# Blackjack® Ai™

Blackjack® Ai™ servers and appliances powered by DW Spectrum® and AI.

# DW

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# BlackjackAi™

Servers Powered by DW Spectrum and IVA Ai Server

Ai INSIDE

# Add the Power of Advanced Neural-Network-Based Analytics to Your Video Streams with Blackjack® Ai™.

Blackjack® Ai™ Artificial Intelligence Network Video Recorders (Ai NVR) and appliances are purpose-built solutions with built-in server-side analytics that unlocks advanced Ai capabilities on any connected video stream. This cost-effective, plug-and-play solutions, with servers powered by DW Spectrum® IPVMS, combine high-performance recording with video analytics in an easy-to-deploy, turnkey solution.

## Understanding DW's Blackjack Ai Solutions

### BlackjackAi™
Powered by DW Ai Appliance

Deep learning analytics on an appliance, connected to any DW Spectrum IPVMS system for any connected stream.

### BlackjackAi™
Powered by DW Spectrum and DW Ai Server

Deep learning analytics at the server for any connected stream, integrated with DW Spectrum IPVMS.

Ai™ Server  +  DW Spectrum® IPVMS  =  Blackjack® Ai™

### All-in-One Device

Achieve lower deployment costs with a single device that performs as an NVR and an Analytics server.

## Object Classification

DW's AI software processes video streams to detect and classify every object appearing in the detection zone. Our Deep Learning engines perform object detection (DL Object tracker), automatically classifying the objects in the scene: bicycles, cars, counters, forklifts, motorcycles, persons, trucks, unclassified and vans.

**Trucks**

**Cars**

**Humans**

Ai INSIDE
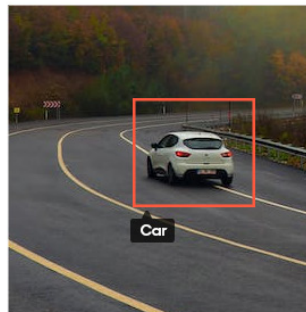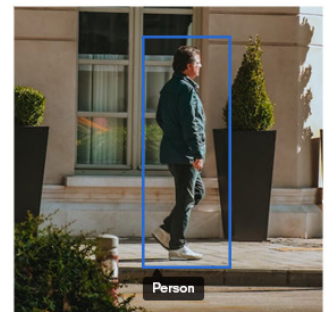
## Future-proof solution

A DW AI analytics provides scalability and optimization of resources across a system. New analytics can be added to your site, making your system future-proof without infrastructure expansion.

## Server-Side Analytics for Any Video Stream

Bring server-side classified object detection to any video stream in your system.

Ai Server
and Appliance
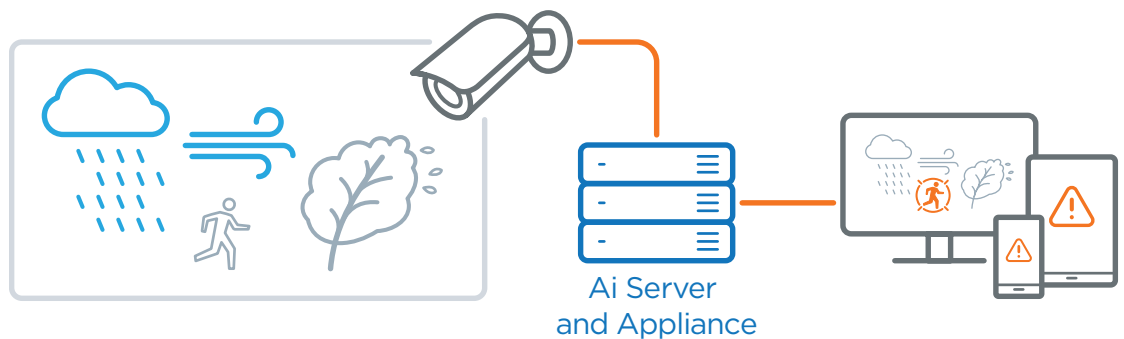
## Logical Rules

Blackjack Ai servers combine multiple zones and virtual tripwires to create elaborate, multiple trigger point rules for a greater event detection level.

Raw Video
Captured by the Camera

Raw Video
Captured by the Camera

Triggered Alarms to Specific Classifications
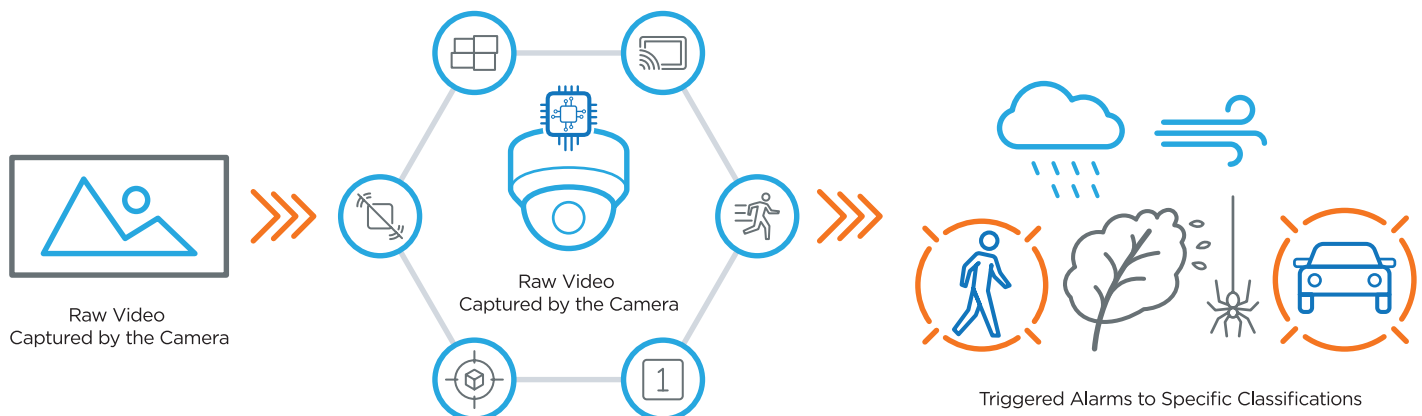
## Easy setup (no calibration)

DW's AI allows operators to choose what to detect and where; with a user-friendly and straightforward UI, users can set up multiple scenarios specific to their monitoring needs without complex calibration.

## Lower total cost of ownership

Combining Blackjack NVRs with an AI Appliance pre-installed, users can achieve a lower total cost of ownership with both flexibility and scalability with a video recording solution enhanced with deep-learning video analytics in a single appliance for any camera network.

Raw Video

Sensor Analysis

Video Analytics

Deep Learning Event Filter
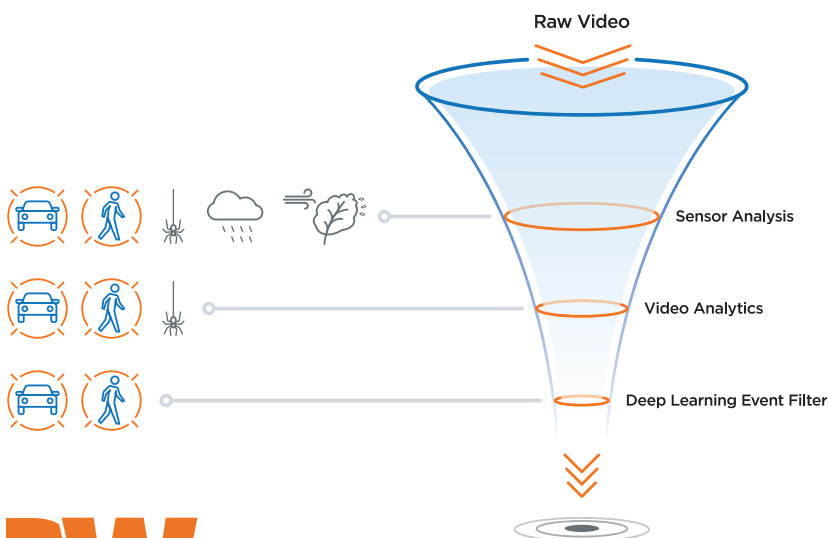
## Deep Learning

Blackjack Ai server-side intelligent algorithms offer deep learning with better object classification and identification of environmental elements. The result is substantially reduced false alarms, allowing only valid events to filter through Blackjack Ai servers to increase efficiency and productivity, and reduces unnecessary costs.

# Smart Storage Management

Manage your recording storage smarter by fine-tuning events and alarms to be recorded. Combining Ai analytics, logic rules and non-detection zones, users can create conditions unique to their environment people and objects must trigger to activate an alarm.

# Seamless Integration with DW Spectrum IPVMS

The Blackjack AI NVRs combine Ai analytics and DW Spectrum IPVMS in a single platform, empowering users to mix and match DW analytics with any camera to optimize deployment and use the best camera to suit your site's requirements.

**Blackjack Ai servers** include all the Intelligent Video Analytics and advanced Video Content Analysis detection capabilities of the Ai engine. In addition, Ai servers empower users with deep learning objects and people tracking and color filters.

Deep Learning Object Detection
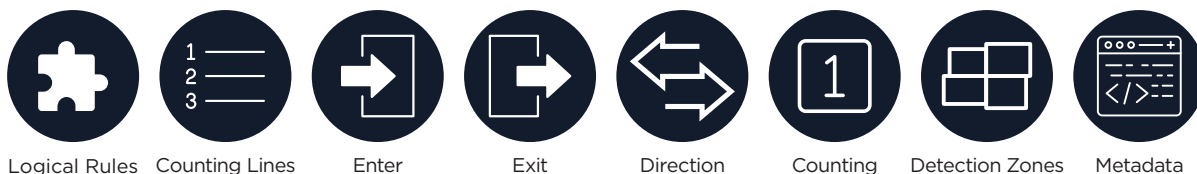
| Logical Rules | Counting Lines | Enter | Exit | Direction | Counting | Detection Zones | Metadata |

| Intrusion | Tailgating | Appear | Disappear | Stopped | Line Crossing | Tamper |

Ai INSIDE

## Dual Network Ports

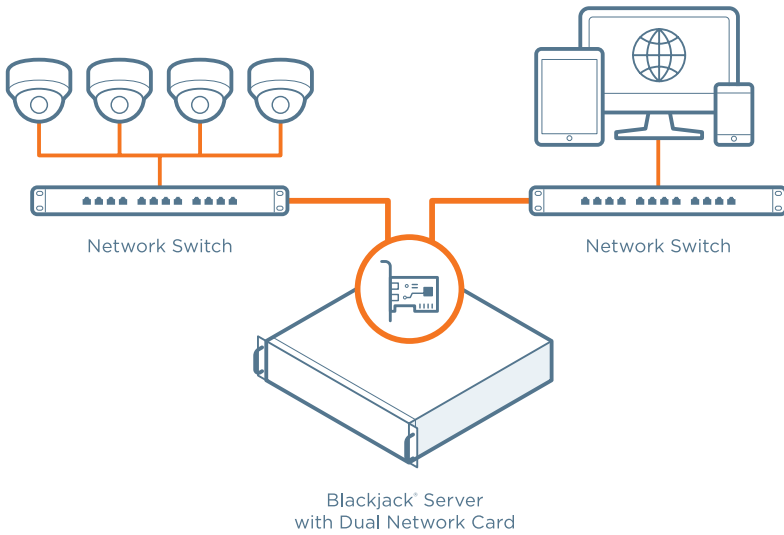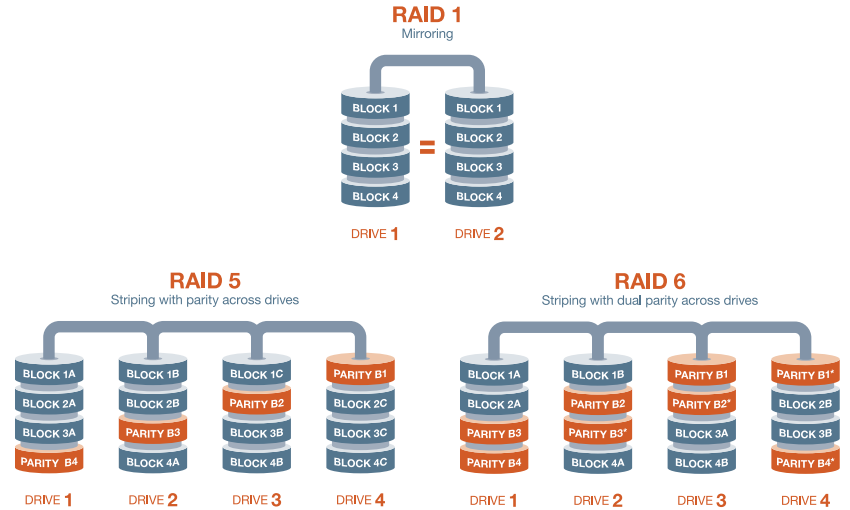Optimize network bandwidth by utilizing dual network ports to build a separate network for the surveillance system and keep that traffic off the main network, reserved for the NVR's communication.

Network Switch

Network Switch

Blackjack® Server
with Dual Network Card

## RAID Storage Mirroring*

Add extra security to your video surveillance system by protecting recorded data and overcoming data loss in the case of a hard drive failure.

**RAID 1**
Mirroring

| BLOCK 1 | BLOCK 1 |
| BLOCK 2 | BLOCK 2 |
| BLOCK 3 | BLOCK 3 |
| BLOCK 4 | BLOCK 4 |

DRIVE **1**     DRIVE **2**

**RAID 5**
Striping with parity across drives

| BLOCK 1A | BLOCK 1B | BLOCK 1C | PARITY B1 |
| BLOCK 2A | BLOCK 2B | PARITY B2 | BLOCK 2C |
| BLOCK 3A | PARITY B3 | BLOCK 3B | BLOCK 3C |
| PARITY B4 | BLOCK 4A | BLOCK 4B | BLOCK 4C |

DRIVE **1**   DRIVE **2**   DRIVE **3**   DRIVE **4**

**RAID 6**
Striping with dual parity across drives

| BLOCK 1A | BLOCK 1B | PARITY B1 | PARITY B1* |
| BLOCK 2A | PARITY B2 | PARITY B2* | BLOCK 2B |
| PARITY B3 | PARITY B3* | BLOCK 3A | BLOCK 3B |
| PARITY B4 | BLOCK 4A | BLOCK 4B | PARITY B4* |

DRIVE **1**   DRIVE **2**   DRIVE **3**   DRIVE **4**

## Mouse & Keyboard Included

Blackjack® servers come with a USB mouse and keyboard included at no extra cost.

## ONVIF® conformant*

All Blackjack solutions are ONVIF conformant, creating a truly unique solution, to match your specific needs.

## Rail Kit Included*

All Blackjack® rackmount servers come with the rail kits included at no extra cost for easy out-of-the-box installation.

**DW®**

**BlackjackAi™**

INSIDE
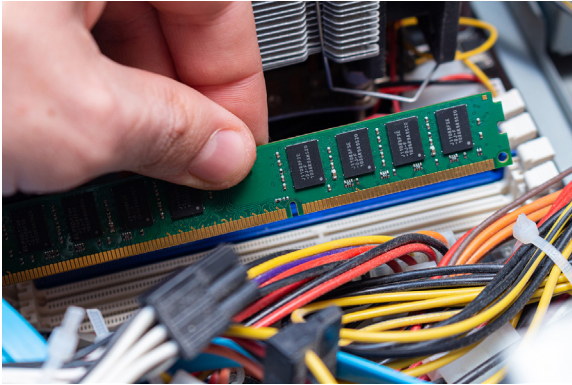
## Designed and Comissioned in the U.S.A

All DW recorders, workstations and NAS devices are designed, assembled and inspected in our California facility. Each product undergoes multiple levels of quality control to guarantee the highest quality and performance.

## OS on dedicated SSD

DW's servers provide a dedicated SSD for the OS. This results in faster boot time, faster application loading times and improved system responsiveness.
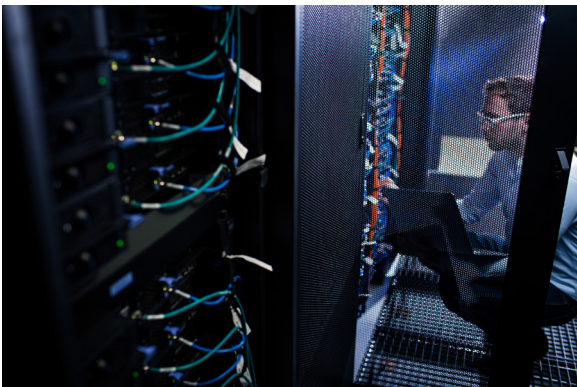
## Next business day onsite hardware repair after remote diagnosis*

If an issue occurs with your product that cannot be resolved by phone, DW will dispatch a certified technician to attempt repair of your machine at your place of business, usually the next business day.

## NDAA/TAA Compliant

DW IP cameras, analog cameras, NVRs, DVRs, network devices and management software sold and distributed worldwide are designed and developed in the U.S.A. and Korea, with manufacturing in Korea, Vietnam and Taiwan.

Most DW products qualify for GSA Schedule Contracts and other government opportunities because they are TAA and NDAA compliant.

**NDAA/TAA** COMPLIANT PRODUCT

**GSA**

Trade Agreements Act FAR 52.225-5

Stay current with all DW® solutions at: **www.Digital-Watchdog.com**

# All-in-One NVR and Analytics Appliance

## AI Servers:

**NDAA/TAA COMPLIANT PRODUCT**

| PART NUMBER | Blackjack Ai Rack™ 2U w/RAID (DW-BJAi2RxxTR) | Blackjack Ai Rack™ 2U w/RAID (DW-BJAiRxxTR) | Blackjack Ai P-Rack™ 2U w/RAID (DW-BJAiPxxTR) | Blackjack Ai Tower™ full-size (DW-BJAiTxxTR) | Blackjack Ai™ slim desktop (DW-BJAiDXxxT) |
|---|---|---|---|---|---|
| Included DW Spectrum IP Licenses | 8 (2x DW-SPECTRUMLSC004) | | 4 (DW-SPECTRUMLSC004) | 4 (DW-SPECTRUMLSC004) | |
| Included DW Ai Server Licenses | 8 (2x DW-DWAiSLSC004) | | 4 (DW-DWAiSLSC004) | 4 (DW-DWAiSLSC004) | |
| Form Factor | | 2U Rackmount | | Full-Size Tower | Slim Desktop |
| Operating System | Windows 10 64 Bit on 2 x 240GB NVMe SSD (RAID1) | | Windows 10 64 Bit on 480GB SSD | | |
| CPU | Dual XEON Gold 6248R | XEON Gold 6248R | Intel® i7 processor | Intel® i7 processor | |
| Memory | 64GB | 32GB | 32GB | 32GB | |
| Ethernet port | 2x 10Gb SFP+, 2x 1Gb base-T | | 2x 1G Ethernet ports | 2x 1G Ethernet ports | |
| System — Max Video Storage rate (Mbps) | 320Mbps | 320Mbps | 320Mbps | 320Mbps | 480Mbps |
| Storage — Max # of Analytic Streams (Secondary) | Up to 128 | Up to 64 | | | |
| Storage — Maximum Storage | 160TB, RAID5 | | 120TB, RAID5 | 120TB, RAID5 | 40TB |
| Video-Out — Outputs | 1x Display Port, for system configuration | | | | |
| Video-Out — Video Card | NVIDIA RTX A4000 16GB | | NVIDIA RTX A2000 12GB | NVIDIA RTX A2000 12GB | NVIDIA RTX A2000 12GB |
| Preloaded VMS Software | DW Spectrum IPVMS | | | | |
| Preloaded Analytic Software | DW Ai Server | | | | |
| Rail Kit | Included | Included | Included | --- | |
| Warranty | 5 year HW warranty with next day on-site repair after remote diagnosis, keep your drive | | 5 year limited | 5 year limited | 5 year limited |

## AI Appliances:

**NDAA/TAA COMPLIANT PRODUCT**

| PART NUMBER | Blackjack Ai APPLIANCE (DW-BJAiASL) | Blackjack Ai APPLIANCE (DW-BJAiARA2) | Blackjack Ai APPLIANCE (DW-BJAiAR2PA2) | Blackjack Ai APPLIANCE (DW-BJAiARA4) | Blackjack Ai APPLIANCE (DW-BJAiAR2PA4) |
|---|---|---|---|---|---|
| Included DW Spectrum IP Licenses | N/A | | | | |
| Included DW Ai Server Licenses | 4 (DW-DWAiSLSC004) | | | | |
| Form Factor | Slim Desktop | 2U Rackmount | 2U Rackmount | 2U Rackmount | 2U Rackmount |
| Operating System | Windows 10 IoT LTSC on separate SSD | Windows 10 IoT LTSC on separate RAID1 configured m.2 NVMe SSD | | | |
| CPU | 12th Gen Intel® Core™ i7 processor | Intel XEON Silver 4215R | 2 x Intel XEON Silver 4215R | Intel XEON Silver 4215R | 2 x Intel XEON Silver 4215R |
| Memory | 32GB | 32GB | 64GB | 32GB | 64GB |
| Ethernet Port | 1 x 1Gb, 1x 2.5Gb Ethernet ports | 4 x 1Gb Ethernet ports | 4 x 1Gb Ethernet ports | 4 x 1Gb Ethernet ports | 4 x 1Gb Ethernet ports |
| System — Max # of Analytic Streams (Secondary) | Up to 64 | Up to 24 | Up to 48 | Up to 32 | Up to 64 |
| Video-Out — Outputs | 1x mini Display Port, for system configuration | | | 1x Display Port, for system configuration | |
| Video-Out — Video Card | NVIDIA RTX A2000 12GB | NVIDIA RTX A2000 12GB | 2 x NVIDIA RTX A2000 12GB | NVIDIA RTX A4000 | 2 x NVIDIA RTX A4000 |
| Preloaded Analytic Software | DW Ai Server | | | | |
| Ai Configuration Tool Supported OS | Cross-platform - Windows® and Linux Ubuntu® | | | | |
| Rail Kit | N/A | Included | | | |
| Warranty | 5 years limited warranty | 5 year HW warranty with next day on-site repair after remote diagnosis | | | |

\*\*\* An uninterrupted power supply (UPS) is recommended.

Designed and Commissioned in the U.S.A

## Contact us:

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# Built for Users.™

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**DW**®