# 625PTZa (2).jpgDescription

The illustra 625 PTZ Camera (hereafter referred to as i625PTZ) operates across an IP network, e.g. the Internet, a LAN or WAN. The video output from the camera is compressed and sent across the network using IP transport mechanisms. PTZ camera control allows complete functionality at a remote location connected by any kind of IP network. A built-in web server provides web pages to configure the dome and streams the video using a customer-selected set of protocols with a standardized transport stream. This will also support other metadata and audio as required. Emails and movie clips (AVI) may be sent across the network in response to alarms. The i625PTZ can operate as a standalone camera on a network however it is intended to be integrated into sophisticated security solutions.

The i625PTZ can network with network video recording systems using illustra API v3.0. These systems include American Dynamics victor Unified Client, American Dynamics VideoEdge NVR, and VideoEdge Hybrid.

The i625PTZ is a Network Video Transmitter, NVT, compliant with ONVIF 2.2 profile S standards, and can interface with network video clients supporting ONVIF.

The i625PTZ is compatible with the American Dynamics illustra Connect tool which provides discovery, configuration, firmware upgrade and diagnostics using ONVIF and WS Discovery protocols.

Features include the following:

* 2 MP with dual streams at 1080p 30ips resolution
* ONVIF 2.2 profile S compliant
* Smooth and accurate PTZ motion control
* Low Latency
* Ultra high speed pan and tilt at 512° per second
* Freeze frame between presets to save on bandwidth and storage
* Real Time Continuous Auto-focus and
* Outstanding color reproduction
* Sleek and compact design
* Easy to install
* Progressive scan imager with full digital path to output
* 20x optical zoom provides 662 horizontal pixels per degree
* True Day / Night with Slow Shutter Technology
* Wide Dynamic Range
* Auto & Manual White Balance Modes
* Eventing with RTP meta-data streaming
* Frame noise reduction

An efficient design allows Feature Plus models to provide bi-directional audio, alarm inputs, and auxiliary outputs only when required.

Indoor units have a modern low profile design which can easily be mounted to any ceiling. This sleek black design camouflages the lens, and provides simple twist lock installation. Optional white and black enclosures are available to provide clear or smoked bubbles when desired. Also, recessed mounting options are available with clear and smoked bubbles.

1. **Performance Specifications**

The i625PTZ supports codecs including H.264 and MJPEG.

Website security is handled via passwords and three access rights established during enrollment. The ONVIF interface security uses WS-Security Username Token and user management as per the ONVIF specification.

The following configurations and controls are accessible via the web:

* Live video and camera controls, as well as configuration of video, presets, patterns, scan, sequences, privacy zones, audio and camera settings.
* Configuration of the PTZ programmable control functions, overlay settings, areas within the field of view, alarms, privacy zones, scheduled tasks, video settings and audio.
* Networking configuration of camera date and time, TCP/IP, user rights, SMTP, FTP, firewall, multicast, DDNS, general maintenance and advanced settings.

All connections to the i625PTZ are via connectors outside the housings. No installer connections are necessary inside the housings.

The i625PTZ supports Ethernet 100/100 Base-T via a RJ45 connection with support for HTTP, TCP/IP, RTP, RTSP, DHCP, multicast, and DDNS client protocols.

The i625PTZ supports live video via the web pages using Internet Explorer 8 or higher or proprietary client software.

The i625PTZ outdoor models use 24V AC power.

The i625PTZ indoor models use 24V AC or Power over Ethernet Plus IEEE 802.atTM Class 4.

The pan mechanism incorporates sealed precision gold plated bifurcated slip ring contacts to provide 360° of continuous pan rotation. The tilt mechanism provides for 105°of mechanical travel, and a full 210° using the digital auto flip feature. Precise manual panning and tilting is achievable through a combination of variable-speed operator control (speed ranges) and automatic adjustment of these speed ranges dependent upon zoom factor. Manual pan and tilt speeds range from 0.25° to 100° per second. Preset pan speeds are 512° per second, and preset tilt operating speeds are 512° per second. Pan and tilt speeds are automatically adjusted by the zoom factor to allow the user the same ease of control, regardless of the field of view. High-speed ironless core direct-drive DC servomotors for low motor inertia, with planetary gearboxes, dynamic motor braking, ceramic bushings, and precious metal brush contacts are used to maintain high torque through the entire operating range. These motors use pulse-width modulation and encoder feedback to control the acceleration, speed, and deceleration of the motors to ensure smooth, precise, accurate, and fluid movement. The design uses DC direct-drive motors and no belt to ensure long-term reliable operation.

Additional camera features include True Day/Night, Wide Dynamic Range (WDR), Automatic White Balance AWB, Auto Iris, Automatic Gain Control AGC, and image freeze.

The i625PTZ has smooth and accurate control functions including pan, tilt, zoom, focus, and iris; and a manual flip function that immediately performs a 180° pan for tracking subject moving below.

The i625PTZ supports PTZ programmable control functions including preset positions, preset sequences, programmable patterns, and scan area, which can be called automatically or manually by users.

The i625PTZ provides 96 Presets where each is a pre-positioned camera scene that can be programmed, and have user-defined titles.

The i625PTZ provides 16 patterns, which are a series of pan, tilt, zoom and focus movements, which can be saved in the dome, and replayed upon command. Patterns must be selectable for repeating or single play. In either case they can be interrupted by a new command.

The i625PTZ provides Apple Peel, which is a predefined pattern stored on the camera by default that covers the entire viewing area. This pattern slowly pans 360° starting at the ceiling line. It then tilts 30° and pans 360 ° again, repeating until the entire viewing area is covered. The pattern will repeat continuously until interrupted by a camera command, preset, scan or alarm.

The i625PTZ provides a scan feature, which allows you to program left and right scan limits for automated surveillance. Once these scan limits are programmed you can choose to run a smooth scan, stepped scan, or random scan. The scan tilt and zoom position will be defined by the left limit. When active, the scan repeats until interrupted by a camera command, preset, pattern or alarm.

The i625PTZ provides 16 Sequences, which are a sequential display of multiple camera Presets. Sequences provide a methodical and effective way to monitor multiple areas of interest by switching to different Presets automatically. Sequences are created by identifying Preset views to include in the Sequence and specifying a dwell time that controls how long each Preset remains on-screen before switching to another Preset. Each sequence can include up to 16 steps (Presets).

The i625PTZ provides a home position function, which can select a preset, pattern, scan, or sequence that automatically runs after a designated period of dome inactivity. This option can be used if you want to keep a specific area under surveillance when the dome is not otherwise being controlled.

The i625PTZ provides 32 Privacy Zones, which are “masked” sections of the dome’s viewing area. These masks prevent operators of the surveillance system who do not have access to the dome password from viewing these designated zones. Each zone has four sides, and the zones may overlap to form irregular shapes. The Privacy Zones move in relation to the dome pan/tilt positions and the apparent size of the Privacy Zone adjusts automatically as the zoom level is adjusted, in order to prevent observation of the selected area.

The i625PTZ provides Areas, which are sections within the viewable space that can be labeled, and these labels may then be turned on within the Overlay Settings option.

The i625PTZ uses DNS protocol to resolve network names and also DDNS Dynamic Domain Name System for updating, in real time, a changing IP address on the Internet to provide a persistent domain name for a resource that may change location on the network per RFC 2136 Dynamic Updates in the Domain Name System.

The i625PTZ supports NTP for time synchronization.

The i625PTZ supports sending IP multicast streams of audio, video and metadata

The i625PTZ is able to send email alerts via SMTP to one specified mailbox using a specified SMTP server. The product supports basic authenticated SMTP using username and password for login on the SMTP server.

The Feature Plus versions of the i625PTZ provide access for using either a micro SD card of up to 32GB which can be used for video alarm storage and audio output pre-recorded clips. The connector for card insertion and removal is in the eyeball (if a bubble is used it must be removed to access)

The product supports WS-Discovery for discovery purpose.

The i625PTZ is supplied with a copy of illustra Connect; an MS-Windows based discovery application, which will allow any illustra camera and other ONVIF cameras (some cameras might be incompatible) on a network to be discovered. For each camera found on the network, the discovery tool will list and allow display filtering by the following:

* Device Name
* Hostname
* IP Address
* Model Name
* Product Code
* Manufacturer
* Firmware Version
* Status
* MAC Address

The i625PTZ interfaces with the illustra Connect application to provide a robust tool for discovery, snapshot, configuration, diagnostics, and firmware upgrade; the following is provided:

* As an alternate to the list display a snapshot view of all cameras can be displayed.
* Device properties windows can be opened to show a snapshot of the camera view, network settings, UUID (ONVID identification code), serial number, and many other device properties.
* Support of IPv4 and IPv6 together or separately with user choice preference for dual stack devices.
* Resolve IP address conflicts and configure devices with static IP addressed or DHCP
* Configure individual device network setting.
* Provides a device list in exportable CVS format
* User account control to secure full administrator access
* Device maintenance allows individual device configuration
* Device maintenance allows three types of reset/reboot:
	+ Reset to factory defaults and change IP settings
	+ Reset to factory defaults and preserve IP settings
	+ Reboot maintaining current settings
* Multiple devices can be updated with one operation for the following:
	+ Time
	+ Date
	+ NTP server
	+ Upgrade firmware
	+ User accounts
	+ Network settings
* Provided as a virtualized standalone .exe file that does not require PC installation. This self contained version of illustra Connect can run with no prerequisites, and can also be used from a USB flash drive.
* The illustra Connect tool is also available as an installation setup file which will be able to store any user specified detail such as security settings and network preferences for future use.
* Both the virtualized and installation files of illustra Connect are available for download from the American Dynamics website.
* Supports all the language options of the i625PTZ camera

**The following information is available for display in the i625PTZ GUI:**

**Model Information**

* Camera Name
* Model
* Product Code
* Manufacturing Date
* Serial Number
* MAC Address
* Firmware Version
* Hardware Version

**Statistics and General Information**

* Operating Time (days-hrs:mins)
* Uptime (days-hrs:mins)
* User Resets
* Power Resets
* Total ROM (MByte)
* Total RAM (MByte)
* Free RAM (MByte)
* PTZ Summary:
	+ Pan Rights
	+ Pan Lefts
	+ Tilt Down
	+ Tilt Up
	+ Zoom Out
	+ Zoom In

The System Log is available for display in the GUI, this provides the most recent messages from the Unix /var/log/messages file, and the information will include the following:

* Messages about system behavior such as process startup/shutdown.
* Warnings about recoverable problems that processes encounter.
* Error messages where processes encounter problems they cannot fix, even if it can continue to work.

The i625PTZ provides a Boot log, which is a log of the Linux operating system boot processes and is useful to

American Dynamics support engineers who require additional information on the device.

**Current Faults**

* + - # - details the fault index.
		- **Fault** - a description of the fault.
		- **Date created** - the time and date when the fault occurred.
		- **Component** - internal software component that raised the fault either DIOM (Digital Input Output Monitor) or ENVM (Environmental Monitor).
		- **Severity** - indicates how serious the fault is. The following are supported, in increasing order of severity, Clear, Warning, Critical and Error.
		- **Detail** - extra information that supplements the fault description.
		- **Delete** -remove the fault from the fault table.

The i625PTZ provides viewing of Alarm Output status.

1. **Minimum Performance Specifications**

**Video**

Imager 1/2.8” Progressive CMOS Exmor™, 2 mega-pixel, solid state

Scanning System Progressive

Rate 1 to 30 ips

Wide Dynamic Range On/Off

Day/Night Yes, True day nigh with mechanical cut filter removal mechanism

Auto Tracing White Balance Yes, Adjustable

Automatic Gain Control . Selectable AGC On/off and limit

Freeze frame When moving to preset position, selectable

Shutter Speed 1/2 - 1/30,000 sec (Auto)

Lens 20X optical zoom

Horizontal Field of View 55.2° (wide); 2.9° (telephoto)

Vertical Field of View 31.8° (wide); 1.8° (telephoto)

Aperture (Aspherical Design) F1.6~F3.5 (wide~telephoto)

Focal Length 4.7mm~94mm (wide~telephoto)

Minimum Scene Illumination 0.4 Lux Color, AGC on, 1/8s
0.04 Lux B&W, AGC on, 1/8s

Supported Codecs H.264 and MJPEG up to 1080p 30ips

Codec Streams 2 any codec, resolution quality/bit rate settings

IP Video Streams 4 maximum including codec sharing duplicate streams

Resolutions (1920 x 1080) 1080p
(1600 x 900) HD+
(1280 x 720) 720p
(1024 x 576) PAL+
(960 x 540) qHD
(800 x 450)
(640 x 360) nHD
(480 x 270)
(320 x 180)
(160 x 90)

MJPEG: Quality: 1-100

H.264: Profile: High level 4.2
GOP: 1-150
Rate Control CBR, VBR
Frame Skip: With CBR
Bit Rate (CBR): Selectable: 16 kbps to 10 Mbps
Quality (VBR): Highest, High, Medium, Low, Lowest

**Operational**

Manual Pan/Tilt Speed: 0.25° to 100° per second scaled in proportion to zoom position.

Preset Pan/Tilt Speed: 512° per Second Maximum.

Pan Travel: 360° continuous, no end stop.

Tilt Travel: 105°; 210° with the Tilt auto flip feature

Tilt and Pan Accuracy: +/- 0. 25°

Zoom and Focus Accuracy: +/- 0.5%

Preset access Time: Less than 1 second to position.

 Full zoom position in < 4 seconds.

 Focus on dome saved presets is < 1 second.

Presets: 96

Patterns: 16

Sequences: 16

Areas: 16

Privacy Zones: 32

External Storage: Micro SD/SDHC card slot for up to 32 GB card

Feature Plus Models:

Alarm Inputs: 4

Auxiliary Output: One form 1-C relay

Audio Compression PCM, G711A, G711U

Language selection: Arabic, Chinese (Simplified), Chinese (Traditional), Czech, Danish, English (default), French, German, Hungarian, Italian, Japanese, Korean, Netherlands, Polish, Portuguese (Brazilian), Spanish, Swedish, Turkish.

Program Storage: 256 M Bytes of electrically programmable Flash Memory

Data Storage: 1 GB Bytes of DDR3 RAM

Programmable Logic: FPGA with 24,051 logic cells

**Network**

Base Protocol: TCP/IP - RFC4614

Internet Layer Addressing: IPv4 - RFC791

 IPv6 - RFC2460

Transport Layer: TCP - RFC973

 UDP - RFC768

Data Transmission: HTTP - RFC2616

 FTP - RFC959

Network Address Configuration: DHCP - RFC2131

 Zeroconf - RFC3927

 Static IP address

Network Name Resolution: DNS - RFC5395

 DDNS - RFC 2136

Time Synchronization: NTP - RFC1305

 IETF NTP Working Group

 1 minute poll rate

Email: SMTP - RFC5321

 Authenticated SMTP - RFC4954

Authentication and Security: TLS - RFC5346

 HTTPS (HTTP over TLS) - RFC2818

 WS-Security

Discovery: WS-discovery - ws-discovery.pdf

Streaming: RTP - RFC3550

 RTSP - RFC2326

 Unicast Streaming

 Multicast Streaming - RFC1112 level 1

External Interface Protocol: AD illustra API 3.0

 SOAP - SOAP 1.2

 ONVIF

 WS-Addressing

 WS-Eventing

**Electrical**

For i625PTZ indoor models, power can be provided by PoE Plus or by a 24 VAC power line. Local powering is possible for indoor models, with the capability to have both sources connected at any time. The local powering option will always be available, whatever the POE status. If both power sources are connected, the first power source connected will provide all power until power goes away. The power source connected second will serve as backup power and power the dome if the first source fails.

The i625PTZ outdoor models use 24V AC power.

**PoE+:** Ethernet Plus and be compliant to POE IEEE 802.3atTM

Class 4

Up to 100m (300 feet)

Compliance verification

**24 VAC:**

Input Voltage: 22 to 30 VAC, Class 2 LPS

Line Frequency: 50/60 Hz

Max Current Indoor: 1.4 amps RMS

Max Current Outdoor: 2.8 amps RMS

Power on in rush current: 18 Amps for 5 ms

Connector: Pluggable Euro-style 3 pin 3.5mm terminal block connector

Design Tolerance: Input minimum: 19 VAC RMS without dropout

Input Maximum: Voltage >35 VAC RMS may damage equipment

Line Frequency: 47-63 Hz

Allowable drop out: 30 ms

**Surge Protection**

Power Line: TVS rated at 60V, 250A, 1.5 Joules, 8/20us impulse

IP: Data lines isolation transformer coupled

Audio: TVS rated at 5V, 300 watts, 8/20us impulse

 Gas discharge tube impulse rated at ten 8/20 us 5kA Impulses

Alarm Input: TVS rated at 3.3V, 500 watts, 8/20us impulse

 Gas discharge tube impulse rated at ten 8/20 us 5kA Impulses

Optocoupled with 500V isolation

Auxiliary output: Dry contact relay with1, 500 volt galvanic isolation

**Connectors**

Data and Power RJ-45 for 10 BaseT/100BaseT (Indoor models only)

24VAC Power Input 3-position, 3.5mm pluggable euro-style screw terminal blocks

Feature Plus Models:

Auxiliary Output 4 input and 1 output 3.5mm pluggable euro-style screw terminal blocks

Audio/Video Cable Assembly, Electret microphone input and audio output

**Mechanical**

Indoor Model:

* + Height (Includes Base) 178mm (7.01”) Diameter 154 mm (6.06”)
	+ Weight 2.06 kg (4.5 lb) add 0.50Kg (1.1 lb) for indoor housing with bubble

Outdoor Model:

* + Height (Includes Pendant Adaptor) 372mm (14.65”) Diameter 257 mm (10.12”)
	+ Weight Fully Assembled (Includes Pendant Adaptor): 6.45kg (14.22lbs)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Ceiling****Surface****Mount****without****Bubble** | **Ceiling****Surface****Mount****with****Bubble** | **Recessed Ceiling Mount without Bubble** | **Recessed****Ceiling****Mount****with****Bubble** | **Indoor****Pendant****Mount****with****Bubble** | **Outdoor****with Bubble and****Sun shade** |
| **Diameter** | 154mm (6.06in) | 210mm (8.27in) | 180mm (7.09in) (body) | 245mm (9.65in) (flange) | 257mm (10.12) | 257mm (10.12) |
| **Total Height** | 178mm (7.01in) | 213mm (8.39in) | 165mm (6.50in) | 280mm (11.02in) | 320mm (12.60) | 372mm (14.65) |
| **Height Below Ceiling** | 191mm (7.52in) | 213mm (8.39in) | 5mm (0.20in) | 116mm (4.57in) | NA | NA |

**Environmental**

Operating Temperature: Indoor:-10°C to 50°C (14°F to 122°F)

Outdoor:-40°C to 50°C (-40°F to 122°F)

Humidity: 95% non-condensing

Storage Temperature: -20°C to 65°C (-4°F to 149°F)

**Regulatory**

Emissions: FCC: Part 15 Class A

CE: EN55022 Class A

AS/NZS CISPR 22 Class A

ICES-003/NMB-003 Class A

Immunity: CE: EN50130-4

CE: EN55024

CE: EN61000-6-1

Safety: UL60950-1

IEC 60950-1

CSA 22.2 No. 60950

CE: EN60950-1

Outdoor: UL 50 (Type 4)

Outdoor: EN60529 (IP66)

Environmental: RoHS