



Vandal Proof Design

Ensuring Continuous Surveillance in High-Risk Environments

Overview

Understanding IK Ratings and Mechanical Impact Standards

The IK code (IEC 62262 / EN 62262) classifies the level of protection an enclosure provides against mechanical impact. Unlike IP ratings (dust/water ingress), IK ratings measure resistance to physical force in Joules (J).

Common Surveillance Benchmarks:

IK08: Moderate vandalism attempts (semi-public environments).



IK09: Strong blows and kicks (public transport, outdoor city surveillance).



IK10: Maximum standard protection-high-energy impacts. (Most ACTi vandal-proof cameras hold this rating).



IK Rating Scale (Joules / Impact Equivalent)

IK Rating	Energy (J)	Impact Equivalent
IK00	0J	No protection
IK01	0.15J	200 g dropped from 7.5 cm
IK02	0.20J	200 g dropped from 10 cm
IK03	0.35J	200 g dropped from 17.5 cm
IK04	0.50J	200 g dropped from 25 cm
IK05	0.70J	200 g dropped from 35 cm
IK06	1.00J	500 g dropped from 20 cm
IK07	2.00J	500 g dropped from 40 cm
IK08	5.00J	1.7 kg dropped from 29.5 cm
IK09	10.00J	5 kg dropped from 20 cm
IK10	20.00J	5 kg dropped from 40 cm

Features

The Core Value of Impact-Resistant Surveillance

Cameras installed in unsupervised environments face deliberate physical strikes, lens tampering, and accidental collisions. Vandal-proof enclosures directly mitigate these threats.



Operational Continuity

Cameras stay online despite attacks or accidents.



Lower Maintenance Costs

Reduced frequency of replacements and repairs.



Enhanced Security Assurance

Provides reliable evidence even in hostile environments.



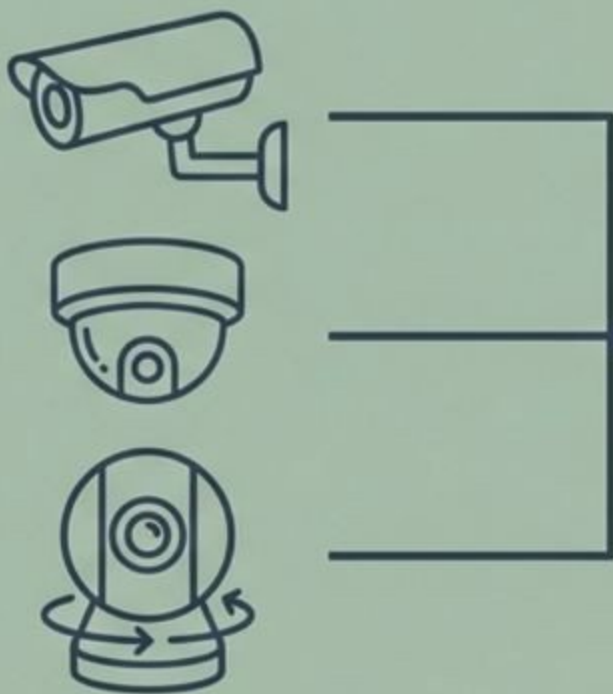
Higher ROI

Extended lifespan reduces total cost of ownership.

Architectures

Resilient Deployment Blueprints

High-Risk Perimeter &
Outdoor Deployment



Secure Redundant Storage
& Video Management



Physical resilience at the edge (IK10) pairs with high-capacity, redundant NVR/CMS server architecture to ensure total system continuity.

Applications

Ideal Vertical Markets for High-Impact Resistance



Public Transportation

Hubs, bus stations, subways, and airports.



Education & Government

Campuses, municipal buildings, and public facilities.



City Surveillance

Parking garages, city streets, and public squares.



High-Risk & Industrial

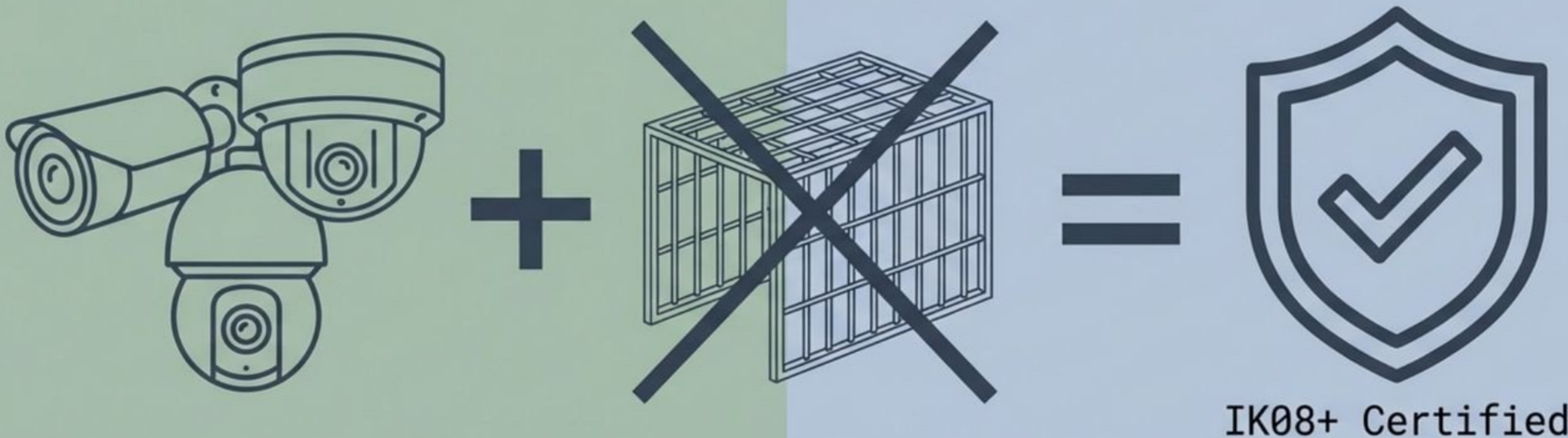
Prisons, industrial manufacturing sites, and retail spaces.

Solutions

Native Vandal-Proof Ready Systems

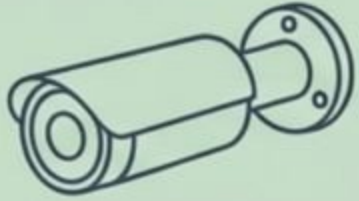
ACTi's surveillance solutions are engineered for maximum durability out-of-the-box. Whether deploying bullets, domes, PTZ, or multi-imager cameras, the hardware is intrinsically rated at least IK08 by its original design.

Key Advantage: No additional aftermarket accessories, external cages, or specialized housings are required to achieve vandal-proof certification, streamlining installation and reducing deployment complexity.



Product Matrix

Bullet, Thermal, and Box Cameras

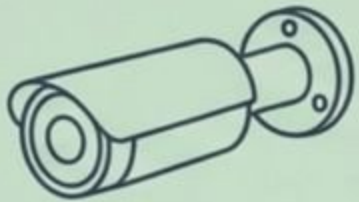


Standard & Zoom Bullets (2MP - 9MP, WDR/Analytics)

A220, A313, A314, A410, A415, A421, A422, A423/00C, A425, A426, A427, A428, A429/P1, A431/P1/P2, A432/P1, B412, B419, E33A, E43B, I42/K1, K31/P1, K32/P1, K33, K41, K42, L31/P1, L33/P1, L41, L43, Z315, Z316/P1, Z317/P1/P8, Z318, Z324, Z330/P1, Z331/P1, Z332, Z411, Z412, Z412, Z413/P1, Z415, Z416, Z429, Z47, Z49.

Differentiators:

Up to 36x optical zoom, Extreme WDR, Built-in Analytics.



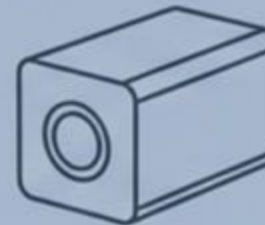
Thermal Bullets (4MP - 5MP, Superior Low Light)

A371/P1/P2, A372/P1, A374/P1, A375/P1/P2, A376/P1/P2, A377/P1/P2, K371/P1/P2, K371/P1/P2, K372/P1/P2, VMGB-359/P1, VMGB-370, VMGB-371.

Differentiators:

Thermal imaging, Adaptive IR.

Multi-Sensor Bullets



Box & Cube & Intercom

Q170 (4MP Thermal Cube),
Q22/K1 (2MP Box),
Q950 (6MP Door Station),
Q970 (2MP Intercom).

Differentiators:

Q170 (4MP Thermal Cube).

Product Matrix

Fixed, Zoom, and Hemispheric Domes



Fixed & Zoom Domes (1.3MP - 10MP, Extreme WDR)

A76, A77, A810, A811, A817,
A820, A821, A826, A85, A86, B64,
E618, E815, E816, E918, E93,
E933/M, E936, K71/P1, K72/P1,
K73, K81, K82, L71, L73/P1,
L81, L83, VMGB-601, VMGB-602,
Z714, Z721, Z724, Z810, Z812,
Z812, Z813/P1, Z818, Z819,
Z819, Z86, Z910, Z911/P9,
Z912/P8, Z913, Z97.

Differentiators:
Extreme Low Light Sensitivity,
Adaptive IR, up to 5x optical
zoom.



Hemispheric & Fisheye (5MP - 12MP)

A711, A713, B76A, E96.

Differentiators:
360-degree coverage,
Built-in Analytics.



Multi-Sensor Domes (8MP - 20MP)

Q711 (8MP 2-Sensor),
Q75 (20MP 4-Sensor 180°),
Q84 (20MP 4-Sensor 360°).

Differentiators:
Massive 20MP resolution,
Advanced WDR.

Product Matrix

Turret, PTZ, and Positioning Systems



Turrets (2MP - 8MP)

A570/P1/P2,
A571/P1/P2, Q550,
Z510, Z511, Z512,
Z53, Z54, Z64,
Z72, Z78, Z79, Z81,
Z814, Z82, Z87.

Differentiators:
Outdoor Thermal
options, 2-Sensor
180° models,
Extreme WDR.



PTZ (2MP - 8MP)

A952, A955, A956,
A961, A962, A966,
A967/B/B-2MP, A972,
A973, B911, B912,
B915/K1, B916, B923,
B928, B934, I915/K1,
I98/K1, K953/2MP,
K954, Z952, Z954,
Z956, Z957, Z958,
Z959.

Differentiators:
Massive zoom ratios
up to 60x optical,
Thermal PTZ variants.



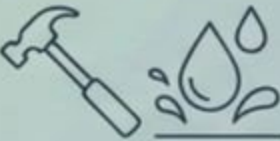
Positioning Systems (4MP)

Q981, Q982/P1/P2.

Differentiators:
Heavy-duty
positioning, up
to 60x optical
zoom, Built-in
Analytics.

Comparison

Selecting the Right IK Rating for Specific Zones

Zone		Requirement
	Public areas (subways, schools, parking lots).	 At least IK09.
	High-risk zones (prisons, stadiums, city centers).	 IK10 (Maximum standard protection).
	Industrial environments with accidental collision risks.	 IK10 combined with waterproof IP66/IP67 ratings.



Consulting Note: Always consider combined IP and IK ratings for outdoor installations (e.g., specifying IP66/IK10 combination cameras).

Summary

Ensuring Long-Term Reliability

- Vandal-proofness is equally as critical as weatherproofing in ensuring the long-term reliability and survival of a camera network.
- By deeply understanding the IKxx rating system, security managers and system integrators can deploy appropriate, hardware-native solutions for environments exposed to severe vandalism or impact risks.
- High IK-rated cameras (IK09–IK10) guarantee the resilience needed for continuous, trustworthy surveillance and optimal Total Cost of Ownership in the most challenging settings.



Contact Us

Connect with ACTi for Project Support



Website: www.acti.com



Email: sales@acti.com



Phone: +886-2-2656-2588 / +1-866-410-ACTi (2284)



Support: Customer Helpdesk & Project Registration
available online.



Register today for Member-Exclusive Pricing and
Project Protection.