

Digital Input/Output

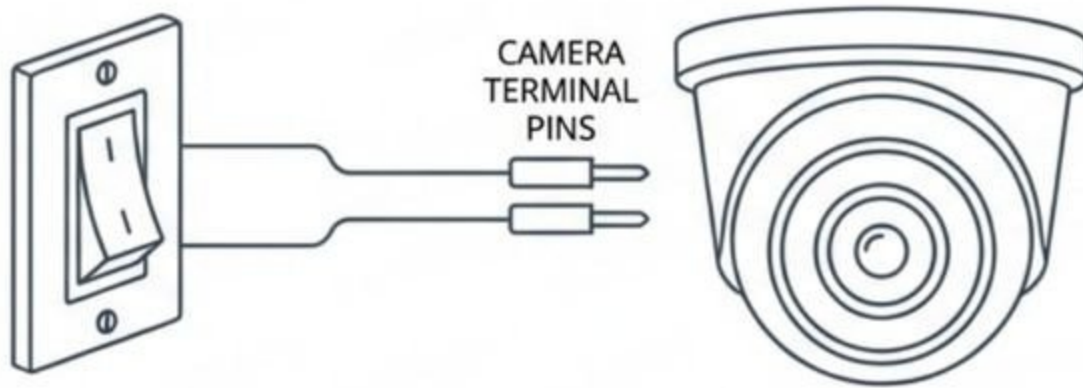
Seamless Integration of Non-IP Electrical Devices with IP Surveillance Systems



Overview

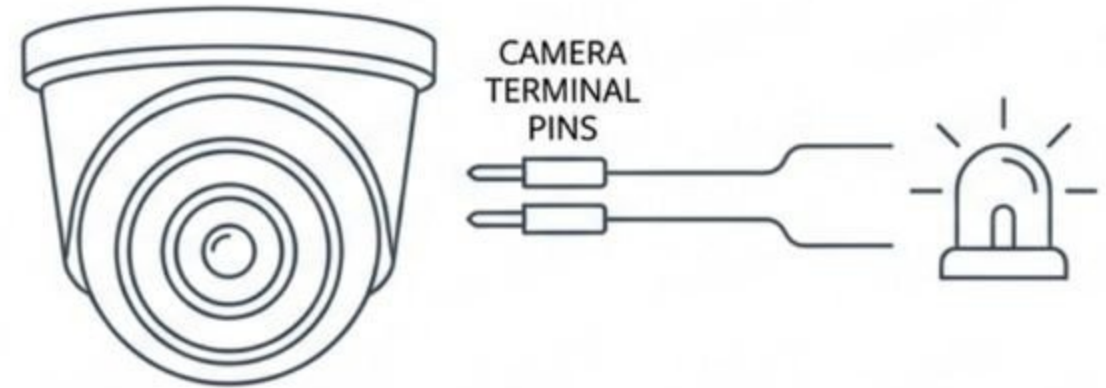
Bridging the Gap Between Physical Sensors and IP Networks

A. What is **Digital Input (DI)**? The Triggers



A pair of terminal pins connecting external devices (switches/sensors) to the IP camera. Allows the external device to notify the camera of local activity (e.g., a panic button sending an alarm to the control center).

B. What is **Digital Output (DO)**? The Responders



Terminal pins connecting the camera to an external responder device. Activated by internal camera events or control center commands (e.g., an alarm siren triggered by the camera).

DI/DO vs. Alarm I/O: While often used for alarm systems, ACTi utilizes the general terms DI/DO because these ports also drive convenience and automated edge functions over the IP-network beyond simple alarms.

Features

Edge-Based Efficiency and Network Optimization



Save Cabling Effort

Transmit physical alarm and trigger events directly to the control center over the existing IP-network/Ethernet cable, drastically reducing physical wire runs.



Instant Camera Response

Cameras instantly react to local triggers without waiting for a control center command (e.g., a PTZ camera automatically turning toward the exact area where a panic button is pressed).

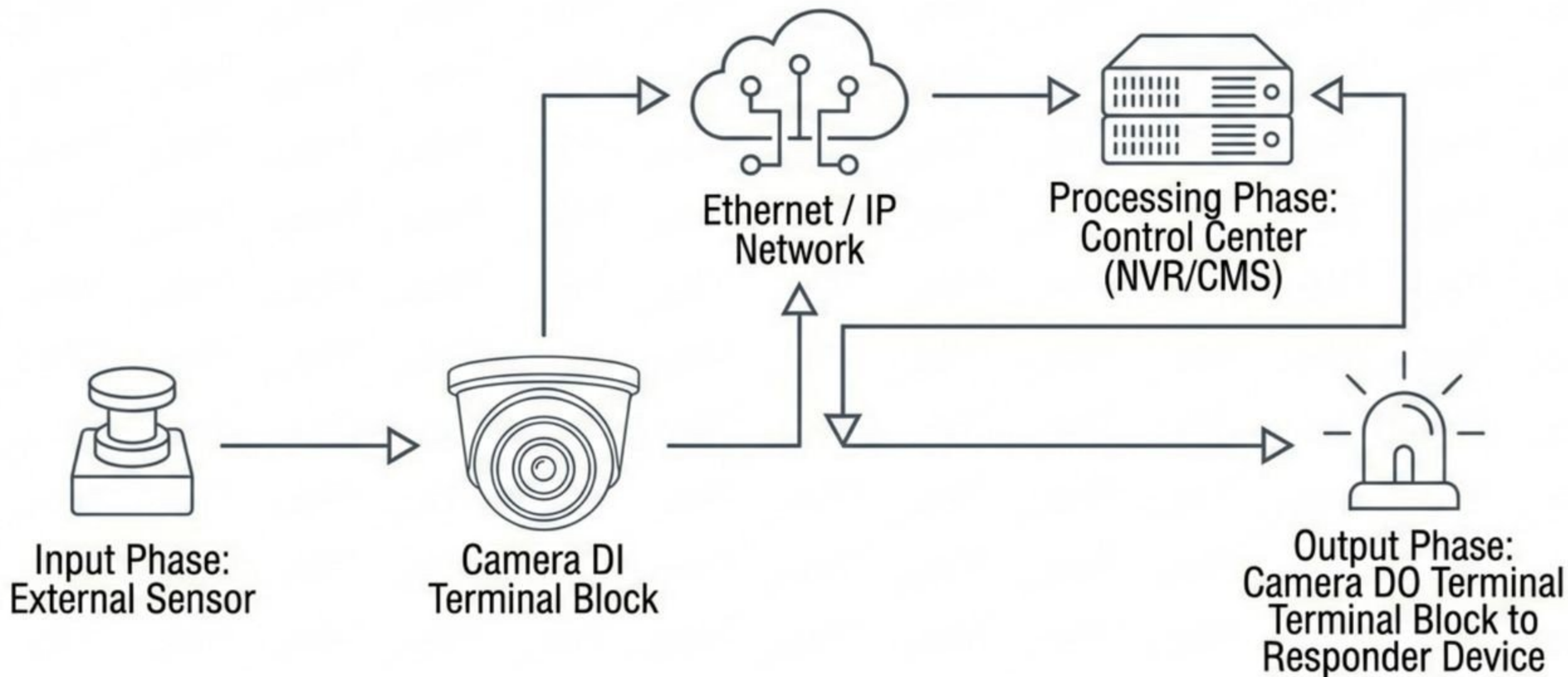


Instant External Commands

Cameras execute immediate output commands to external devices upon internal detection (e.g., triggering room lights via DO the moment video motion or a PIR sensor detects activity for optimal exposure).

Architectures

Flow of Action: From Trigger to Responder



Applications

Vertical Market Use-Cases for Triggers and Responders

Triggers (DI Applications)



- Campuses / Public Safety: Panic Buttons, Emergency Buttons.
- Industrial / Warehousing: Smoke Detectors, Passive Infrared (PIR) Sensors.
- Retail / Enterprise: Magnetic Contacts for Windows/Doors, Glass Break Detectors.

Responders (DO Applications)

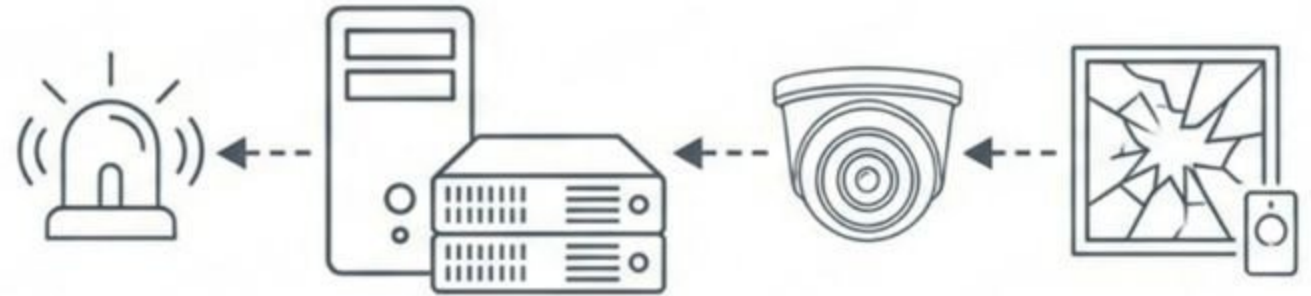


- Smart Buildings: Automated Lights (triggered by video motion/PIR).
- High-Security Perimeters: Alarm Sirens.
- Logistics / Access Control: Gate Control, Magnetic Locks.

Solutions

Centralized Event Management with NVR 3 and CMS 2

- Enterprise Integration: Works seamlessly with ACTi NVR 3 and CMS 2.
- Universal Compatibility: Designed to trigger or respond to DI/DO events across every single ACTi camera that supports a DI/DO interface.
- Capacity & Redundancy: As standalone scalable servers, NVR 3 / CMS 2 support vast multi-site camera deployments with built-in high availability and redundancy features standard for enterprise environments.



Workflow Example:
Workflow: Glass Break (DI) -> IP Camera
-> NVR 3 -> Global Alarm System

Product Introduction

The ACTi DI/DO Hardware Ecosystem

ACTi provides over 100+ purpose-built devices featuring Digital Input/Output, ensuring system integrators have the exact form factor, resolution, and edge-analytics required for any vertical application.



Bullet



Dome



Turret



PTZ



Box



Hemispheric



Server

Product Matrix

Box & Bullet Cameras (2MP to 9MP)

Box Cameras 	Bullet Cameras (High Resolution) 	Bullet Cameras (Standard Resolution)
5MP: A213 (Extreme WDR), A214 (40x Zoom)	9MP: A432 (3.6x), A432-P1 (Vari-focal)	4MP: A422 (5x), A427, A428, A429/A429-P1 (4.3x/4x), A431/P1/P2, Z411 (22x Zoom), Z413-P1 (4.3x)
3MP: B26 (36x Zoom)	8MP: A421 (4.3x), Z429 (5x), Z47 (4.3x) 6MP: A423 / A423-00C-V01-261 (5x), L43 (4.3x)	
2MP: A29, E217 (Built-in Analytics), Q22, Q22-K1	5MP: A410 (5x), A426 (4.4x), B419 (10x), E43B, Z416 (12x)	3MP: A415 (4.3x), B412 (10x) 2MP: A220 (4.3x), A425 (4.3x), I42/I42-K1 (36x Zoom), L41 (4.3x), Z415 (10x)

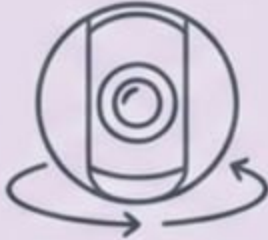
Product Matrix

Dome, Turret & Hemispheric Cameras

Turret & Hemispheric Cameras 	Dome Cameras (High Res) 	Dome Cameras (Standard Res)
Turret Series: 8MP: Q550 (2-Sensor 180°, Extreme WDR)	10MP: E816 (4.3x)	4MP: A76 (Fixed), A811 (5x), A820 (5x), KCM-7311 (3.6x), Z813-P1 (4.3x)
4MP: A570 / P1 / P2 (Outdoor Thermal, Adaptive IR)	8MP: A817 (4.3x), Q711 (2-Sensor), Z810 (4.3x), Z818 (5x)	
 Hemispheric & Multi-Imager: 20MP: Q84 (4-Sensor 360°, 5x), Q75 (4-Sensor 180°) 12MP: A711, B511A, B76A 8MP: Q450 (2-Sensor Bullet) 6MP: B57 5MP: A713, A912	6MP: A77 (Fixed), A821 (5x)	
	5MP: A810 (5x), A826 (4.4x), A86 (5x), E815 (4.3x)	3MP: E618 (4.3x) 2MP: A85 (4.3x), L81 (4.3x), VMGB-601/602 (4.3x/4x), Z914 (Fixed)
		1.3MP: B64 (3x)

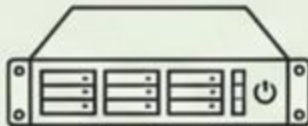
Product Matrix

PTZ & Positioning Systems

	PTZ Cameras 		PTZ Positioning Systems 
	• 32MP: K9001 (Multi-Imager, 42x Zoom) • 8MP: A952 (22x), A962 (36x), Z953 (40x), Z954 (25x) • 5MP: A955 (40x), A967/A967B (33x), B912 (10x), B928 (36x), K953 (33x), K954 (42x), Z972 (5x) • 4MP: A972/A973 (Thermal, 32x), Z952 (25x), Z956/Z957 (33x), Z959 (16x) • 3MP: B911 (10x), B915/B915-K1 (36x), B923 (30x) • 2MP: A956 (40x), A961 (60x Zoom), A966 (33x), A967B-2MP (33x), B916 (20x), B934 (30x), I915/I915-K1 (36x), I98/I98-K1 (33x), K953-2MP (33x)		• 8MP: Q992 (41x Zoom, Superior WDR) • 4MP: Q981 (56x Zoom), Q991 (41x) • 2MP: Q990 (45x Zoom)

Product Matrix

Thermal Imaging, Edge Devices & Servers

 Thermal Bullets	 Covert & Door/Intercom	Edge Devices & Audio	 Servers & NVRs
5MP: A376/P1/P2, A377/P1/P2 4MP: A371/P1/P2, A372/P1/P2, A374/P1, A375/P1/P2, K371/P1/P2, K372/P1/P2, VMGB-359/P1, VMGB-370, VMGB-371	5MP: Q115 2MP: Q113, Q963, Q970 6MP Door Station: Q950	Readers/Controllers: R71CF-series (31/313/317/35/36/37/39), R73C-31/32 IP Speakers: PSPK-0004/5/6 Video Encoders: V21, V24, V32 (Rackmount), ECD-200 (Decoder)	NVR Series: ENR-421, KNR-220P, KNR-421, ZNR-222P/224/424/429/ 429-32ch/431 Ruggedized/Edge: PIOB-0100/0301, PCI-101 (M12), PCI-201

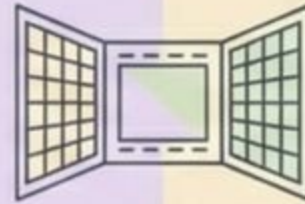
Comparison

Selecting the Right Differentiator for Your Vertical



Optical Zoom Tiers

Ranging from Standard (3x-10x) for retail and enterprise environments, up to Extreme Long Range (40x-60x in A961/A955 and 56x in Q981 Positioning Systems) for critical infrastructure and vast perimeters.



Sensor Configurations

Scale efficiently using Single Sensor deployments or upgrade to Panoramic Multi-Sensor arrays (e.g., Q75 20MP 180° vs. Q84 20MP 360°) for massive area coverage utilizing fewer physical DI/DO endpoint installations.



Environmental Technology

Choose between Standard IP cameras, Adaptive IR Thermal (A37x/K37x series) for zero-light and heavy industrial zones, or fully Ruggedized Servers (PCI-101 M12) for transit and extreme edge deployments.

Summary

Empowering Intelligent, Automated Environments



Seamless Hardware Integration

ACTi's DI/DO ecosystem eliminates installation friction, heavily reducing cabling costs by utilizing the existing IP network for all trigger and response signals.



Zero-Latency Edge Automation

Edge-based DO configuration allows for instant PTZ tracking and environmental responses (lighting, sirens) the absolute millisecond an event is detected.



Unmatched Vertical Adaptability

Supported by a massive matrix spanning from covert 2MP endpoints to 32MP Multi-Imager PTZs and specialized Thermal imagers, entirely unified under robust NVR 3 / CMS 2 platforms.

Contact Us

Partner with ACTi Today



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