

XYZ School District

Date

1.0. INVITATION TO BID

The XYZ School District invites you to submit a sealed bid to provide and install a **District Wide IP surveillance system expansion** for the **project**. Bids will be opened at the **Location and Time of bid opening**

The undersigned accepts the terms and conditions herein and hereby commits to honor the price(s) bid. Please print.

Name & Title _____
Company Name _____
Address _____
City, State, Zip _____
Telephone _____ Fax _____
Signature _____ Date _____

2.0. BID SUBMISSION

Return sealed bid by mail or in person to Purchasing, **XYZ School District, City of XYZ, XYZ** **Address**. Bids must be received by Purchasing in the Administration office prior to the bid opening in a **sealed envelope marked as follows**:

School District
IP SURVEILLANCE SYSTEM
BID # _____

3.0. BID TERMS & CONDITIONS

- 3.01. BID AWARD: Bid will be awarded according to the lowest overall bid meeting specifications. Individual prices are required for the owners inventory purposes.
- 3.02. QUESTIONS
- A. For additional information on bidding procedures, contact **John Doe**, Purchasing Director, **XYZ School District, XYZ Address** at (xxx) xxx-xxxx, or (email address) **jdoe@xyzk12.org**.
- B. Forward questions concerning the specifications by noon, **Date** to **John Doe** via fax to **(xxx) xxx-xxx** or email at **jdoe@xyzk12.org**. Bidders' questions and the owner's response will be provided to all known potential bidders. After time listed above there will be no exception or addendums submitted.
- C. There will be a mandatory pre-bid meeting and site walk-through starting at **Date and Time** in the **Address**. Failure to attend will result in rejection of bid. No exceptions.
- 3.03. Bids not received before **Date**, will not be opened and will be returned to the bidder.
- 3.04. To be considered valid, bid must:
- A. submitted on these bid forms.
- B. completed with signature and all requested information.
- C. sealed in an envelope with the bid name, number, clearly marked on the outside of envelope.
- D. received in the purchasing office prior to the designated bid opening.
- E. Attend pre-bid meeting and site walk through
- 3.05. Prices must include delivery to **XYZ School District at Address**.
- 3.06. Payment is contingent upon the final product meeting bid specifications.
- 3.07. Bid openings are open to the public. No discussion will be entered into with any vendor as to the quality or provisions of the specifications, and no award will be stated or implied at the bid opening. After bid opening the evaluation process will not be available for review by bidders.
- 3.08. Upon request of **XYZ School District**, bidders must furnish satisfactory evidence of their ability to furnish products or services in accordance with the terms and conditions of these specifications. **XYZ School District** reserves the right to make the final determination as to the bidder's ability.
- 3.09. The bid results are scheduled for presentation at the board meeting scheduled **Date**. Once the bid is approved, a purchase order or contract will be issued.
- 3.10. Purchase of bid items is not guaranteed and may be contingent upon budget availability.

- 3.11. A complimentary copy of bid results will be provided upon request if a self-addressed, stamped envelope is submitted with the bid. Otherwise, copies of bid documents may be purchased at a rate of \$1.00 per page or a minimum of \$10.00.
- 3.12. Services and commodities cannot be provided or received without a written purchase order or contract signed by an agent of the owner. A written purchase order or contract mailed or otherwise furnished to the successful bidder within the time of acceptance indicated results in a binding contract without further action by either party. The contract shall not be assignable by the vendor in whole or in part without the written consent of **XYZ School District**.
- 3.13. **XYZ School District** reserves the right to reject any and all bids and to accept any items on the bid unless otherwise specified by the bidder.
- 3.14. If the bidder fails to state the time within which bids must be accepted, it is understood and agreed that **XYZ School** shall have sixty (60) days to accept.
- 3.15. If an awarded vendor fails to meet all contract specifications or requests a price increase, the purchase order(s) and contract may be canceled and the vendor may be removed from the owners bid list for a period of twenty-four (24) months.
- 3.16. Failure of a vendor to respond to four (4) consecutive bids will result in removal from the owners bid list.
- 3.17. By submission of this bid, the bidder certifies with regard to collusion that
 - A. this bid has been independently arrived at without collusion with any other bidder or competitor,
 - B. this bid has not knowingly been disclosed and will not be knowingly disclosed prior to the bid opening.
 - C. no attempt has been or will be made to induce any other party to submit or withhold submission of a bid.

4.0. SUBSTITUTIONS

- 4.01. References to brand names are to establish minimal standard requirements. They are not intended to limit competition.
- 4.02. Only three (3) manufacturers have been listed. Bids on items or materials manufactured by other manufacturers will be considered substitutions and **MUST** be of equal or higher quality, performance, and durability. **XYZ School District** reserves the right to request demonstration of similar equipment to determine whether substitution is equal or better.
- 4.03. Any substitution or deviation from specified items **MUST** be fully documented to be considered. Substitutions must be of equal or higher quality than specified.

SCOPE OF WORK

General:

Furnish engineering, labor, materials, apparatus, tools, equipment, transportation, temporary construction and special or occasional services as required to make a complete working security system installation, as described in these specifications.

Consult other Divisions; determine the extent and character of related work and properly coordinate work specified herein with that specified elsewhere to produce a complete and operable system.

- 5.01. Provide all labor, materials, equipment and training necessary for complete installation of the new IP Digital Video Surveillance System for **XYZ School District**.
- 5.02. Project is to be completed, including delivery, installation, and training after 90 days of receiving purchase order.
- 5.03. This project shall be an all IP based system.
- 5.04. ALL exterior exposed cabling MUST be concealed in conduit.
- 5.05. The specified and preferred software is Video Insight. Vendors bidding alternative products should submit detailed, complete specifications for determination of equal or higher quality. Currently the **XYZ School District** has two (2) Video Insight IP network video recorders in place. If alternate product is bid the vendor shall include the cost of changing out the existing systems with equipment compatible with the alternate product. It is mandatory that the **XYZ School District** have a unified consistent recording software interface and accessibility.

6.0. VENDOR REQUIREMENTS

- 6.01. Vendor MUST submit signed and dated proof of authorization to sale and /or service company for manufacturer products.
- 6.02. Vendor MUST submit signed and dated proof of open and active account with manufacturer products.
- 6.03. Vendor MUST submit signed and dated proof of open line of credit with manufacturer products.
- 6.04. The awarded vendor must provide evidence of Worker's Compensation insurance and \$1,000,000 General Liability insurance prior to issuance of a purchase order.
- 6.05. Vendor must have at least 5 years of experience installing the specified type of equipment.

- 6.06. A list of at least 3 references of similar size and scope of project, and the dates of service MUST be provided with the bid. Please attach reference documentation.
- 6.07. Vendor is responsible for any measurements, calculations, and other details that may require viewing the site. There will be a onetime mandatory site evaluation to all bidders. Failure to attend site evaluation will result in rejection of bid. See Section
- 6.08. Vendor must employ at least one individual who has achieved Advanced Certification from Video Insight, or equal.
- 6.09. Vendor must provide documentation of completed camera manufacturer training and certification.
- 6.10. Awarded vendor must provide a minimum of 2 days of onsite training after installation.
- 6.11. Non-resident contractors must submit a copy of their state's current preference law with the bid.
- 6.12. Detailed specification sheets of all equipment MUST be submitted with bid.
- 6.13. Vendor MUST submit with bid detailed AutoCAD drawings with layout and locations of all equipment and hardware to insure proper coverage is met.
- 6.14. Vendor MUST submit line item pricing for all equipment, conduit, rental equipment, sub-contractors costs, cabling etc. in bid packet.

7.0. QUALITY ASSURANCE

- 7.01. All equipment, unless otherwise stated herein, shall carry a manufacturer's warranty of one year covering parts and labor and include a one-year advanced replacement program.
- 7.02. All Dell servers and storage devices shall carry a 3 year next day onsite repair and replacement warranty.
- 7.03. No aftermarket servers or storage devices will be excepted as a approved equal.
- 7.04. The installing contractor shall be the primary contact for warranty responsibility for all equipment, material and work furnished and installed under this specification.

- 7.05. In the presence of owner representative, test-operate all functions of the installation, doing any explanation necessary of the operation and relevant safety features.

8.0. SPECIFICATIONS

8.01. GENERAL

- A. All equipment and materials shall be standard components that are regularly used in the manufacturer's system.
- B. All equipment shall be thoroughly tested in actual use.
- C. All equipment shall be supported with an available toll-free (U.S. and Canada) technical support number from the manufacturer that is available at all times.
- D. Network Video Recorders shall have the capability to be managed and serviced from remote location via internet.
- E. Detailed specification sheets of all equipment must be submitted with bid.

8.02. NETWORK VIDEO RECORDER SOFTWARE

1. IP Server

- a. The Server shall be designed to run on a Windows platform, supporting both Desktop and Server class operating systems.
- b. Server shall run as a Window's Service. This service shall run as part of the local service account. This service shall be running as long as the system is booted and has started Windows. It shall not require the user to be logged in.
- c. The Server will store settings in SQL Express and shall not require a full MS-SQL license.
- d. The service shall connect to the camera and handle streaming to the server. It shall not require each client to connect to individual cameras.
- e. This service shall allow the cameras to be placed on one network and the clients on a separate network using a different IP range.
- f. The server shall only require two ports for streaming video as well as handling any setting changes or commands from the client software.
- g. The Server shall record the video streams from different cameras.
 - i. The service shall handle transcoding of the camera streams if the cameras are MJPEG based. The video shall be re-encoded to WMV to reduce storage needs and to reduce the impact of streams to clients on the server.
 - ii. For MPEG-4 based cameras, the video shall be stored in the native codec of the server.
 - iii. Each camera will have the option to be able to be stored in different locations (i.e. One locally, another on a NAS, a third on a different network share)
- h. The Server shall support motion detection at the camera and at the software levels.
- i. The Server shall provide graphic examples of what it determines as motion to thick clients if the thick client requests it.

- i. The software shall display the motion detection as an outline around the area moving.
 - ii. The software shall provide a bar showing the total percentage of change. This bar shall have a slider on it to allow the user to quickly set motion detection.
- j. The Server shall allow for multiple zones to be set within an image that support differing motion detection values within a cameras field of view.
 - i. There shall be no limit on the total number of zones allowed, either on a per camera or per server basis.
 - ii. Zones should allow the ability to ignore motion within an area.
 - iii. The user shall have the ability to move the zones after the fact.
 - iv. Motion zones should be able to be tied into a rules engine to allow the software use them as triggers for events.
- k. The Server shall support the use of imported maps to show camera placement. These maps will be in .jpg, .gif, or .bmp formats as determined by the user.
 - i. Hovering over a camera on a map shall cause it to be displayed in a window on the side.
 - ii. When the camera is displayed on the side, the option to review recently recorded video will be available to them.
 - iii. The user shall be able to embed layouts onto the facility map. Clicking on the layout shall change the display of the client software.
 - iv. Alarms from DIOs shall be able to be embedded as well.
 - v. Audio sources shall also be an option.
 - vi. Other facility maps shall also be an option to embed. Clicking on a different embedded map shall bring up that map.
- l. The Server shall not require the administrator to contact the manufacturer to replace a camera.
- m. The Server shall support reporting to a diagnostic tool.
 - i. The server will report the number of active cameras.
 - ii. The server shall report active cameras offline.
 - iii. The version of the server.
 - iv. The amount of disk space left.
 - v. The recording status of the server.
- n. The server shall support pre-motion and post motion recording.
- o. The server shall support customizable layouts. The layouts will allow for blank spaces within the layout.
- p. The server shall support an unlimited number of users.
 - i. Users can be drawn from either an Active Directory server or entered manually.
 - ii. There will be five different levels of user.
 - iii. Users can be members of a group with settings set for the group. Individual user settings can override the group settings.
 - iv. Permissions can be set for live viewing, access to recorded video and control of PTZ cameras. Permissions can be defined on a per camera basis.

- q. The server will include a diagnostic version with limited interface, to allow for testing of the server.
- r. A rules engine shall be included to allow the server to handle more complex tasks.
 - i. Triggers will include:
 - 1. Dry contacts (DIO)
 - 2. Motion detection of a camera stream.
 - 3. Scheduled events. Events can be scheduled on daily, weekly, or monthly basis. Individual events can be handled as well.
 - 4. An Alert button for the user interaction in the monitor station.
 - 5. Inputs sent programmatically via appropriate APIs.
 - ii. Actions will include:
 - 1. Logging the event.
 - 2. Opening or closing a dry contact.
 - 3. Sending an e-mail with a custom text message tied to the trigger. Multiple texts will be allowed for different triggers.
 - 4. Sending an e-mail with an .avi clip from a selected camera.
 - 5. Sending an e-mail with a .jpg of a selected event from a camera.
 - 6. Opening a live window for a user who is viewing.
 - 7. Move a PTZ to a certain preset location.
 - 8. Force recording.
 - 9. Force recording with audio.
 - 10.
- s. PTZ functionality within the camera will be supported.
- t. The server will only stream video to clients that the clients request.

2. Monitor Station

- a. The monitor station will be a thick client for viewing live and recorded video, along with handling administrative tasks.
- b. The thick client will support an encrypted XML file for storing settings. The file can be set up to be shared between many clients, allowing the administrator to update all clients with a single file push.
- c. Clients will be able to use Active Directory to authenticate users.
- d. The Monitor Station will display the servers it's connected to along with the server's cameras in a tree view on the left hand side.
 - i. The tree view will allow the user to see the status of the servers that the instance of the monitor station is aware of.
 - ii. The tree view will also include access to custom layouts, facility maps and action buttons.
 - iii. There will be an option to hide the tree on start up of the monitor station.
- e. The thick client will not be limited in the number of servers it can connect to.
- f. Live view will allow views of 1, 4, 8, 9, 10, 13, 16, 25 and 32 cameras. A widescreen option for 18 and 24 cameras will also be available.
 - i. Layouts will be selectable via icon or keyboard function keys.
 - ii. Layouts will not be limited to cameras from a single server.
 - iii. Users will be able to get any combinations of layouts to cycle through on the main screen.

- g. Live view will allow cameras to be dragged and dropped onto the live view from the left hand tree. Cameras can be duplicated in a view.
- h. Users will be able to invoke a digital zoom by drawing a box.
- i. Digitally zoomed areas will be treated as a digital PTZ.
- j. Live view will support a full screen mode that hides the UI.
- k. Right clicking on a camera in live view will have the following behaviors:
 - i. Right clicking on a camera within live view will allow the user to be able to review the recently recorded video for that camera.
 - ii. Right clicking on a camera within live view will also allow access to the properties dialog box for that camera.
 - iii. Right clicking on a camera will bring up the option to save a still image of the live view.
 - iv. Live audio will be able to be accessed by right clicking on a camera in the live view.
 - v. Allowing access to recorded video.
- l. Recorded video will be able to be accessed by right clicking the live view, expanding the camera in the tree view, or by opening the media player via the pull down menus.
- m. The Media player shall support the following functionality:
 - i. The ability to fast forward and rewind video at up to 16x normal playback speed. .
 - ii. The ability to generate clips of recorded video. The clips can be defined by either frame numbers or by the use of slider bars visible on the player.
 - iii. The ability to save video directly to a CD or to a local hard drive or network share.
 - iv. If motion detection and logging are enabled, a timeline of video will be displayed. The user will be able to zoom in on the timeline and use it to select where video will start playing from.
 - v. Users will have access to a motion log which will show motion events and how long they occurred for. Clicking on the entry will start the video from the appropriate spot.
 - vi. The player will support digital zoom.
 - vii. The player will have the option to allow an object search. The user will be able to define an area and seek out changes in the image within that area.
- n. A separate player will allow for the use of synchronized playback.
- o. The thick client will include a repair utility for corrupted video.
- p. The Monitor Station will be able to display logging information, such as changes to the server, lost camera signals and other errors. This functionality will be limited to administrative users. The log will be exportable as txt or to the Windows clipboard.
- q. Facility maps will be available in the software for viewing.
 - i. When the user hovers over a camera in the facility map it will display the camera in a window off the side of the map.

- ii. While a camera is displayed it will allow access to recorded video from that camera as well as the live stream.
 - iii. If motion is detected at the camera, the camera will change color on the map.
 - iv. Cameras will display where they are pointed.
 - v. Embedded layouts will change the layout of the Monitor station if they are clicked on.
 - vi. Embedded Facility maps will cause the current map to change to the embedded map if clicked on.
 - r. The Monitor Station will support the Axis Joystick.
 - s. The software shall support the ability to open a live window that can be moved around. This window will be able to access the view of any camera or layout the user has access to.
 - t. The user will be able to enable or disable the following settings:
 - i. Server name in the live view.
 - ii. Camera Name in the live view.
 - iii. Audio notification on motion.
 - iv. Forcing aspect ratio.
 - v. Use Direct Show for display.
 - vi. Double clicking to change the server layout.
 - vii. Double clicking expands the camera.
 - viii. Allowing multiple live windows.
 - ix. Block live windows from popping up.
 - x. Live window always on top.
 - xi. The speed in which layouts cycle.
 - xii. Hiding left tree on start up.
 - xiii. Launching Facility maps on start up.
 - u. Users with Administrator privileges will be able to configure the server and camera settings. Users will also be able to test SMTP settings and database settings.
 - v. Users will be able to access a graphic representation of what the server's motion detection settings are picking up.
 - w. Users will be able to configure user settings as well as layout settings from within the thick client.
3. Web Client
- a. The Web Client will be a thin client, using either an active-x control or an MJPEG streaming method.
 - b. It shall support IE, Firefox and Safari.
 - c. It will not be limited to Windows platforms only.
 - d. Users will not be able to change any settings within the server via the thin client.
 - e. Users will be able to select layouts for live viewing, or individual cameras or groups of cameras.
 - f. Users will be able to access recorded video.
 - g. The web client will use IIS as it's web server.

4. Health Monitor
 - a. The Health Monitor will listen for reports given by the service as to it's status.
 - b. If the Health Monitor detects anything abnormal, it will give a visual display through a web front end, or by sending out an e-mail.
 - c. It will be able to support an unlimited number of servers.
 - d. It will be hosted locally or across the internet.

5. LTS
 - a. Long Term Storage solution will be a service that allows for automated backing up of the server.
 - b. It will allow for transcoding of the video stored on the server.
 - c. It will support reducing frame rate of video over a certain age.
 - d. It will allow for continuous or scheduled usage.

8.03. NETWORK VIDEO RECORDER
(Technical Specifications)

Base System	Dell PowerEdge R700 series 2 U rack
Analog Video Inputs	None
IP Camera Inputs	Up to 32
Live Display Rate	320 FPS
Recorded Rate	240 FPS at D1
Max Resolution	720x576
Storage	6 TB SATAII
RAID	RAID 5
Removable Drives	DVD-RW

Microsoft Operating System	Windows 2008 server
Emergency Recovery Disk	Included
Processor	PE 700 Xeon
Memory	2 GB
Audio	None
External Monitor Support	N/A
External Multiplexed Support	N/A
Analog Video Loop Out Ports	N/A
Video Port Connectors	N/A
Ethernet Port	Gigabit
Digital Inputs	Supports varies by camera model
Digital Outputs	Supports varies by camera model
PTZ Control	Supports varies by camera model
Video Insight Included Software	IP Server, Monitor Station, Web Client, Health Monitor and Long Term Storage (LTS) Manager
Included Accessories	Keyboard, Mouse, and Power Cable
Operating Temperature Range	50° to 95°F
Form Factor	2U Rack 29.31" D x 17.5" W x 3.4" H Weight: 51 lbs.

8.04. NETWORK STORAGE SERVER
(Technical Specifications)

Base System	Dell PowerEdge R700 series 2 U rack
Analog Video Inputs	None
Storage	6 TB SATAII
RAID	RAID 5
Removable Drives	DVD-RW
Microsoft Operating System	Windows 2008 server
Emergency Recovery Disk	Included
Processor	PE R700 Xeon
Memory	2 GB
Audio	None
Ethernet Port	Gigabit
Included Accessories	Keyboard, Mouse, and Power Cable
Operating Temperature Range	50° to 95°F
Form Factor	2U Rack 29.31" D x 17.5" W x 3.4" H Weight: 51 lbs.

8.05. Camera 1 : 1.3 Megapixel Fixed Dome, Power over Ethernet, varifocal DC-Iris, indoor camera

Models	<u>Manufacturer</u> : Tamper-resistant casing
Image sensor	1/3” Micron Progressive Scan RGB CMOS 1.3 Megapixel
Lens	Varifocal 2.8 - 10 mm, F1.3, DC-iris Focus range: 0.3 m to infinity
Angle of view Camera angle	27°-100° horizontal
Adjustment	Pan 360°, tilt 170°, rotation 340°
Minimum illumination	2 lux, F1.3
Video compression	Motion JPEG MPEG-4 Part 2 (ISO/IEC 14496-2) with motion estimation, Profiles: Advanced Simple Profile level 0-5 and Simple Profile level 0-3
Resolutions	24 resolutions from 1280x1024 to 160x90 via API 22 selections via configuration web page
Frame rate	Motion JPEG: U p to 12 fps at 1280x1024 20 fps at 1024x768 (partial scan) 30 fps at 800x600 (partial scan) MPEG-4: U p to 8 fps at 1280x1024 13 fps at 1024x768 (partial scan) 20 fps at 800x600 (partial scan) Partial scan takes the data from the center region of the sensor and scales it down to present an image at optimal frame rate.
Video streaming	Simultaneous Motion JPEG and MPEG-4 Controllable frame rate and bandwidth Constant and variable bit rate (MPEG-4)

Image settings	<p>Compression levels: 100 Rotation: 0°, 180° Configurable color level, brightness, sharpness, contrast, white balance, exposure control, fine tuning of behavior at low light Overlay capabilities: time, date, text, image or privacy mask</p>
Shutter time	1/4 s to 1/15000 s
Audio	<p>Two-way (half duplex), one-way or audio off Built-in microphone, external microphone input or line input Mono audio output (line level) connects to active speaker with built-in amplifier Audio compression: AAC LC 8 32kbit/s G.711 PCM 64 kbit/s G.726 ADPCM 32 or 24 kbit/s</p>
Security	<p>Multiple user access levels with password protection IP address filtering HTTPS encryption IEEE 802.1X network access control</p>
Users	<p>20 simultaneous users Unlimited number of users using multicast (MPEG-4)</p>
Alarm and event management	<p>Events triggered by video motion detection, audio detection, external input or according to a schedule Image upload over FTP, email and HTTP Notification over TCP, email, HTTP and external output Pre- and post alarm buffer: up to 24 MB (300 images or more, in full 1280x1024 resolution)</p>
Connectors	<p>RJ-45 for Ethernet 10BaseT/100BaseTX Mini DC power jack Terminal block for 1 alarm input and 1 output 3.5 mm jack for Mic in (max 80 mVpp) or Line mono input (max 6.4 Vpp), 3.5 mm jack for Line mono output (max 1.3 Vpp) to active speaker</p>
Casing	Polycarbonate base and polycarbonate transparent cover
Processors and Memory	<p>CPU, video processing and compression: ARTPEC-A RAM: 64 MB, Flash: 8 MB Battery backed-up real-time clock</p>

Power	4.9- 5.1 V DC max 3.8 W Power over Ethernet IEEE 802.3af, Class 1 power Classification
Operating conditions	0–50 °C (32–122 °F) Humidity 20-80% RH (non-condensing)
Video access from web browser	Camera live view Video recording to file (ASF) Sequence tour for up to 20 Axis video sources Customizable HTML pages
Minimum web browsing requirements	Pentium III CPU 500 MHz or higher, or equivalent AMD 128 MB RAM AGP graphics card 32 MB RAM, Direct Draw Windows XP, 2000, DirectX 9.0 or later Internet Explorer 6.x or later
System integration Support	Open API for application integration including Quality of Service (QoS) Layer 3, DiffServ Model Embedded Linux operating system
Supported protocols	IPv4/v6, HTTP, HTTPS, SSL/TLS*, TCP, QoS, SNMPv1/v2c/v3 (MIB-II), RTSP, RTP, UDP, IGMP, RTCP, SMTP, FTP, ICMP, DHCP, UPnP, Bonjour, ARP, DNS, DynDNS, SOCKS, NTP, IEEE802.1X. More information on protocol usage available for use in the Open SSL Tool kit
Included accessories	Power supply 5.1 V DC, mounting and connector kits, Installation Guide, CD with installation tools, recording software and User’s Manual, MPEG-4 licenses (1 encoder, 1 decoder), MPEG-4 decoder (Windows)
Accessories (not incl.)	Tamper-resistant casing with smoked transparent cover Vandal-resistant casing with smoked transparent cover Drop ceiling mount kit MPEG-4 Decoder multi-user license pack
Approvals	EN 55022 Class B, EN 61000-3-2, EN 61000-3-3, EN 55024, FCC Part 15 Subpart B Class B, ICES-003 Class B, VCCI Class B, C-tick AS/NZS CISPR 22, EN 60950 Power supply: EN 60950, UL , CSA
Dimensions (HxWxD)	

and weight 94 x 144 x 132 mm (3.7" x 5.7" x 5.2")
425 g (0.94 lb)

8.06. Fixed Dome, Power over Ethernet, varifocal DC-Iris, indoor camera

Models	Tamper-resistant casing
Image Sensor	1/4" Micron progressive scan RGB CMOS
Lens	Fujinon, F1.3 varifocal 2.8-10 mm, DC-iris Focus range: 0.3 m to infinity
Angle of view	Horizontal: 20°-73°
Camera angle adjustment	Pan 360°, tilt 170°, rotation 340°
Minimum illumination	1 lux, F1.3
Video compression	Motion JPEG MPEG-4 Part 2 (ISO/IEC 14496-2) with motion estimationProfiles: Advanced Simple Profile and Simple Profile
Resolutions	9 resolutions from 640x480 to 160x120 via API 6 selections via configuration Web page
Frame rate	Up to 30 fps in all resolutions (Motion JPEG or MPEG-4)
Video streaming	Simultaneous Motion JPEG and MPEG-4 Controllable frame rate and bandwidth Constant and variable bit rate (MPEG-4)
Image settings	Compression levels: 100 Rotation: 0°, 180° Configurable color level, brightness, sharpness, contrast, white balance, exposure control Overlay capabilities: time, date, text, image or privacy mask
Shutter time	1/4 s to 1/15000 s
Audio	Configurable for built-in or external microphone Audio compression Audio in: AAC LC 8-32 kbit/s, G.711 PCM 64 kbit/s, G.726 ADPCM 32 or 24 kbit/s Audio out: G.711 PCM 64 kbit/s, G.726 ADPCM 32 or 24 kbit/s Half duplex, simplex or audio off

Security	Multiple user access levels with password protection IP address filtering HTTPS encryption Network control IEEE 802.1X
Users	20 simultaneous users Unlimited number of users using multicast (MPEG-4)
Alarm and event management	Events triggered by built-in multi-window motion detection, audio detection, external input or according to a schedule Image upload over FTP, email and HTTP Notification over TCP, email, HTTP and external output Pre- and post alarm buffer of 9 MB (approx 5 min of 320x240 resolution video at 4 frames per sec)
Connectors	Ethernet 10BaseT/100BaseTX, RJ-45 Mini DC power jack Terminal block for 1 alarm input and 1 output 3.5 mm jack for Mic in (max 80 mVpp) or Line mono input (max 6.4 Vpp) 3.5 mm jack for Line mono output (max 1.3 Vpp) to active speaker
Casing	Polycarbonate base and polycarbonate transparent cover
Processors, memory and clock	CPU, video processing and compression: ARTPEC-A RAM: 32 MB, Flash: 8 MB Battery backed-up real-time clock
Power	4.9-5.1 V DC max 3.6 W, or Power over Ethernet (IEEE 802.3af) with power classification: Class 1 (max 3.84 W)
Operating conditions	0–50 °C (32–122 °F) Humidity 20-80% RH (non-condensing)
Operating conditions	0–50 °C (32–122 °F) Humidity 20-80% RH (non-condensing)
Installation, management and maintenance	Web-based configuration Configuration of backup and restore
Video access from Web browser	Camera live view Video recording to file (ASF) Sequence tour for up to 20 Axis video sources Customizable HTML pages

Minimum Web browsing requirements	Pentium III CPU 500 MHz or higher, or equivalent AMD 128 MB RAM, AGP graphics card 32 MB RAM, Direct Draw Windows XP, 2000, DirectX 9.0 or later Internet Explorer 6.x or later
System integration support	Open API for application integration including AXIS VAPIX API*, AXIS Media Control SDK*, event trigger data in video stream Quality of Service (QoS) Layer 3, DiffServ Model Embedded Linux operating system
Supported protocols	IPv4/v6, HTTP, HTTPS, SSL/TLS*, TCP, ICMP, QoS, RTSP, SNMPv1/v2c/v3 (MIB-II), RTP, UDP, IGMP, RTCP, SMTP,FTP, DHCP, UPnP, ARP, DNS, DynDNS, SOCKS, NTP, etc.
Included accessories	Installation Guide, CD with User's Manual, software, installation and management tools, mounting and connector kits, power supply 5.1 V DC, MPEG-4 licenses(1 encoder, 1 decoder), MPEG-4 decoder (Windows)
Accessories (not incl.)	Tamper-resistant casing with smoked transparent cover Vandal-resistant casing with smoked transparent cover Drop ceiling mount kit (216FD) MPEG-4 Decoder multi-user license pack
Approvals	EN 55022 Class B, EN 61000-3-2, EN 61000-3-3,EN 55024, FCC Part 15 Subpart B Class B, ICES-003 Class B,VCCI Class B, C-tick AS/NZS CISPR 22, EN 60950-1 Power supply: EN 60950, UL, CSA
Dimensions (HxWxD)and weight	94 x 144 x 132 mm (3.7" x 5.7" x 5.2") Weight: 425 g (0.94 lb) excl. power supply (AXIS 216FD) 580 g (1.28 lb) excl. power supply (AXIS 216FD-V)

8.07. Camera 2: Power over Ethernet, varifocal DC-Iris, indoor/outdoor

Models	Power over Ethernet, varifocal DC-Iris, indoor/outdoor
Image Sensor	1/4" Sony Wfine progressive scan RGB CCD
Lens	4.0 mm, F1.2, fixed iris, CS mount 3.0 - 8.0 mm, F1.0, DC-iris, CS mount

Angle of view	27°-67° horizontal
Minimum illumination	0,75 lux, F1.0
Video compression	Motion JPEG MPEG-4 Part 2 (ISO/IEC 14496-2), Profiles: ASP and SP
Resolutions	16 resolutions from 640 x 480 to 160 x 120 via API, 5 selections via configuration web page
Frame rate	Motion JPEG: Up to 30 fps in all resolutions MPEG-4: Up to 25 fps at 640x480 Up to 30 fps at 480x360 or lower
Video streaming	Simultaneous Motion JPEG and MPEG-4 Controllable frame rate and bandwidth Constant and variable bit rate (MPEG-4)
Image settings	Compression levels: 11 (Motion JPEG)/23 (MPEG-4) Rotation: 90°, 180°, 270° Configurable color level, brightness, contrast, exposure, white balance, fine tuning of behavior at low light Overlay capabilities: time, date, privacy mask, text or image
Shutter time	2 sec to 1/12500 sec
Security	Multiple user access levels with password protection IP address filtering
Users	20 simultaneous users Unlimited users using multicast (MPEG-4)
Language support (Web interface)	English. Downloadable language files for French, German, Italian, Japanese and Spanish are available at www.axis.com/techsup . Other language files may also be available
Alarm and event management	Events triggered by built-in motion detection, external input or according to a schedule Image upload over FTP, email and HTTP Notification over TCP, email, HTTP and external output Pre- and post alarm buffer: up to 1.2 MB (up to 40 sec of 320x240 video at 4 frames per sec)
Connectors	RJ-45 for Ethernet 10BaseT/100BaseTX Terminal block for 1 alarm input, 1 output and alternative power connection

Processors, memory and clock	CPU: ETRAX 100LX 32bit Video processing and compression: ARTPEC-2 RAM: 16 MB, Flash: 4 MB Battery backed up real-time clock
Power	7-20 V DC max 7 W AXIS 211: PoE IEEE802.3af Class 2
Operating conditions	5 - 45 °C (41 – 113 °F) Humidity 20 - 80% RH (non-condensing)
Installation, management and maintenance	Web-based configuration, configuration of backup and restore
Video access from Web browser	Camera live view, Video recording to file (ASF), Sequence tour for up to 20 external Axis video sources, Customizable HTML pages
Minimum Web browsing requirements	Pentium III CPU 500 MHz or higher, or equivalent AMD, 128 MB RAM, AGP graphics card 32 MB RAM, Direct Draw Windows XP, 2000, 2003 Server, DirectX 9.0 or later Internet Explorer 6.x or later
System integration support	Open API for application integration including AXIS VAPIX API*, AXIS Media Control SDK*, event trigger data in video stream Quality of Service (QoS) Layer 3, DiffServ Model Embedded Linux operating system
Supported protocols	IPv4/v6, HTTP, TCP, QoS, RTSP, RTP, UDP, IGMP, RTCP, SMTP, FTP, ICMP DHCP, UPnP, Bonjour, ARP, DNS, DynDNS, SOCKS.
Included Accessories	Power supply 9 V DC, stand, connector kit, Installation Guide, CD with installation tool, software and User's Manual, MPEG-4 licenses (1 encoder, 1 decoder), MPEG-4 decoder (Windows)
Accessories (not incl.)	Housings for adverse indoor/outdoor environments Power over Ethernet midspans AXIS 292 Network Video Decoder MPEG-4 Decoder multi-user license pack
Approvals	EN 55022 Class B, EN 61000-3-2, EN 61000-3-3, EN 55024, FCC Part 15 Subpart B Class B, ICES-003 Class B, VCCI Class B, C-tick AS/NZS 3548, EN 60950 Power supply: EN 60950, UL, cUL
Dimensions (HxWxD) and weight	38 x 95 x 178 mm (1.5" x 3.7" x 7.0") 250 g (0.55 lb) excl. power supply

8.08. 22X Optical Zoom IP Pan Tilt Zoom Camera

Pick-up element	1/4" interline transfer SuperCCD™
Effective picture elements	648 x 486 x 2 pixel (honeycomb layout)
Resolution	SXVGA (1280 x 960) VGA (640 x 480) default QVGA (320 x 240) QQVGA (160 x 120)
Frame per second (fps)	SXVGA: Max 7.5 FPS VGA: Max 30 FPS QVGA: Max 30 FPS QQVGA: Max 30 FPS
Image compression	JPEG
Video streaming format	Motion JPEG
Pan angle	-175° to +175°
Pan speed	300° per second
Tilt angle Desktop	-30° to 90°, Ceiling -90° to 30°
Tilt speed	200° per second
Minimum subject illumination	0.13 lux @ F1.6 at AGC High
Day night function (color cut)	Yes
Lens	22x optical zoom, f=4.0 mm to 88.0 mm, F1.6 (wide), F3.8 (tele)
Focus mode	Auto/manual/preset
Slow shutter	Off, 1/7.5 s (x4), 1/3.75 s (x8), 1/2.5 s (x12), 1/1.8 s (x16), 1 s (x30), 2 s (x60), 4 s (x120), Off=1/30 s
Iris control	Auto/manual
Auto white balance	Normal/wide
AGC (gain)	Standard and max
Color gain	R-Y/B-Y gain control
Sharpness	Yes (sharp/standard/soft)
White balance	Auto, indoor 1, indoor 2, outdoor, hold, manual
Backlight compensation	Off, screen upper 2/3, screen lower 2/3, screen center 1/3, screen center 1/6, screen right and left 1/2, auto
Protocols	TCP/IP, UDP, FTP, DHCP, HTTP, DNS, DDNS, ARP, ICMP, SMTP, POP3, RNCP
Ethernet connection	10Base-T, 100Base-TX
Ethernet port	RJ45
Audio in/out	Yes (1-microphone in/1-line out)
Alarm on/out	Yes (1-alarm in/1-alarm out)
External storage	Slot for SD memory card
Operating system	Linux
Camera mounting	Desktop, ceiling
Power supply	12 V DC (±10%), 100-240 V AC
Power consumption	10 W
Operating temperature	14° F to 104° F (-10° C to 40° C)
Dimensions (inches)	4.48 (W) x 5.35 (H) x 4.48 (L)
Weight	1.58 lbs. (720 grams)
Standards	UL2044/cUL, FCC, Class A
Accessories	AC power adaptor, AC power

8.09. Rack Mount KVM switch with LCD and Keyboard

- 1U – 15” / 17” TFT/LCD high-resolution monitor
- Tactile keyboard with separate numeric keypad
- Integrated trackball or touchpad
- PS/2 connections
- Built-in single or multiple user KVM switch option
- Provides access to as many as 1,000 computers
- Quick and easy rack mounted installation
- Supports AT/XT, PS, and UNIX computer
- Front panel conceals unit when it is not in use
- Full size keyboard for typing comfort
- Keyboard available in international variations
- Monitor OSD control color, brightness, contrast, position, and sharpe of the display
- Front panel controls for quick adjustments
- Easy-glide KVM drawer can be mounted at any height in a standard 19” rack

8.10. 24 Port Power over Ethernet Switch

24-port 10/100BASE-TX Fast Ethernet Smart managed rack mountable switch with 2 Gigabit ports and 24 PoE ports

Features:

ProSafe Smart Switch unmanaged and fully managed switch

Full Layer 2/Layer 3 management implementation

PoE capable Smart Switch

Power and data using built-in IEEE 802.3af PoE on all 24 ports

Intuitive web-based management tool for deployment and configuration

24 10/100 ports that support 802.3af PoE. Total POE budget is 195 Watts

Advanced features: 802.1x, ACLs, Rate limiting, DSCP/TOS-based prioritization, IGMP

Snooping, SNMP v1, v2, v3

Two copper Gigabit Ethernet ports

Two Combo (SFP/Copper) ports

Easy-to-manage through web-based GUI

Access Control Lists (ACL), 802.1x port authentication, enhanced QoS, rate limiting and

IGMP Snooping

24 10/100Mbps ports, two copper 10/100/1000 ports and two combination (Copper/hot-swappable Small Form-factor Pluggable (SFP)

Gigabit ports for optional fiber connectivity

Non-blocking wire-speed architecture with an 12.8Gbps switching

capacity for maximum data throughput
Auto Uplink

8.11. 1.25 Gigabit Ethernet-Multimode Transceiver

850nm VCSEL

Date Rate: 1.25Gbps, NRZ

Single +3.3V Power Supply

RoHS Compliant and Lead-free

AC/AC Differential Electrical Interface

Compliant with Multi-Source Agreement (MSA) Small Form Factor Pluggable (SFP)

Duplex-LC Connector

Compliance with specifications for IEEE 802.3z Gigabit Ethernet at 1.25Gbps

Compliance with ANSI specifications for Fiber Channel applications at 1.06Gbps

Eye Safety

Designed to meet Laser Class 1 comply with EN60825-1

8.12. Exterior Weather Proof Camera Housing

Heavy duty outdoor security camera housing

Must be totally weather proof

Built in thermostatically controlled heating element

Heater operates on 24 volts AC

Tough metal mounting bracket

Swivel and tilt adjustments

8.13. Exterior Weather Proof Smoked Pan Tilt Zoom Dome Housing

(Technical Specifications)

Standard 24 VAC, 27 watts

Weight 10 lbs.

Construction:

Top: .125 engineered plastic

Dome: Cell-cast acrylic

Pendant mounted bracket: Cast and machined aluminum

Components:

Seals: .136" x 10.25" O-ring

Environmental Specifications:

Operating Temperature: -20deg F to +120deg F

Heater activates at +40deg F (+/-8deg), deactivates at +60deg F (+/-8deg)

Effective Projected Area (EPA): Approx. 180 square inches

Operating Humidity: Up to 100%

8.14. Exterior Corner Adaptor for Pan Tilt Zoom

(Technical Specifications)

Durable powder coat finish

All aluminum construction

Threaded bolt inserts

75 lb load rating

8.15. Interior Smoked Pan Tilt Zoom Dome Housing

(Technical Specifications)

Standard 24 VAC, 27 watts

Weight 10 lbs.

Construction:

Top: .125 engineered plastic

Dome: Cell-cast acrylic

Pendant mounted bracket: Cast and machined aluminum

Components:

Seals: .136" x 10.25" O-ring

8.16. Rack Mounted UPS Battery Backup

(Technical Specifications)

Input Capacity: 2200VA

Power Compatibility: United States, North America

Input Voltage: +/- 25% at a line input, single phase

Input frequency: 50 or 60 Hz +/- 5%

Output Voltage (on battery): Pure sine wave at +/- 5% of nominal, +/- 10% of nominal after low battery warning

Output frequency (on battery): 50 or 60 Hz +/- 5%

Output Voltage Regulation (AVR): AVR automatically increases output 15% above input voltage if -9% to -25% of nominal. AVR decreases output voltage if +9% to +25% of nominal

Spike Protection: 320 Joules, 2ms

Unit Input Protection: Breaker for overload and short circuit protection

EMI/RFI Filter: 10dB at 0.15MHz, 50dB at 30MHz

Overload Protection: UPS automatic shutdown if overload exceeds 110% of nominal at 60 seconds and 125% at 3 seconds

Transfer time: 2/4ms, including detection time

Battery short recharge time: 8 hours to 90% of full capacity

Backup time: 85-95 min

Weight: 28 kg (61.6 lbs)

Rack Size: 3U

Tower Dimension (WxDxH) mm: 483 x 351 x 130

Multiple LED and audio indicators of power and surge levels

Interface: RS-232C Bi-Directional Communication port

8.17. 4U Vertical Wall Rack

(Technical Specifications)

Supports 200lbs.
Universal square mounting holes
14 gauge steel, cold roll steel
Black powder coated finish
Mounting hardware

8.18. Fiber Cable

(Technical Specifications)

6 Fiber Tight Buffer PVC

6 Strand Multi Mode Fiber 62.5 Microns thick.

The jacket on the cable reads Flame-retardant polyvinyl chloride (PVC) Sequential footage markings* Black Jacket—Multimode fibers

Cable Features Lightweight, flexible design simplifies installation, a tight buffer provides individual fiber protection, tight buffered fibers are easy to handle and strip for field connectorization, and Sub-units are numbered for identification.

Handling information is as follows, Storage -40°C (-40°F) to +70°C (+158°F) Operating -20°C (-4°F) to +70°C (+158°F), Minimum Bend Radius:20 X OD—Installation10 X OD—

In-Service, Maximum Crush Resistance:850 lbs/in (1485 N/cm), Maximum Vertical Rise—1,640 ft (500 m)

This cables applications include Intrabuilding voice or data communication backbones, UL Listed Type OFNR for installation in vertical riser and general horizontal applications when installed in accordance with NEC article 770-51 (b) and 770-53 (b).

This cable meets the following certifications

- UL and c(UL) Listed Type OFNR
- CSA FT-4
- ANSI/TIA/EIA 568B.3
- ICEA S-83-596
- GR-409

8.19. Fiber Patch Panel

(Technical Specifications)

24 port terminal box

Fibre Terminal Wall-mountable Boxes with Keys

Durable and light weight design Fibre Cable Management

Steel Constructed

Security door with lock and keys

Dust and debris protection

Unloaded 6-cutout mounting plate for SC simplex bulkheads

SC Fiber Connector

8.20. Cat5e Cable

(Technical Specifications)

8665610 - 24 AWG 4 Pair Category 5e UTP Non-Plenum Cable, UL Listed and Rated Type CMR, ETL Verified

Non-Plenum Category 5e Cable. 24 AWG Category 5e Unshielded Twisted Pair (UTP) Cable For Data Transmission up to 350MHz. This Cable is Non-Plenum Rated and Verified to Category 5e Electricals.

The color code of the cable consists of Pair 1: White-Blue/Blue, Pair 2: White-Orange/Orange, Pair 3: White-Green/Green, Pair 4: White-Brown/Brown.

The Print legend on the cable reads A B C D E 0 1 2 3 4 5 6 7 8 9 4PR CAT5E ENHANCED (UL) OR C(UL) 24AWG 350MHZ CMR VERIFIED TO TIA/EIA 568B.2 WINDY CITY WIRE

The Max conductor DCR is 9.38 Ohms/100m (28.6 Ohms/kft) Max.

The Characteristic Impedance 100 +/- 15 Ohms (1-100 MHz)

This cable is rated to 300 volts

8.21. LABOR & INSTALLATION

- A. Installation must be scheduled with the XYZ School District project coordinator and must be completed by ? 2009.
- B. Any debris resulting from vendor's installation of surveillance system must be promptly removed and disposed of by the vendor.
- C. Vendor must include cabling, installation, and training in bid price.

8.22. TRAINING

- A. A minimum of two (2) days of onsite training must be provided by the vendor for **XYZ School District** employees responsible for utilizing and maintaining the system. The project coordinator will schedule the training with the vendor upon completion of the project.
- B. Vendor must provide two (2) complete user guides including warranty/guarantee information, contact information for maintenance and repairs, and replacement parts listing. Manuals are to be either bound, in a 3-ring binder, or other hard cover book.

8.23. MISCELLANEOUS

- A. All costs for installation of complete, functional system must be included in the bid price. Space has been provided on the Bid Form for the amount(s) of these miscellaneous charges.
- B. Any costs that have not been addressed within the specifications or listed on the following Bid Form must be described below.

- C. All charges and fees must be listed on the following Bid Form. Otherwise, such charges and fees can not be paid.

9.0. LOCATIONS & QUANTITIES OF EQUIPMENT

9.01. LOCATIONS

- A. Locations for installation of equipment are listed below and are noted on the Bid Form.

9.02. QUANTITIES: Item quantities are noted on the Bid Form.

BID FORM

Note: in case of a discrepancy between unit price and total price, unit price shall prevail.

Location / Description	QTY		UNIT PRICE	TOTAL PRICE
XYZ School District				
Video Insight Dell PowerEdge server R700, Xeon processors, 2 GB RAM, 250GB OS Drive, 6TB of Storage	#	@	\$ _____	\$ _____
Network Storage Server, Dell PowerEdge server R700, Xeon processors, 2 GB RAM, 250GB OS Drive, 6TB of Storage	#	@	\$ _____	\$ _____
Video Insight IP Software License per camera	#	@	\$ _____	\$ _____
8 Port KVM switch with 17" LCD	#	@	\$ _____	\$ _____
1.3 Mega Pixel Interior High Resolution IP Dome color Camera	#	@	\$ _____	\$ _____
Interior High Resolution IP Dome color Camera	#	@	\$ _____	\$ _____
Exterior High Resolution IP Color Camera	#	@	\$ _____	\$ _____
Exterior Weather Proof Housing with Mounting Arm	#	@	\$ _____	\$ _____
22X Optical Zoom IP Pan Tilt Zoom Camera	#	@	\$ _____	\$ _____

Location / Description	QTY		UNIT PRICE	TOTAL PRICE
Interior Smoked PTZ Dome with Mounting Equipment	#	@	\$ _____	\$ _____
Exterior Weather Proof Smoked PTZ Dome with Goose Neck and Corner Mounting Bracket	#	@	\$ _____	\$ _____
24 Port Managed PoE Switch	#	@	\$ _____	\$ _____
1.25 Gigabit Ethernet-Multimode Transceiver	#	@	\$ _____	\$ _____
Rack Mounted UPS Battery Backup	#	@	\$ _____	\$ _____
Fiber Patch Panel with punch outs and SF connectors	#	@	\$ _____	\$ _____
4U Vertical Wall Rack	#	@	\$ _____	\$ _____
Cat5 Cable	#	@	\$ _____	\$ _____
6 Strand Fiber	#	@	\$ _____	\$ _____
Equipment Rental	#		\$ _____	\$ _____
Installation, Labor and Equipment			\$ _____	\$ _____
Training			\$ _____	\$ _____
Shipping & Handling			\$ _____	\$ _____
Miscellaneous: _____			\$ _____	\$ _____
<u>TOTAL FOR XYZ School District</u>				\$ _____

Note: in case of a discrepancy between unit price and total price, unit price shall prevail.

1) TRAINING , including manuals	\$ _____
2) MISCELLANEOUS CHARGES (not previously listed): _____ _____ _____	\$ _____
3) PROJECT TOTAL	\$ _____

Note: Authorized signature and bidder information on page 1 must be complete. Any additional information or documentation required within these bid documents must also be provided.