: none"> • Active optical HDMI cables up to 150' 	<p>Y</p>	<p>Can provide 3rd party provider</p>
<ul style="list-style-type: none"> • Standard cables up to 25' 	<p>Y</p>	<p>Can provide 3rd party provider</p>
<p>SYSTEM HEALTH MONITORING</p>		
<ul style="list-style-type: none"> • Actively monitor video processor voltages and temp 	<p>Y</p>	
<ul style="list-style-type: none"> • Alarms can be sent when out of spec conditions occurs 	<p>Y</p>	<p>Requires 3rd party software</p>

VIDEO WALL FUNCTION		
<ul style="list-style-type: none"> Ability to place information on multiple video walls and standalone displays as many times as required 	Y	
<ul style="list-style-type: none"> Ability to encode video outputs 	Y	
<ul style="list-style-type: none"> Each display driven at its native resolution 	Y	
<ul style="list-style-type: none"> Each display home run to video processor, signal path cannot be daisy chained 	Y	Daisy chain also supported
<ul style="list-style-type: none"> Support 4K video 	Y	
<ul style="list-style-type: none"> Compatible with all Windows frontend security programs 	Y	Runs Windows 10 LTSSB
<ul style="list-style-type: none"> Seamless video stream decoding 	Y	
<ul style="list-style-type: none"> Full HDCP compatibility 	Y	
<ul style="list-style-type: none"> Wall Control must support either Windows 10 or Windows 7 	Y	
<ul style="list-style-type: none"> Inputs, outputs and decoders easily expandable without additional programming 	Y	

Request for Proposal

<ul style="list-style-type: none"> • Command line interface 	Y	API included
CONTROL OVERVIEW		
<ul style="list-style-type: none"> • Quickly create complex templates 	Y	
<ul style="list-style-type: none"> • Easily identify sources 	Y	
<ul style="list-style-type: none"> • Place any source in any window 	Y	
<ul style="list-style-type: none"> • View the wall in real-time 	Y	
<ul style="list-style-type: none"> • Create, save and recall layouts 	Y	
<ul style="list-style-type: none"> • Multiple walls managed by a single user 	Y	
<ul style="list-style-type: none"> • User rights management, registered users assigned differing access rights to walls 	Y	
<ul style="list-style-type: none"> • Decode as many video streams as hardware allows 	Y	

Request for Proposal

WARRANTY AND SUPPORT			
<ul style="list-style-type: none"> • 3-year warranty against manufactures defects 	Y		
<ul style="list-style-type: none"> • 1st year support plan, renewable annually after first year 	Y	The first two years of limited Hardware Warranty, Software Support & Updates are included. Renewal options available thereafter.	

System Integration Requirements

The following List illustrates the system integration requirements for City of Geneva.

1. Advanced Control System PRISM SCADA
2. Tyler Technologies New World CIS
3. ESRI ArcGIS 10.3.1 or 10.5
 - a. ArcGIS Server
 - b. ArcGIS Portal
4. Microsoft SQL Server 2012
5. Itron AMR system
6. Fleetmatics AVL
7. OMS

Product Configuration Capabilities

City of Geneva is seeking to reduce both deployment and long term support costs by implementing a solution that is configurable and requires minimal custom code development. Please describe in detail the following:

1. **The extent of functionality that can be tailored to City of Geneva requirements without resorting to the development of customized extensions.**

Customization is not required for the Jupiter Catalyst4K. This includes the need to establish touch panel control, as desktop short cuts can be created to recall all established layouts.

2. **The software tools utilized to facilitate product configuration.**

Canvas, a Jupiter by InFocus product, delivers real-time video, data, and application screens from across the enterprise and empowers collaboration with team members on their video walls, laptops, and mobile devices anywhere in the world.

3. **How custom application functionality can be incorporated into the core product.**

Jupiter has an open API. Catalyst4K's Windows based foundation allows you to run applications directly on the processor.

4. **How the City of Geneva specific configuration and any custom components would be impacted by product upgrades.**

Product upgrades are generally software related and updating to current build does not impact existing configuration.

Request for Proposal

System Infrastructure Requirements

Please provide a description the system infrastructure requirements for the proposed products including:

1. Client and server hardware requirements and recommended specifications (please refer to section 9.2 for estimated number of City of Geneva users).
2. All third party software requirements including Operating System and Relational Database Management System.

Hardware and software specifications for optimal utilization of Canvas software are as follows:

Canvas Client	
CPU	PC: Intel Core 2 Duo 2.4GHz or equivalent
System Memory	4G RAM, minimum
Operating System	Supports Windows 7 Pro and above
Languages	English, Simplified Chinese, Traditional Chinese
Canvas Server	
CPU	Intel Xeon 2.4 GHz or equivalent
HDD	20GB, minimum
System Memory	4GB RAM, minimum
Operating System	Windows 7 32-bit Pro, Windows 7 64-bit Ultimate, Windows Server 2008, Windows Server 2016
Canvas iOS Client	
Operating System	iOS 6.1 or later
Devices	iPhone 4, 4S, 5, 6, 6 Plus or later; iPad 2nd, 3rd, or 4th Gen, Air or later; iPad Mini 1st Gen or later
Supported Sources	
Video Streams	H.264, H.265, H.265 MPEG2 MPEG4 MJPEG
Desktop Streams	VNC (RFB), Encrypted VNC
Web Windows	Browser windows showing websites or web applications
Desktop Presentation Screens	SimpleShare™ windows (only from CRS 4K)
Network	
LAN/WAN	Gigabit Ethernet, TCP/IP
Wireless	Wi-Fi, 4G/LTE

*Product specifications, terms, and offerings are preliminary and subject to change at any time without notice.

Request for Proposal

System Deployment

Please provide a summary of your organizations approach to product deployment and a project schedule that includes an estimated time frame for each of the phases.

PROJECT PLAN

Project Phase	Time Frame
Project Kickoff <ul style="list-style-type: none"> • Define project stakeholders • Obtain inputs, documents and configuration information from City • Outline project schedule 	2-4 business days
Display Wall Design, Customization, and Installation Plan <ul style="list-style-type: none"> • Lead a design discussion to better understand desired functionalities and everyday uses • Lead a discussion to understand the City's current security features/best practices • Develop customization and integration plan 	3-5 business days
Device Staging & Customizations <ul style="list-style-type: none"> • Stage equipment in configuration facility (utilizing either Orbis Solutions' staging area or other designated area) • Test functionality via testing scenarios • Label, inventory and asset tag equipment to City's specification • Prepare onsite documentation and ready equipment for shipping to site 	5-7 business days
Installation & System Deployment <ul style="list-style-type: none"> • Stage equipment in appropriate closet • Physical install, mounting, and connection of all equipment 	5-7 business days
Testing and Documentation <ul style="list-style-type: none"> • Thoroughly test and validate connectivity, display, and functionality • Provide device configuration documentation • Provide introductory training 	3-5 business days

Request for Proposal

Resource and Training Requirements

Please provide a description of the City of Geneva resources required to support both the deployment and system maintenance and support activities. For each resource list the following:

1. Resource type, e.g. Project Manager.

Project Manager

2. Estimated percent of time required for deployment phase and post deployment (support) phase.

Project Manager – 20-30 hours to assist in both the planning and deployment phases. Project Manager should have an understanding of how the City of Geneva plans to use the completed system so that we can work together to insure the display fully meets the needs of the City.

3. Required technical skills, e.g. SQL.

None

4. Training requirements.

None

Request for Proposal

Product Information

Please provide a brief description of the proposed product. Include with the description the following information.

1. Number of year's product has been in development.

2

2. Current version number.

Model Number: Catalyst4K-8HC-2DVI4K-2SSD-RAID1-2NIC-64RAM

3. Number of major upgrades to product in past two years.

0

4. Number of sites in production.

1,000+

5. Description of user group activities, e.g. annual meetings.

Due to the nature of our install base, this is confidential information that we unfortunately are unable to share at this time

Product specification sheets are included as exhibits at the end of this proposal.

- Jupiter Catalyst 4K Display Wall Processor with Canvas - 4K-8HC-2DVI4K-2SSD-RAID1-2NIC-64RAM
 - Mitsubishi Electric 55" Full HD 1.8 mm Extreme Narrow Bezel Flat Panels - LM55P3
 - Remote Control - DP-02RK
 - SmartMount Modular Video Wall Pedestal Mount Datasheet - DS-S555-3X2
-

Request for Proposal

Pricing

Please provide pricing as follows:

<i>Project Phase/Component</i>	<i>Cost</i>	<i>Comments</i>
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System design and core product configuration	\$4,750.00	
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Hardware/Servers

Item	Description	Qty	Price	Price Ext.
4K-8HC-2DVI4K-2SSD RAID1-2NIC-64RAM	Jupiter Catalyst 4K Display Wall Processor with Canvas	1	\$27,075.00	\$27,075.00
LM55P3	Mitsubishi Electric - 55" Full HD 1.8 mm Extreme Narrow Bezel Flat Panels	6	\$4,323.53	\$25,941.18
DP-02RK	Remote Control	1	\$111.76	\$111.76
DS-S555-3X2	SmartMount® Modular Video Wall Pedestal Mount	1	\$3,200.00	\$3,200.00
	Handling & Shipping	1	\$695.00	\$695.00
			Total	\$57,022.94

Customizations to core product	\$2,250.00
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Development and testing	\$2,250.00
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System deployment/Installation	\$9,350.00
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Travel expenses	\$0
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Total "Lump Sum" Costs:	\$75,622.94
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Request for Proposal

Software and Maintenance

Please provide pricing for all products required to support 5 seats

<i>Product Name</i>	<i>Quantity</i>	<i>Unit Price</i>	<i>Total Price</i>	<i>Warranty Period</i>
Canvas Client-Floating License: CANVAS CLIENT- FLOATING LICENSE: Included floating Canvas client license that gets bundled with the hardware. Canvas Client that may be used by any user on a PC or Jupiter hardware. Each floating license may be used by only one device at a time.	2	Included	Included	The first two years of limited Warranty Software Support & Updates are included. Jupiter Care can be extended for an additional fee
Canvas Server Standalone License: Standalone Canvas Server can only be activated on Jupiter hardware. Does not support redundant Canvas Servers or Mobile deployment. Manages Canvas users and Active Directory domain user authentication. Regulates user permissions based on security roles. Stores source information related to canvases, sources and system configuration. Supports named and floating licenses for user privileges to connect to the server.	1	Included	Included	The first two years of limited Warranty Software Support & Updates are included. Jupiter Care can be extended for an additional fee

Please provide a five year schedule for software maintenance fees.

<i>Product Name</i>	<i>Year</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
Jupiter Care: Hardware Warranty, Software Support & Updates	Included	Included	\$2,854.12 – if purchased upfront \$3,568.82 – after initial purchase	\$2,854.12 – if purchased upfront \$3,568.82 – after initial purchase	\$2,854.12 – if purchased upfront \$3,568.82 – after initial purchase

Request for Proposal

Training

Please provide pricing of all recommended training courses. Please indicate if the location of the training in the description field.

<i>Course Name</i>	<i>Description</i>	<i>Cost</i>
	Initial user training is included.	

Request for Proposal – Outage Management Solution

References

Provide three references for electric utilities that have deployed a similar solution to that which is being proposed. For each reference please provide:

- Company Name
- Contact Name
- Contact Phone Number and E-Mail Address
- Name and version of deployed products
- Brief description of system interfaces
- Years in production

Reference #1

- Company Name: Misumi
 - Contact Person: Steven Szczepanski
 - Contact Info: Schaumburg, IL / 847-843-9105 ext 248 / sszczepanski@misumiusa.com
 - Service Period: Ongoing
 - Detailed Description of Services Performed:
 - Design, installation, and maintenance of all A/V technology for 9 conference rooms
 - Installation and implementation of a Cisco video conferencing solution (VCS) across 7 local conference rooms and 2 international sites.
 - Installation of projectors, screens and A/V hookups in each conference room that could be used standalone or integrated into the VCS for video calls.
 - While traditional Japanese custom and culture is to speak softly, the company was having issues with video calls as participants often could not be heard. In Misumi's largest conference room, we designed and installed a system of 40 microphones, one for each seat, and integrated it into the Video Conference System. This install has provided resolution to the company's previous communication issues.
-

Request for Proposal – Outage Management Solution

Reference #2

- **Company Name:** Phillips Chevrolet
- **Contact Person:** Mike Maheras
- **Contact Info:** 815-469-2323 / MLM@phillipschevrolet.com
- **Service Period:** Ongoing
- **Detailed Description of Services Performed:**
 - Design and installation of all A/V equipment in company Training / Conference room.
 - Conference Room technology included TV, speakers, connections for a laptop, and a PC connected to the TV used for ongoing training and sales meetings.
 - In addition to conference room, we also designed, installed, & continue to maintain a video surveillance network of 400+ cameras across the company's three locations.

Reference #3

- **Company Name:** Village of Burr Ridge
 - **Contact Person:** Jerry Sapp, Finance/IT Director
 - **Contact Info:** Burr Ridge, IL / 630-654-8181 x 4000 / jsapp@burr-ridge.gov
 - **Service Period:** Ongoing
 - **Detailed Description of Services Performed:**
 - Design, installation and maintenance of A/V equipment for Village Boardroom. This consisted of a broadcast system, projector, microphones, cameras, overhead speakers and touchscreen control. Board members now have the option to dial in remotely to conduct business even while out of town.
 - Design, installation and maintenance of A/V equipment for a large training room in the Burr Ridge Police Department. This includes projector, microphones, speakers, and touchscreen control.
 - Orbis Solutions has provided the Village of Burr Ridge with comprehensive IT support for the last 15 years. In addition to help desk support and day-to-day troubleshooting, we manage and administer the Village's network and servers, provide comprehensive cyber security measures, and manage all peripheral devices including printers, switches, phones, mobile devices, and local cable channel broadcast support, etc. We have built wired and wireless networks in the Village's municipal buildings to support hundreds of devices and have partnered with the Burr Ridge PD on many specialized projects.
-

Request for Proposal – Outage Management Solution

Testimonials: What Our Clients Have to Say

As a leading provider of IT services for businesses in Chicagoland, we have partnered with many other businesses to support their IT needs, particularly in helping them establish a highly available and secure network infrastructure. We have provided a few testimonials, a partial client list, and a case study featuring the wireless networks we have designed, installed, and continue to manage for the Village of Burr Ridge.



360 Degrees of Support: Design, Installation, & Management

Orbis is more than just a “trusted IT partner” for the Village. They are our IT Department! We have been outsourcing the IT Department with them for the past 15 years. Orbis Solutions continues to support the Village on a variety of projects. The design and installation of the Village's wireless network met our goals and was on budget. Their team's knowledge and experience was critical in helping us find the right solutions to fit the Village's needs. Most importantly, it works! Orbis stands behind their installs and provides ongoing management, support/maintenance, and training as needed.

Jerry Sapp, Finance Director for the Village of Burr Ridge, Illinois

This Solution Prevents us from Experiencing Costly Downtime

I am in an industry that highly values uptime. Before coming to Orbis, we experienced an issue during tax season that prompted us to look for a more stable and reliable solution. Orbis designed and installed a highly available system that has prevented us from experiencing incredibly costly downtime. Potential downtime is no longer something I have to lose sleep over.

- ***Mark Geoffrey, Owner of Geoffrey Johns & Associates – a full service accounting firm serving the Kankakee, IL area.***



GEOFFREY *Johns*
Accounting

Conscientious of Critical Issues & Flexible with Time Constraints

While working with the Orbis team, I found all individuals a pleasure to work with. They were extremely professional and knowledgeable in their area of expertise. Unlike past IT companies that I've worked with, Brad and his team were very conscientious of time critical issues and were flexible when time constraints required the change of our established timeline. I look forward to working with the members of Orbis again in the near future!

- ***Matthew Hertzog, Assistant Vice President of Technology & CIO of Resurrection University – a private, Catholic university located in Chicago, IL.***



Request for Proposal – Outage Management Solution

Orbis Steers You in the Right Direction with your Bottom Line in Mind


In our industry, we can't afford to have hours of downtime when we experience a problem. Brad and his staff are always very knowledgeable about the IT issues affecting our organization and provide quick resolutions. The Orbis team is always thinking about ways that making a change could **make a positive impact on our performance** and providing solutions that continually help improve our business process.

- **Cherie Goselin, Associate Executive Director at Iroquois Mental Health Center.** *IMHC is a nonprofit community mental health center with 10 clinics throughout Iroquois County, Illinois.*

Our Critical Needs are Taken Care Of


The single biggest benefit we have realized since partnering with Orbis is their fast response time – especially when we have critical needs. The service, support and expertise of Brad and his team is superior to other firms we've worked with in the past. If you are on the fence about selecting Orbis, I can assure you they will take good care of you!

- **Gary Thrun, Vice President of Anchor Products Co** – *a leading manufacturer of innovative surgical products headquartered in Addison, IL.*

We Love the Streamlined Support & Fast Service


Since the implementation of our first project a few years ago, we have been a satisfied customer of Orbis Solutions. The single biggest benefit is the automated services available with our Orbis partnership! We love their streamlined support for all of our needs. Since our partnership with Orbis, we have never had any major issues. When we do need support, their help desk is quick to respond and complete the project.

- **Dawn Moticik, Office Manager at Central DuPage Foot & Ankle Associates** -- *a podiatry practice located in Winfield, IL.*

Well-Rounded Tech Expertise


The professionals at Orbis Solutions are prompt and responsive to our not for profit organization's tech needs. Their trusted expertise and willingness to work with us to meet our unique needs are greatly appreciated.

Deanna Tyrpak, Co-Founder & Executive Director of Soaring Eagle Academy -- *a special education school in Lombard, IL.*

Request for Proposal – Outage Management Solution

Orbis Prioritizes Customer Satisfaction Even After the Sale

The single biggest benefit of working with Orbis is finally having a properly operating Wi-Fi/A-V environment in our home. They outperformed our previous provider by proving these three essential attributes of a good tech provider:

1. Communicating highly technical processes in a manner that was clear and understandable to the customer
2. Delivering on-time, professional technical support by well-groomed, polite and highly competent technicians
3. Maintaining an ethical, ongoing interest in the satisfaction of the customer after the sale was made

If someone is on the fence about choosing Orbis I would be happy to relate our experience and would urge them to give great regard for the company.

- ***Mike Weible, Homeowner in St Charles, IL***

Active resolution : Full HD (1,920 x 1,080) Wall space : Width: 143.1inch x Height: 53.8inch Available area : 7,694.5in²

16:9 55inch LM55P2A 16:9 55inch LM55P2V 16:9 55inch LM55P3

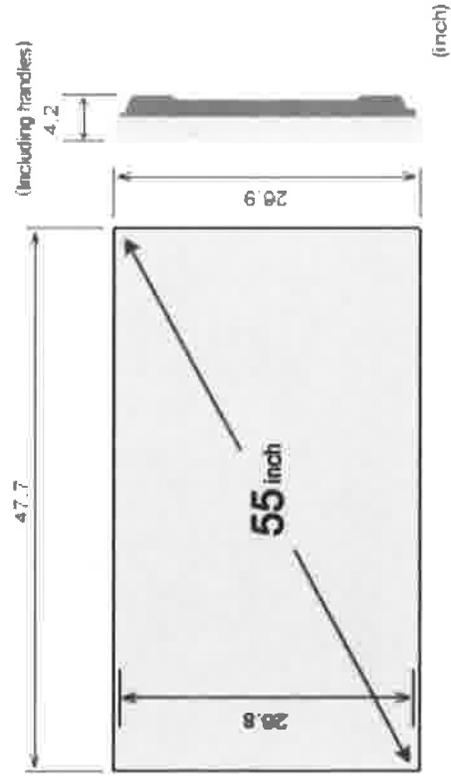
Unit W: 3unit x H: 2unit

Specification

LM55P3

Model name	Specification		
Top view			
			
Overall Display Wall			
Total # of Screens	6		
# of Screen WIDE	3		
# of Screen HIGH	2		
Width	143.1 inch		
Height (w/o Base Portion)	53.8 inch		
Total Screen Diagonal	152.6 inch		
Total Screen Area	7,679.9 in ²		
Horizontal Pixels	5,760		
Vertical Pixels	2,160		
Total Pixels	12,441,600		
Pixel Size	1,617		
Pixel Size	0.025 inch		
Optimal Visual Acuity*	85.2 inch		
Weight	150 kg		
Power Consumption *Normal Mode	1,500 W		
Thermal Dissipation *Normal Mode	330.6 lbs		
DVI-D x1	BTU/h		
Display Port x1	Kcal/h		
Signal Input Terminal	D-sub x1		
Display Consists of:	OPS Slot(DP-1SDI-3G*x1+VC-LM1HD*x1 *Optional)		
	Unit	LM55P3	
	IR Receiver	BR-LM1KK DP-02RK	
Data per Screen	Size	inch	55
	Horizontal Pixels	inch	1,920
	Vertical Pixels	inch	1,080
	Actual Pixels	inch	2,073,600
	Width	inch	47.7
	Height (w/o Base Portion)	inch	26.9
	Weight	kg	25
	Power Consumption *Normal Mode	lbs	55.1
Thermal Dissipation *Normal Mode	W	250	
	BTU/h	854	
	Kcal/h	215	

Size



EXTREME AND ULTRA NARROW BEZEL LCD MONITORS

High Performance LCD Display Walls

- ▶ Design and built for 24/7 continuous operation
- ▶ Virtually seamless narrow bezels
- ▶ Tiling compatibility with frame compensation
- ▶ 700 cd/m² brightness with anti-glare surface
- ▶ Available models:
LM55P2A - 3.5 mm narrow bezel
LM55P3 - 1.8 mm narrow bezel



RELIABLE. FLEXIBLE. SCALABLE.

FEATURES

EXTREME AND ULTRA NARROW BEZEL LCD MONITORS

Mitsubishi Electric's extreme and ultra narrow bezel LCD monitors are specifically engineered for 24/7 operation to address the needs of demanding mission critical environments by delivering stunning visuals with innovative features and unbeatable durability and reliability.

LM55P2A Full HD (1920 x 1080)
 55"(Viewable image size: 1209.6x680.4)
 Bezel width: 2.3mm (Upper/Left) / 1.2mm (Bottom/Right)



LM55P3 Full HD (1920 x 1080)
 55"(Viewable image size: 1209.6x680.4)
 Bezel width: 0.9mm (Upper/Left) / 0.9mm (Bottom/Right)



Near-Seamless Design

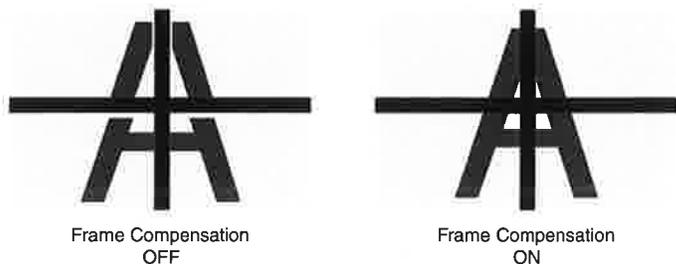
Mitsubishi Electric's narrow bezel LCD monitors create a video wall solution with multiple display images that appear nearly seamless with a tiled bezel as small as 1.8mm.*



* Depending on the product and installation conditions, the joint width may be larger than min. bezel

Tiling Compatibility With Frame Compensation

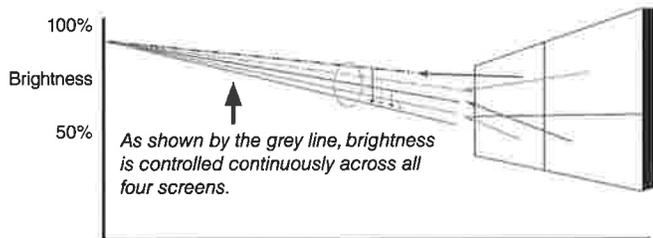
Frame compensation supports up to 25 displays in 5x5 configuration to avoid image distortion at the seams, ensuring image accuracy when spread across multiple screen displays.



Dynamic Brightness Balance*

Mitsubishi Electric pioneered and developed Multi-Vision balancing technology to achieve brightness uniformity and display alignment across multiple screens by ensuring proper coordination of internal sensors and inter-screen communication functions.

4-Screen Multi-Image:



* LM55P2A only.

Adjustment Time

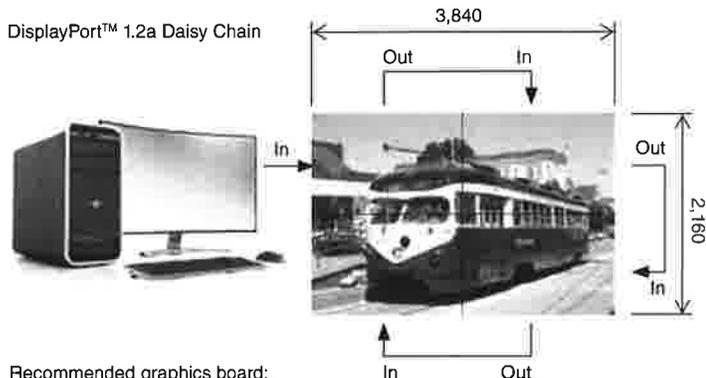
Equipped With Intel® OPS Slot

Mitsubishi Electric narrow bezel LCD displays are equipped with an Intel Open Pluggable Specification (OPS) slot to expand the scope of any application. Easily integrate a variety of peripheral equipment that support HDCP long distance signal transmission, of up to 100 meters or 328 feet with CAT6 (STP) cables.



4K Resolution

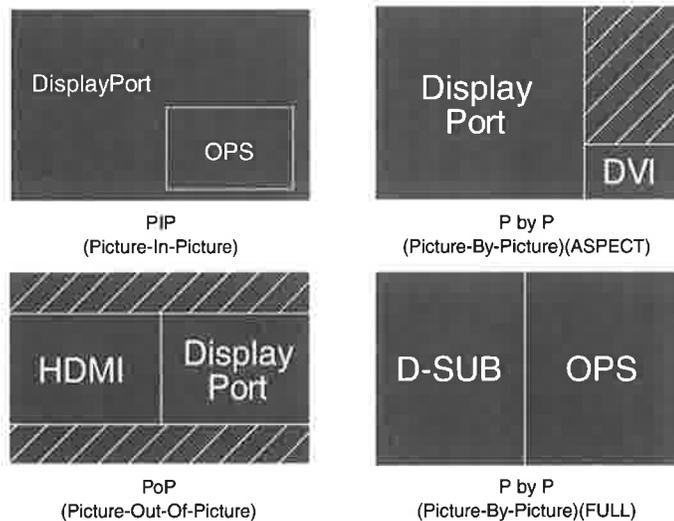
Using DisplayPort™, easily configure four LCD Panels in a 2x2 format via daisy-chain connection to achieve a 4K display (3,840 x 2,160) with stunning colors and clarity.



- Recommended graphics board:
- nVIDIA Quadro K5200
 - nVIDIA Quadro K4000
 - nVIDIA GeForce GTX980Ti

Picture-In-Picture

PIP feature allows quick access to auxiliary displays through screen layering. Two images can be easily layered and displayed on a single screen, with the sub-display movable to a user-desired location allowing optimal display of both screens.



1. Maximum sub-display size possible is 960x540 pixels.
2. Image input from HDMI, DVI, D-SUB, DisplayPort™, OPS possible
3. Depending on the scaling setting, in some cases there may be no movement.

Optional Accessories



BR-LM1KK
Front-access wall mount bracket



DP-01RK
LM55P2 Remote Control
DP-02RK
LM55P3 Remote Control



VC-LM1HD
HDBaseT OPS module input board

LM55P3 EXCLUSIVE FEATURE

Reverse Scan

Reverses direction of image scanning to smoothly play enlarged videos on multiple displays.



Reverse Scan Mode OFF



Reverse Scan Mode ON

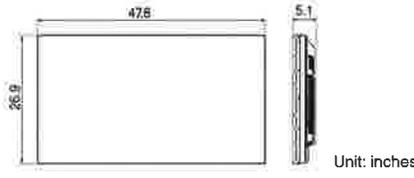
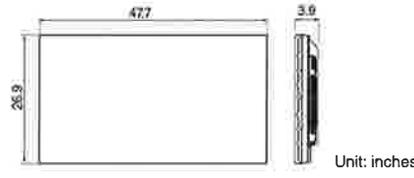
Other Features

- Digital Zoom
- Programmable Scheduling
- Screen-saver
- LAN Control
- Display Port
- SDI Connection (Optional)
- Remote Control (Optional)
- HDBaseT™ Input Board (Optional)



Warranty with ERA Advanced Replacement Program*

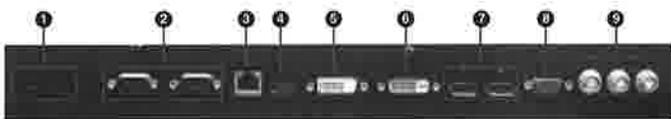
* ERA for Installations within the continental United States only.

Model Name		LM55P2A	LM55P3
Dimension			
Dimensions (W x H x D)		47.8 x 26.9 x 5.1"	47.7 x 26.9 x 3.9"
Screen Surface Treatment		Anti-glare (Haze 25%, hard-coating)	Anti-glare (Haze 44%, hard-coating)
Mullion Size (total)		3.5 mm ^{*1}	1.8 mm ^{*1}
Resolution		Full HD (1920 x 1080 pixels)	
Screen Size		55" (H: 1209.6mm, V: 680.4mm)	
Backlight Technology		LED (direct)	
Operation Lifetime		50,000 hrs. (typ.) ^{*2}	60,000 hrs. (typ.) ^{*2}
Viewing Angle		178° (CR>10)	
Brightness	High Bright Mode	700 cd/m ²	
	Standard	500 cd/m ²	
Contrast Ratio		4000:1 (typ.)	1200:1 (Typ.) / 240,000:1 (local dimming)
Display Colors		16.7 million	1.07 billion
Input Connectors	Video	DVI-D (with HDCP) x 1, HDMI x 1, DisplayPort™ (1.2a) x1, D-sub 15 x 1, Composite (BNC Y: shared with component video) x 1, Component (YPbPr)<BNC> x 1	DVI-D (with HDCP) x1, DisplayPort™ (1.2a)*4 x1, D-sub 15 x1
	Audio	3.5 mm phone jack	
	Control	RS-232C: 2.5 mm phone jack, LAN: RJ45 (10BASE-T/100BASE-TX), Wired remote: 3.5 mm phone jack, IR receiver	
Output Connectors	Video	DVI-D (with HDCP) x 1, DisplayPort™ (1.2a) x 1	DisplayPort™ (1.2a)**4 x1
	Audio	3.5 mm phone jack, SPDIF (optical digital audio output)	
	Control	RS-232C x 1, ø3.5mm stereo mini jack x 1	RS-232C: 2.5 mm phone jack, Wired remote: 3.5 mm phone jack
Control Signals		RS-232C x 1, LAN (RJ45) x 1, Wired remote: 3.5 mm phone jack, IR receiver	
Optional Input Board Slot		Intel® OPS slot x1 ^{*5}	
Power Consumption (without OPS)	High Bright Mode	240 W (typ.)	250 W (typ.)
	Standard	200 W (typ.)	180 W (typ.)
Voltage Range		100-240VAC±10%, 50/60Hz±1Hz	
Weight		72 lbs. (32.5 kg)	55.1 lbs. (25 kg)
Operating Environment		5-35°C (41-95°F)	
		20-80% relative humidity	

*1: When using with BR-LM1KK, the optional wall mount frame: A certain additional physical gap is required to draw the monitors out for maintenance. About 1 mm is recommended.
 *2: No image staining occurs even in 24-hour operation, although the image persistence would still happen if a static image is displayed for a long term.
 *3: When the ambient temperature rises over 30°C, the max stack height will be up to 4 in high bright mode.
 *4: Can receive a DisplayPort™ SST (single-stream transport) signal. For example, a regular 3840 x 2160 pixel image from a signal source can be displayed natively on a 2x2 of LCD wall through daisy chaining.
 *5: OPS is a controller module and slot standard for digital signage produced by Intel® Corporation.

Connector Terminals

LM55P2A



- ① Remote controller connector
- ② RS-232C connector (D-SUB 9-pin)
- ③ LAN connector
- ④ HDMI in
- ⑤ DVI-D in
- ⑥ DVI-D out
- ⑦ DISPLAYPORT in/out
- ⑧ D-SUB in
- ⑨ YPbPr/VIDEO in
- ⑩ OPS slot

LM55P3



- ① LAN connector
 - ② Remote controller connector
 - ③ RC-232C connector
 - ④ DVI-D in
 - ⑤ DisplayPort in
 - ⑥ D-SUB in
 - ⑦ Audio in
 - ⑧ USB (For factory use)
 - ⑨ OPS slot
- Others (Side Terminals)
- DisplayPort out
 - SPDIF
 - AUDIO out



for a greener tomorrow

Eco Changes is the Mitsubishi Electric Group's environmental statement, and expresses the Group's stance on environmental management. Through a wide range of businesses, we are helping contribute to the realization of a sustainable society.

V051419R4



LCD Display Monitor
LM55P3
Product Specifications

Mitsubishi Electric Corporation
Kyoto Works

Rev. 1.0
November 27, 2018



LM55P3 Specifications

1. Product outline

This model is an eXNB (extremely-narrow bezel) LCD display for display wall applications.

2. Image panel

LCD Type	TFT LCD (IPS panel)	
Resolution	Full HD (1920 x 1080 pixels)	
Screen size	55" diagonal	
Surface treatment	Anti-glare (haze 44 %), Hard coating (3H)	
Pixel pitch	0.63 (H) x 0.63 (V) mm	
Backlight	Type	LED (Direct)
	Lifetime	60,000 hours (typ.) *1
Mullion size	1.8 mm (Bezel to Bezel, min.) *2	
Display colors	1.07 Billion (10-bit)	
Response time (G-to-G)	8 ms (typ.)	
Screen brightness (at 25°C)	High bright	700 cd/m ² (typ.)
	Standard	500 cd/m ² (typ.)
Contrast ratio	1200:1 (typ.)	
Viewing angle	Horizontal	178°
	Vertical	178°

3. Electric specification

Power consumption / Thermal dissipation (typ.) at 25 °C, without OPS		Power consumption		Thermal dissipation	
		High bright	Standard	215.0 kcal/h (853 BTU/h)	154.8 kcal/h (614 BTU/h)
	Stand-by	0.5 W in low power mode		--	
Voltage range	AC 100 – 240 V ±10 %, 50/60 Hz ±1 Hz				
Operating current (100/240 V)	3.0/1.5 Amp.				
Inrush current (100/240 V)	23/47 Amp.				
Image signal terminals	Input	DisplayPort™ (1.2a) x1			
		DVI-D (with HDCP) x1 D-Sub 15 x1 (YPbPr supported)			
	Output	DisplayPort™ (1.2a) x1			
Input frequencies Refer to "Available input signal lists" for details.	Resolution	640 x 480 – 4096 x 2160 pixels			
	Horizontal	15.6 – 135.0 kHz			
	Vertical	24.0 – 85.1 Hz			
	Pixel clock	25.2 – 594.0 MHz			



(Continued)

Control signals	LAN: RJ45 (10BASE-T/100BASE-TX)
	RS-232C: 2.5 mm phone jack
	Wired remote: 3.5 mm phone jack
	IR receiver
Communication between the monitors	RS-232C: 2.5 mm phone jack (input, output)
	Wired remote: 3.5 mm phone jack (input, output)
Optional input board slot	Intel® OPS slot x1
Audio terminals	3.5 mm phone jack (input, output)
	SPDIF (optical digital audio output)
Major functions	Daisy-chainable DisplayPort™ (1.2a) Up to 4 units: DisplayPort™ SST signal *3 supported One of any input signals including OPS can be looped out.
	Scaling function: up to 15x15
	Screen saver
	Reverse scan mode

4. Mechanical specification

		Product	Packing
Dimensions	Width	1211.9 mm / 47.7"	1480 mm / 58.3"
	Height	682.7 mm / 26.9"	988 mm / 38.9"
	Depth	99.0 mm / 3.9" (excluding handles)	380 mm / 15.0"
Weight		25 kg / 55.1 lbs	39 kg / 86.0 lbs
Maximum stack height	Landscape	6 units*4	
	Portrait	3 units	
available tilt angle		0° to 10° downward (both landscape and portrait orientations)	
Audio noise		29 dBA (typ.) (at 3 m distance from the screen center)	
Accessories		DisplayPort™ cable (1.8 m)	
		RS-232C cable (1.8 m): D-sub 9 pins – 2.5 mm phone plug	
		RS-232C cable (4 m): 2.5 mm phone plugs on both ends	
		User's manual	
		Plastic ties	

5. Environment

Condition for operation	5 °C – 35 °C (41 °F – 95 °F), 20 % – 80 % RH non-condensing
Condition for storage	-20 °C – 55 °C (-4 °F – 131 °F), 20 % – 80 % RH non-condensing

6. Safety approval

	LM55P3(W)	LM55P3(C)
Safety approval	UL62368-1, CAN/CSA-C22.2 No.62368-1, EN 62368-1, EN62311, GOST IEC 62368-1, AS/NZS 60950.1, CNS14336-1	GB4943.1
EMC	FCC Part15 Subpart B Class A, ICES-003 Issue No.6 Class A, EN55032 Class A, EN55024, EN61000-3-2, EN61000-3-3, GOST 30805.22 Class A, GOST CISPR 24, GOST 30804.3.2, GOST 30804.3.3, AS/NZS CISPR 32 Class A, CNS13438 Class A, IS 13252 (Part 1), VCCI Class A, JIS C 61000-3-2	GB9254 Class A, GB17625.1
Environment	European Union RoHS, Turkish RoHS	China RoHS



7. Options

Remote control kit	DP-02RK
SDI input board	DP-1SDI-3G
HDBaseT™ input board	VC-LM1HD
Wall mount bracket	BR-LM1KK
Recommended Intel® OPS board	Advantech DS280 (i7-6822EQ, 4+4 GB DDR4, SSD)
	North America JC-PC3MA
	Europe JC-PC3ME
Power cord (3 meters)	Russia JC-PC3MR
	China JC-PC3MC
	Japan JC-PC3MJ

*1: It can be used for 24-hour operation, although the image persistence would still happen if a static image is displayed for a long term.

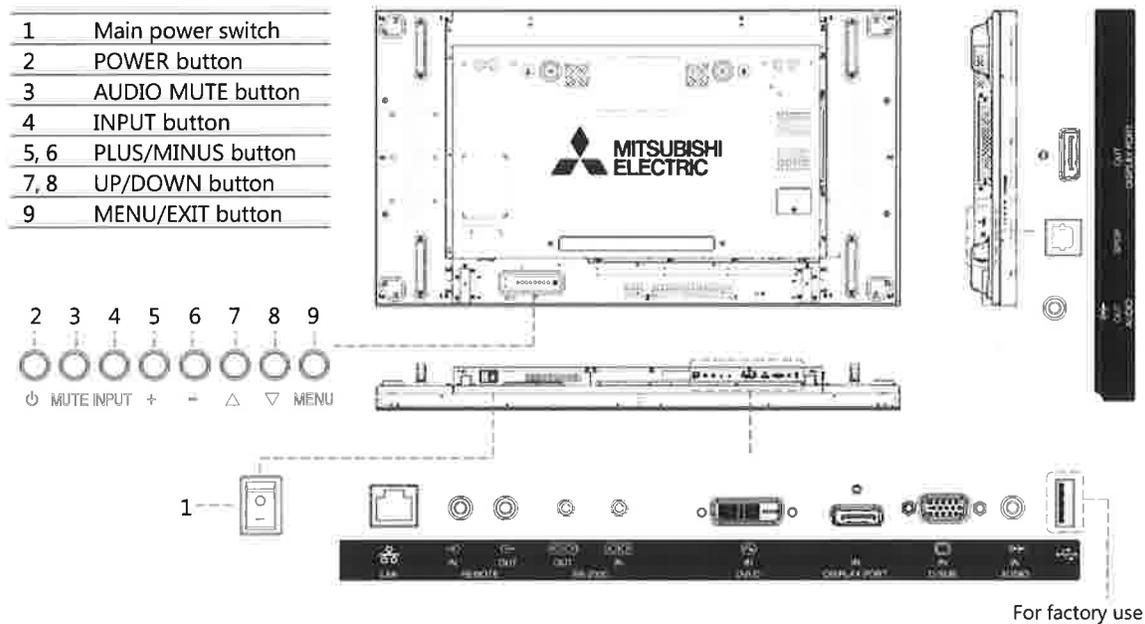
*2: When using with the optional wall mount frame, BR-LM1KK, a certain additional physical gaps is required to draw the monitors out for maintenance.

*3: Can receive a DisplayPort™ SST (single-stream transport) signal. For example, a regular 4K resolution (3840 x 2160 pixels) image from a signal source can be displayed natively on a 2x2 of LCD wall.

*4: When the ambient temperature rises over 30 °C in high bright mode, the max stack height will be up to 4.

- DisplayPort is a trademark of Video Electronics Standards Association, registered in the U.S. and other countries.
- Intel is a trademark of Intel Corporation or its subsidiaries in the U.S. and/or other countries.
- HDBaseT™ and the HDBaseT Alliance logo are trademarks of the HDBaseT Alliance.
- Information in this document is subject to change without notice.

Control switches, terminals





Available input signal lists

Computer signals

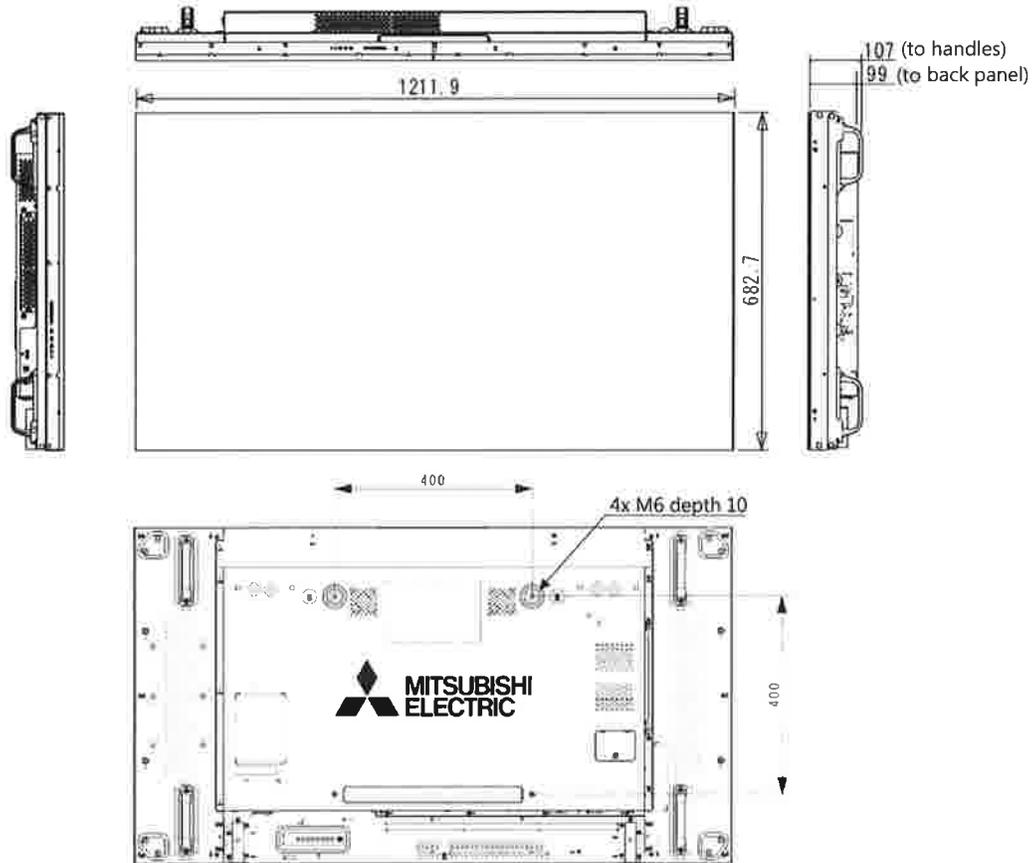
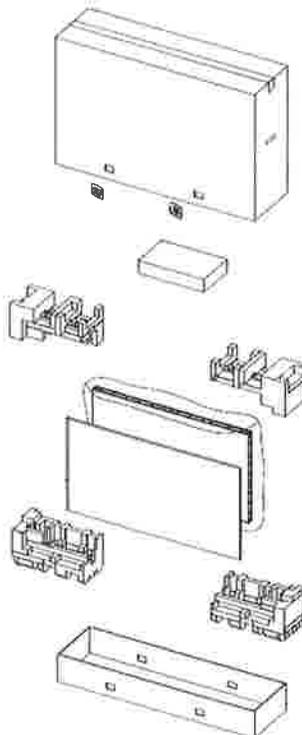
Resolution	Frame rate (Hz)	Line rate (kHz)	Pixel rate (MHz)	DP	DVI-D	OPS	D-sub (RGB)	D-sub (YPbPr)
3840x2160	59.997	133.313	533.250					
	49.977	110.500	442.000	✓	--	--	--	--
	29.981	65.688	262.750					
	23.999	52.438	209.750			✓		
3840x1080	59.968	66.625	266.500	✓	--	✓	--	--
	2560x1600	59.972	98.713	268.500	✓	--	✓	--
2560x1440	59.951	88.787	241.500	✓	--	✓	--	--
1920x1200	59.950	74.038	154.000	✓	✓	✓	✓	--
	49.932	61.816	158.250	✓	✓	✓	✓	--
1920x1080	59.963	67.158	173.000		--			
	59.950	66.587	138.500	✓	✓	✓	✓	--
	49.929	55.621	141.500		✓			
1680x1050	59.954	65.290	146.250	✓	✓	✓	✓	--
	49.974	54.121	119.500					
1600x1200	60.000	75.000	162.000	✓	✓	✓	✓	--
1400x1050	74.867	82.278	156.000					
	59.978	65.317	121.750	✓	✓	✓	✓	--
	59.948	64.744	101.000					
	49.965	54.113	100.000					
1366x768	59.790	47.712	85.500	✓	✓	✓	✓	--
1280x1024	85.024	91.146	157.500					
	75.025	79.976	135.000	✓	✓	✓	✓	--
	60.020	63.981	108.000					
1280x960	85.002	85.938	148.500					
	75.000	75.000	126.000	✓	✓	✓	✓	--
	60.000	60.000	108.000					
1280x768	84.837	68.633	117.500					
	74.893	60.289	102.250					
	59.870	47.776	79.500	✓	✓	✓	✓	--
	59.995	47.396	68.250					
	49.929	39.593	65.250					
1152x864	84.999	77.094	121.500					
	75.000	67.500	108.000	✓	✓	✓	✓	--
	70.012	63.851	94.500					
1024x768	84.997	68.677	94.500					
	75.029	60.023	78.750	✓	✓	✓	✓	--
	70.069	56.476	75.000					
	60.004	48.363	65.000					
848x480	84.751	42.969	46.750					
	74.769	37.684	41.000	✓	✓	✓	✓	--
	59.659	29.830	31.500					
800x600	85.061	53.674	56.250					
	75.000	46.875	49.500	✓	✓	✓	✓	--
	72.188	48.077	50.000					
	60.317	37.879	40.000					
640x480	85.008	43.269	36.000					
	75.000	37.500	31.500	✓	✓	✓	✓	--
	72.809	37.861	31.500					
	59.940	31.469	25.175					

TV signals

Resolution	Frame rate (Hz)	Line rate (kHz)	Pixel rate (MHz)	DP	DVI-D	OPS	D-sub (RGB)	D-sub (YPbPr)
4096x2160	30.00	67.500	297.00					
	25.00	56.250	297.00	✓	--	--	--	--
	24.00	54.000	297.00					
3840x2160	60.00	135.000	594.00	✓				
	60.00	67.500	297.00	--				
	50.00	112.500	594.00	✓				
	50.00	67.500	297.00	--	--	--	--	--
1080p	30.00	67.500	297.00					
	25.00	56.250	297.00	✓				
	24.00	54.000	297.00					
1080i	60.00	67.500	148.50					
	50.00	56.250	148.50					
	30.00	33.750	74.25	✓	✓	✓	✓	✓
	25.00	28.125	74.25					
720p	60.00	45.000	74.25					
	50.00	37.500	74.25	✓	✓	✓	✓	✓
576p	50.00	31.250	27.00	✓	✓	✓	✓	✓
480p	59.94	31.469	27.00	✓	✓	✓	✓	✓
576i	50.00	15.625	27.00	--	✓	✓	--	✓
480i	59.94	15.734	27.00	--	✓	✓	--	✓

External dimensions

[Unit: mm]


Packing specification


Quotation



Model Name Catalyst4K-8HC-2DVI4K-2SSD-RAID1-2NIC-64RAM

Catalyst 4K Configuration Overview

Input/Output + 4x2 - 8 1920x1080 resolution display channels;
+ 2 4K DVI inputs (DL-DVI, SL-DVI, VGA and progressive YPrPb compatible);

CPU 4U rackmount CPU Chassis;
+ Intel Six-Core Xeon, 3.5GHz LGA2011 CPU
+ 64 GB DRAM Memory per system;
+ 2 - 512GB SSD, solid state drives as a mirrored RAID 1 pair;
+ DVD-RW/CD-RW drive;
+ 2 10/100/1000MHz Ethernet ports, RJ45 connectors;
+ 1 RS-232 ports;
+ 4 USB 2.0 ports (two are front accessible);
+ 104-key USB keyboard and mouse;
+ Redundant 920 Watt power supplies;

Summary System occupies 4U rackspace;
3 out of 7 slots allocated;

Catalyst4K System Components

D-CAN-001-01 Canvas Client-Floating License: CANVAS CLIENT- FLOATING LICENSE: Included floating Canvas client license that gets bundled with the hardware. Canvas Client that may be used by any user on a PC or Jupiter hardware. Each floating license may be used by only one device at a time.

D-CAN-000-01 Canvas Server Standalone License: Standalone Canvas Server can only be activated on Jupiter hardware. Does not support redundant Canvas Servers or Mobile deployment. Manages Canvas users and Active Directory domain user authentication. Regulates user permissions based on security roles. Stores source information related to canvases, sources and system configuration. Supports named and floating licenses for user privileges to connect to the server.

CATALYST4K.BASE Catalyst 4K Base Unit: Includes 2-5-612-050-00 Single hot swappable power supply module for Catalyst 4K, one 4-630-007-00 4U Tower/Rackmount Display Wall Controller Chassis, one 4-540-288-00 Single XEON PCie 3.0 CPU Board, one 5-605-026-00 Fan sink Catalyst 4K Xeon, 3-4-615-041-00 Catalyst 4K Mid-Chassis Fan Assembly, 2-4-615-042-00 Catalyst 4K Rear-Chassis Fan Assembly and one 5-619-062-00 DVD-RW Drive.

5-405-031-00 Six-Core Xeon, 3.5GHz LGA2011: Six-Core Xeon, 3.5GHz LGA2011

4-408-082-00 32 GB RAM : 2 x 16 GB RDIMMs

2-540-287-01 Eight 1080P Graphics Output Board: Eight Channel Graphics Output Board: Four 4K or Eight 1080P graphics output Board with 8 mDP 1.2 ports. Must use active dongles if the connection is either DVI (HD Only) or HDMI (4K or HD resolutions).

3-540-284-00 4K DVI Input Card: For HD inputs : Dual DVI-I Input ports. Single and Dual-link DVI compatible up to 2560x1600 resolution per input. Analog

	<p>VGA input (using DVI-I to HD15 adapter) up to 2048x1200. YPrPb (progressive scan) inputs to 1080p (with adapter cable). Up to four freely scalable, high performance windows per board. HDCP is enabled only on the FC4500H with resolutions 1080P and below. 4K inputs only available on Catalyst4K: Supports 1 4K@30 input per board. One freely scalable, high performance window per board.</p>
<p>4-619-067-04</p>	<p>Catalyst 4K 512 GB SATA SSD: Catalyst 4K 512 GB SATA SSD</p>
<p>CATALYST4K.RAID1</p>	<p>RAID1 Option for Catalyst 4K: Requires two SSD configured in system to support RAID 1 mirrored drives. Included in base system. Does NOT require Catalyst 4K RAID adapter (for system orders only).</p>
<p>4-750-159-00</p>	<p>Mini-DP to HDMI Active Adapter: Enables you to connect both the audio and video from Mini DisplayPort-equipped desktop or laptop computer to an HDMI monitor, projector, or display for resolutions up to 4K.</p>
<p>Jupiter Care</p>	
<p>JUP-CARE-FC</p>	<p>The first two years of limited Hardware Warranty, Software Support & Updates are included.</p>
<p>To Extend Jupiter Care</p>	<p>Jupiter Care must be maintained continuously and can be extended at an annual rate.</p>



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Canvas

See and engage every corner of the global enterprise, from anywhere and on any device.

See Everything. Work Anywhere.

Sharing a common operating picture is essential to effective management, but often team members don't work in the same room – or even on the same continent. Canvas, a Jupiter by InFocus product, delivers real-time video, data, and application screens from across the enterprise and empowers collaboration with team members on their video walls, laptops, and mobile devices anywhere in the world.

With Canvas, smartphones and tablets can also be sources. Point the mobile device camera at anything and share live video with remote colleagues. View the scene in front of you as well as an overlay of information from experts at other sites.

Instant Connection and Access

Users can share streams and collaborate from anywhere in the network: On a display wall, on PCs, and on iOS and Android smartphones and tablets.

On the go, Canvas transforms any device into a portable video wall with instant connection and access to essential business intelligence. Control Canvas from a multitouch web-based interface to share camera feeds, laptop screens, application windows, conversations, audio, and real time data for rapid, well-informed decision making.

Airtight Security

Canvas reduces the risk of misuse and inadvertent disclosure of secure content at every step, from user authentication, to object-level security on sources and features, to encryption of transmissions over the mobile network.

- Supports Windows Single Sign-On (SSO)
- User permissions are set by the system administrator and managed by Canvas Server
- Role-based security makes management of large numbers of users and permissions easy and flexible
- Mobile sources protected using AES and SSL 128/256 encryption with SHA-1 80-bit authentication
- Object-level security prevents users from inadvertently exposing content to anyone without explicit permission to view it
- User authentication managed by your Active Directory system or Workgroup protocols



Canvas Features

Canvas is easy to use with an improved object-based, drag and drop interface and enhanced display wall management features.

- Supports both Active Directory and Workgroup environments for user authentication
- Manage applications anywhere with the expanded capabilities of web-based Mimic Touch software
- Includes the powerful features of ControlPoint for display wall management
- Easily select streaming sources for sharing, annotate directly on live video and data, and control content from cameras, applications, and the web
- Drag and drop video and data windows anywhere on the display wall
- Juxtapose sources in order to get full 360-degree view of ops
- Save and recall layouts appropriate for specific situations, users, or time of day
- Improved security and logging features mean all Canvas communication now requires SSL and the Canvas database can now be encrypted

Cost effective and efficient native CPU based decoding with the Catalyst 4K display wall processor.

- For H.264, simultaneously decode 12 HD streams or 3 UHD streams
- For H.265, simultaneously decode 2 UHD streams

Canvas ships standard with all Catalyst display wall processors, and replaces ControlPoint.

Uniquely Adaptable

Canvas defines flexibility, supporting a broad range of common networks and applications, as well as unique customizations.

- Supports most enterprise LAN and WAN network configurations
- Supports 4G mobile networks
- Supports integration with popular VMS systems

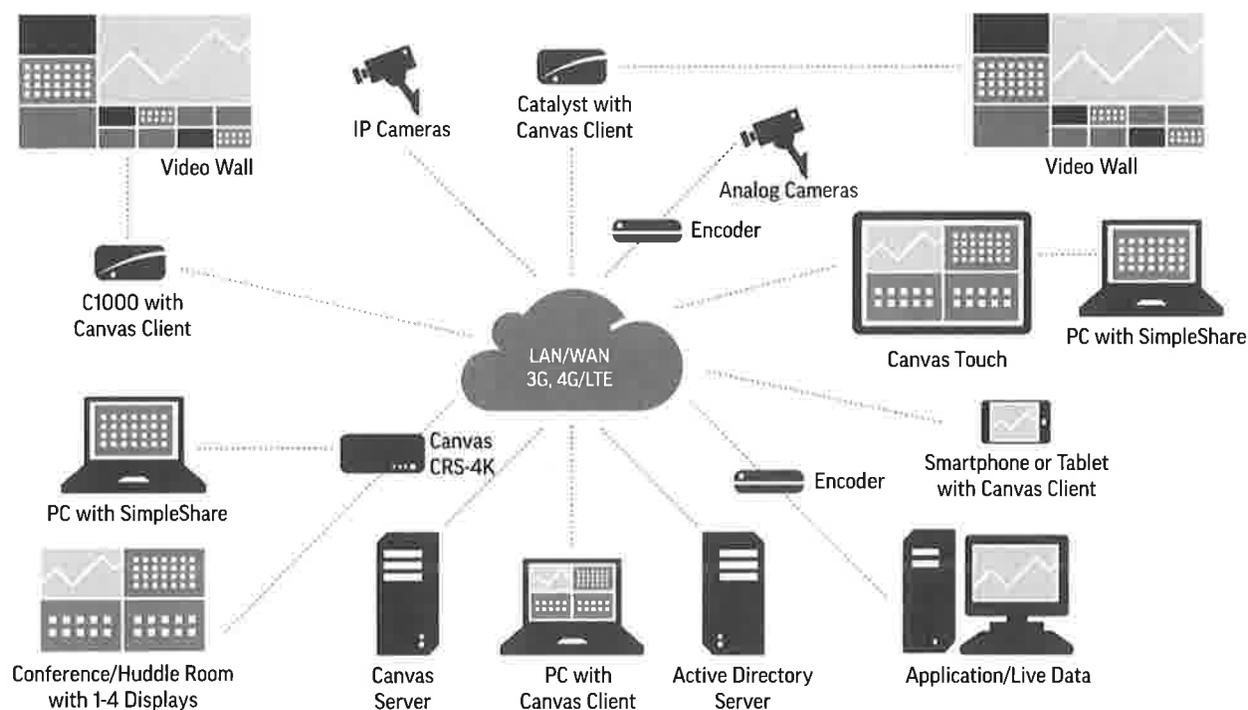
End-to-End Collaboration, Evolved

Canvas enables managers to work as effectively with remote colleagues as they would with team members in the same room. Remote users become both a source and destination for information as colleagues share and annotate on live video streams, communicate with voice and text, and collaborate on documents as events unfold.

- Share live H.264, H.265, MPEG2, MPEG4, and MJPEG video streams, VNC viewer windows, active web browser windows, and desktop presentation screens
- Draw, type, label, identify, or annotate areas of interest on live video and other sources
- Create shared whiteboards for brainstorming
- Share active web windows
- All participants working with a canvas share a voice chat room for effective communications

The Canvas System

Canvas is real-time visual intelligence. Users can access and share video, audio and data with colleagues anywhere in the world, on virtually any device. With a rich set of familiar tools, users can collaborate using the latest information in ways that were not previously possible.



Conference room solutions with Canvas Touch and CRS-4K

Extend your collaborative visualization capabilities to the conference room with Canvas Touch or CRS-4K. Canvas Touch offers a powerful touchscreen interface to collaborate with remote colleagues running Canvas on almost any device, sharing live video, real-time data, application screens, web windows, documents, and presentations. Display up to six simultaneous sources from your Canvas environment, with all of Canvas' rich collaboration tools so users can annotate, whiteboard, and edit documents.

CRS-4K brings collaborative visualization to video walls with as many as four 1080p HD displays or a single 4K Ultra HD display. A small, quiet box, CRS-4K is at home on the conference room table, a shelf, or anywhere else groups meet and collaborate. And with SimpleShare™, anyone with a laptop, even without Canvas installed, can walk into the room and present content to local and remote Canvas participants wirelessly.

Specifications*

Canvas Client	
CPU	PC: Intel Core 2 Duo 2.4GHz or equivalent
System Memory	4G RAM, minimum
Operating System	Supports Windows 7 Pro and above
Languages	English, Simplified Chinese, Traditional Chinese
Canvas Server	
CPU	Intel Xeon 2.4 GHz or equivalent
HDD	20GB, minimum
System Memory	4GB RAM, minimum
Operating System	Windows 7 32-bit Pro, Windows 7 64-bit Ultimate, Windows Server 2008, Windows Server 2016
Canvas iOS Client	
Operating System	iOS 6.1 or later
Devices	iPhone 4, 4S, 5, 6, 6 Plus or later; iPad 2nd, 3rd, or 4th Gen, Air or later; iPad Mini 1st Gen or later
Supported Sources	
Video Streams	H.264, H.265, H.265 MPEG2 MPEG4 MJPEG
Desktop Streams	VNC (RBF), Encrypted VNC
Web Windows	Browser windows showing websites or web applications
Desktop Presentation Screens	SimpleShare™ windows (only from CRS-4K)
Network	
LAN/WAN	Gigabit Ethernet, TCP/IP
Wireless	Wi-Fi, 4G/LTE

*Product specifications, terms, and offerings are preliminary and subject to change at any time without notice.

Compatible Display Wall Processors

Models	CRS-4K	C-Series	FC4500	Catalyst 4K	Catalyst XL
Operating System	Windows 10	Windows 10	Windows 7	Windows 10	Windows 10
CPU	i7	E5 4-Core	Dual E5 6-Core	E5 14-Core	E5 14-Core
RAM (GB)	8	8	Up to 96	Up to 128	Up to 128
Drive Type (GB)	128 SSD	256 SSD	500 HDD/512 SSD	512 SSD	512 SSD
RAID Support	No	No	Yes	Yes	Yes
Audio Support	Yes	Yes	Yes	Yes	Yes
Max Outputs	4	8	96	48 (Display Loop)	48 (Display Loop)
4K Outputs	1	4	0	12	12
Max Video Inputs	0	10	56	56	156
4K Inputs	0	4	20	20	156
Max IP Inputs	8	8	108	112	156
Software Decoding	8	8	0	12	12



Catalyst 4K

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4K Display Wall Processor with Canvas

Create the world's highest resolution video wall with 4K resolution on every display



Leading Performance and Power

The Catalyst 4K system, a Jupiter by InFocus product, is a highly evolved display wall processor, delivering razor-sharp 4K resolution to every display in the video wall for stunning clarity. It's built on an Intel E5 14-Core Xeon CPU-based platform with a PCI Express 3.0 chassis and 6 powerful, high speed slots, providing faster graphics, real time frame rates, and better overall system performance than anything in its class. Featuring bandwidth that reaches 336 Gbps, Catalyst 4K delivers high resolution and high frame rate performance at 4K resolution.

Drag and drop video and data windows anywhere on the display wall, juxtapose sources in order to get a full 360-degree view of operations, save and recall layouts appropriate for specific situations, users, or time of day. Catalyst 4K ships with Canvas, our award-winning collaborative visualization software.

4K Input & Output Support

Capable of decoding up to 20 4K signals, Catalyst 4K supports input signals with a 4K DVI input card that leverages a DVI-D dual-link connector. Catalyst 4K supports up to 12 HDCP 4K outputs on a single CPU Chassis. Each 4K display has a resolution of 3840 x 2160 pixels per output through a mini DisplayPort interface. Add up to four Expansion Chassis, each with 7 slots, to add even more inputs.

Built for Canvas

The Catalyst 4K display wall processor ships with Canvas, which provides access to all of the visual business intelligence made available in the user's network – including live streams from network cameras and mobile devices, application screens from PCs, and real time data feeds. Remote colleagues can see, share, and collaborate using the same live information in a highly secure environment no matter what device they have in front of them. Additional users are enabled simply by deploying additional Canvas clients on PCs, smartphones, tablets, or by adding Canvas Touch or CRS-4K systems to conference rooms.

With Canvas, users can annotate directly on live video streams, chat by text or voice, and collaborate on documents in real time. Canvas includes software decoding of IP video streams (including 4K), as well as support for user authentication in either Active Directory or Workgroup environments.

Native 4K Decoding

Catalyst 4K offers CPU-based decoding on both H.264 and H.265 HD and 4K sources. Catalyst 4K supports decoding up to:

- 12 HD streams or 3 4K streams from H.264 sources
- 8 HD streams with low bitrate from H.265 sources
- 8-bit 4K streams from H.265 sources

Catalyst 4K in Action

The Catalyst 4K processor is the ideal solution for projects of any size. Each 4RU rack-mountable CPU Chassis has 6 PCI Express 3.0 slots while each of up to 4 expansion chassis has 7 PCI Express 2.0 slots, enabling very large configurations. Catalyst 4K supports up to 12 4K displays or 32 HD displays, which can showcase up to 56 HD sources. With optional Quad HD Decoder Cards, Catalyst 4K can support up to 132 streaming HD inputs in one CPU Chassis plus four Expansion Chassis.



The Catalyst 4K processor is also valuable when users want to present content to an in-room audience outside of a Canvas session. Optional Dual-Link DVI Input Cards support up to 56 inputs for display on the local display wall only. Inputs via the DVI connection are not shareable in Canvas.

Specifications

Product	Catalyst 4K
System Architecture Chassis	PCI Express 3.0 Chassis with 6 high speed slots for input, output cards and 7th slot for auxiliary audio and Ethernet cards
CPU Board Processor	Intel E5 Six Core Xeon CPU or 14 core CPU
CPU Board System Memory	64GB RAM per CPU standard, up to 128GB RAM optional
Drives	512GB solid state drives Optional 2nd and 3rd drives, Optional RAID1 array with hot spare
Optical Storage	DVD-RW/CD-RW
Network Interface: Ethernet	Standard dual 100/1000 Mbps RJ45 ports
Input Devices (USB)	104-key keyboard and mouse
Expansion Chassis (Optional)	Catalyst 4K Expansion Chassis: PCI Express 2.0 Chassis with 7 slots for input or output cards
Quad HD Decoder Input Card (Optional)	Quad HD Decoder Input Card (Optional), Up to 112 inputs in 1 CPU Chassis + 4 Expansion Chassis Supports real-time decoding of HD or SD streams, Supports most popular IP cameras and encoders
Dual-Link DVI Input Card without HDCP Support for Local Display Only (Optional)	Inputs: Up to 56 inputs in 1 CPU Chassis + 4 Expansion Chassis Format: Dual-Link DVI-D up to 2560x1600, Single-Link DVI-D up to 2048x1200 Pixel Rate: Digital: Up to 270 MHz Pixel Format: 32 bits per pixel Windows: 4 destination windows per card
Catalyst 4K Output Graphics Card	Outputs: Up to 48 outputs (display loop) with Canvas collaborative visualization software in 1 CPU Chassis + 4 Expansion Chassis Resolution: Digital: Up to 3840 x 2160 x 60 FPS per output Color Depth: 32 bits per pixel Output Signal: mini DisplayPort
Catalyst 4K Input Capture Card	Inputs : Up to 20 inputs with Canvas collaborative visualization software in 1 CPU Chassis + 4 Expansion Chassis Resolution: Digital: 3840 x 2160 x 30 FPS per input Color Depth: RGB 32 or YUV 16 bits per pixel Input Signal: DVI-D dual-link connector
Dimensions	7.00" H x 17.8" W x 25.5" D (17.8 cm x 45.2 cm x 64.8 cm)
Weight	40 lbs. (18.2 kg.)
Shipping Weight	50 lbs. (22.7 kg.)
Operating Range - Temperature	32°F - 104°F (0°C - 40°C), Non-operating: 14°F - 150°F (-10°C - 66°C)
Humidity	10-90% non-condensing
Altitude	Up to 10,000 feet (3,048.0 m)
Electrical - Redundant Power Supplies	High efficiency (94%) with PMBus and I2C
Input Voltage	100-240 VAC, auto-ranging power supply
Line Frequency	50-60 Hz
Power Consumption	500 Watts nominal per CPU Chassis, 450 Watts per Expansion Chassis
Regulatory - United States	UL 60950 listed, FCC Class A
Canada	cUL CSA C22.2, No. 60950
International	CE Mark, CB Certificate, IEC 60950, CCC, Taiwan(BSMI), Japan(VCCI), Russia (EAC), Belarus (EAC), Kazakhstan (EAC), Australia (RCM), New Zealand (RCM)

DS-S555-3X2



VESA®

200 x 200 up to
600 x 400mm

Max load

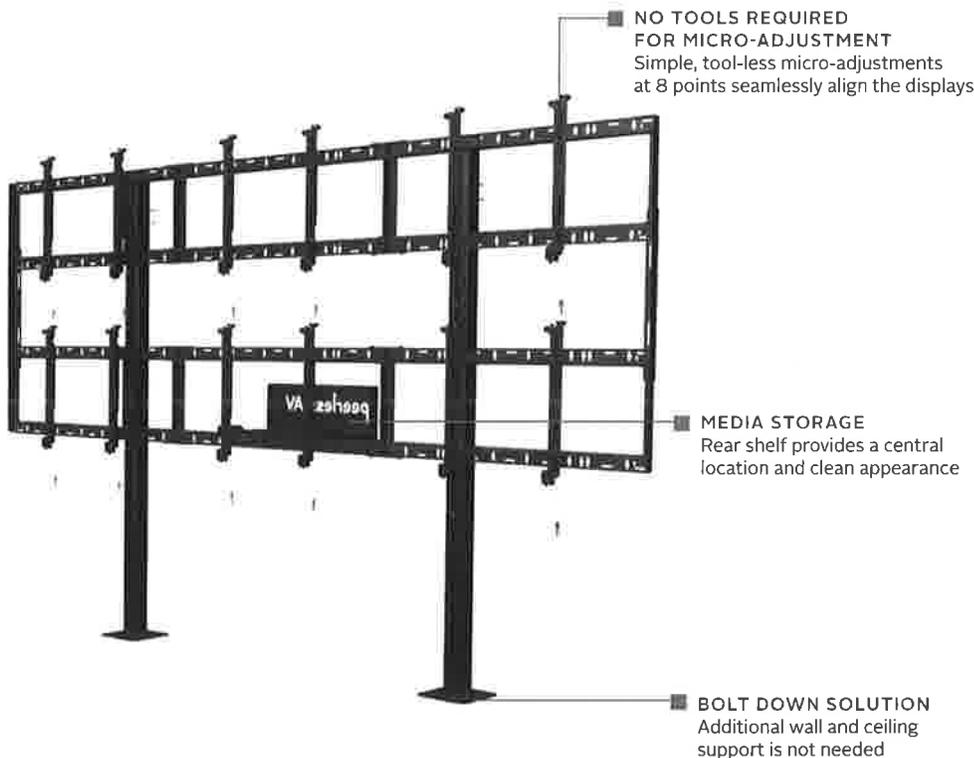
600lb (272kg)
100lb per display**SMARTMOUNT.**

Modular Video Wall Pedestal Mount 3x2 Configuration

FOR 46" TO 55" DISPLAYS UP TO 5" DEEP (127mm)

Peerless-AV's Modular Video Wall Pedestal Mount encompasses an assortment of useful features that eliminate the need for extra tools and hardware, all while ensuring your application is secure and looks professional. The DS-S555-3X2's tool-less micro adjustment provides the time saving feature you need for perfect display alignment. The built-in cable management and media storage features provide a safe central location to house your components, and help create a clean and clutter-free appearance. If you're looking for added stability, this mount can be mounted to concrete structures without additional wall or ceiling supports in any retail, public transportation or any other high traffic location.

- Tool-less micro-adjustment at 8 points seamlessly align the displays
- Adaptors feature a quick connect latch for automatic engagement with the mounting rails and ease of set-up
- Cable management through rear adjustable cable centralizing brackets
- Bolts directly to concrete without requiring additional connections to the wall or ceiling
- Rear media storage shelf and cover stores components while maintaining a clean appearance
- Aluminum frame reduces the overall weight and shipping costs
- VESA® 200 x 200 up to 600 x 400mm compatible
- Designed for displays that are up to 5" deep (127mm)

**RoHS**

✉ info@peerless-av.com

🌐 peerless-av.com

peerless-AV

Driving Technology Through Innovation

DS-S555-3X2 SmartMount® Modular Video Wall Pedestal Mount 3x2 Configuration for 46" to 55" Displays up to 5" deep (127mm)

Product Specifications

	DIMENSIONS (W x H x D)	PRODUCT WEIGHT	LOAD CAPACITY	FINISH	AVAILABLE COLORS
DS-S555-3X2	121.07" x 75.44" x 13.36" (3075 x 1916 x 339mm)	168lb (76.4kg)	600lb (272kg) 100lb per display	Powder Coat	Black

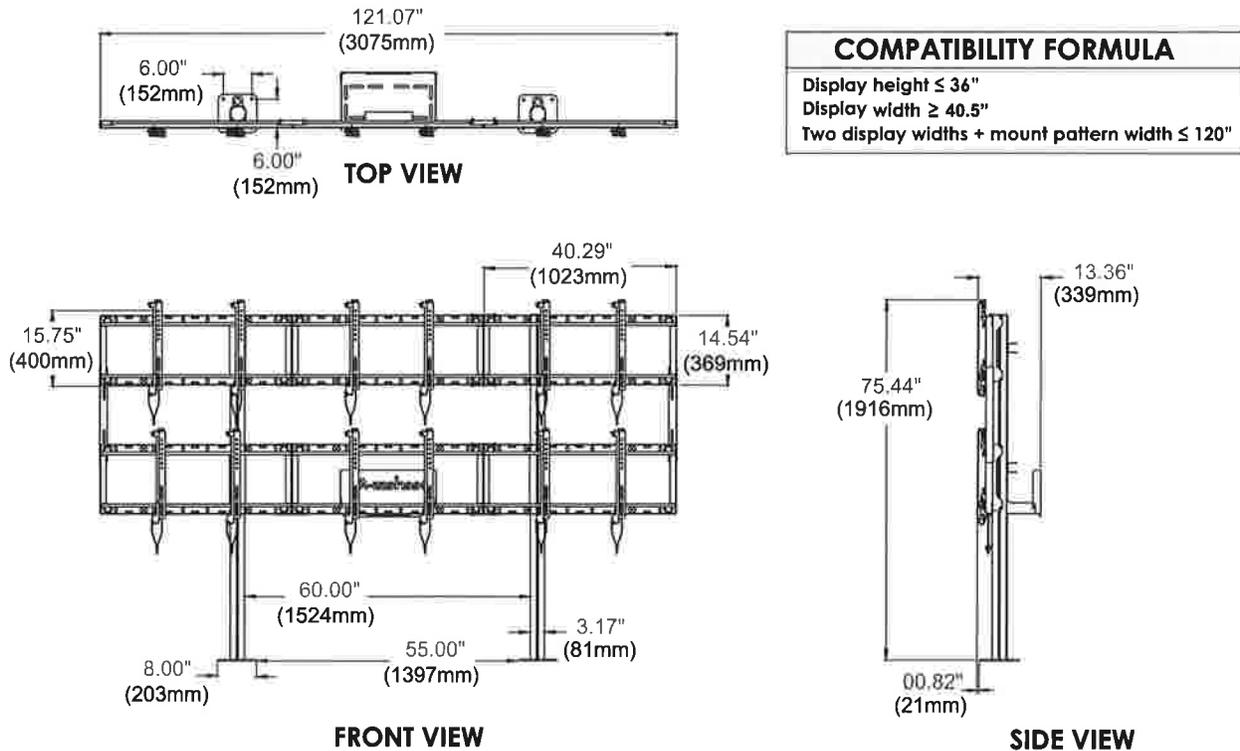
Package Specifications

	PACKAGE SIZE (W x H x D)	PACKAGE SHIP WEIGHT	PACKAGE UPC CODE	PACKAGE CONTENTS	UNITS IN PACKAGE
DS-S555-3X2	84.00" x 37.50" x 12.50" (2133 x 952 x 317mm)	191lb (86.8kg)	735029303459	Stand, display adaptors and hardware	1

Accessories

ACC-V800X: Adaptor accessory for 600 x 400 and 800 x 400mm mounting patterns

All dimensions = inch (mm)



Architect Specifications

The Smartmount® Modular Video Wall Pedestal Mount 3x2 Configuration shall be a Peerless-AV model DS-S555-3X2 and shall be located where indicated on the plans. Assembly and installation shall be done according to instructions provided by the manufacturer.

Visit peerless-av.com to see the complete line of AV solutions from Peerless-AV, including outdoor displays, wireless, kiosks, digital audio, display mounts, projector mounts, carts/stands, and a full assortment of accessories.

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