

Cloud-Managed Video Management Anywhere, Anytime.



Built for Users.™

Apps for every operating system. **Cloud-enabled.**

DW Spectrum® Pro supports all major operating systems with the ability to link any system to DW Cloud™ for fast, reliable remote access.

Automated. Intuitive. **Built for Users.**

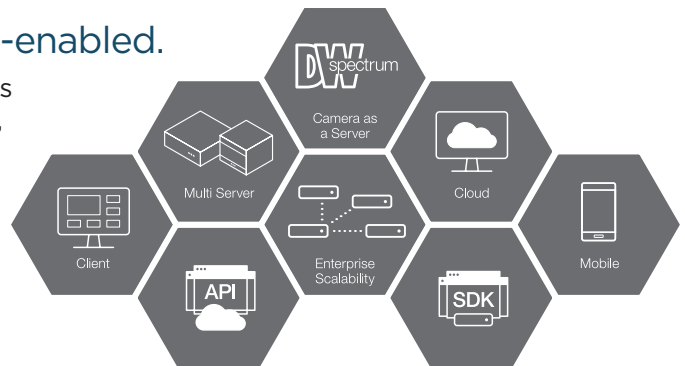
Installs in seconds configures in minutes. Instantly usable for novices, operators, integrators, or developers.

Auto-discover devices from hundreds of manufacturers.

Discover and manage thousands of compatible video, audio and I/O devices. Set up a new system or replace any existing VMS in minutes.

Open for developers. **Integrate anything.**

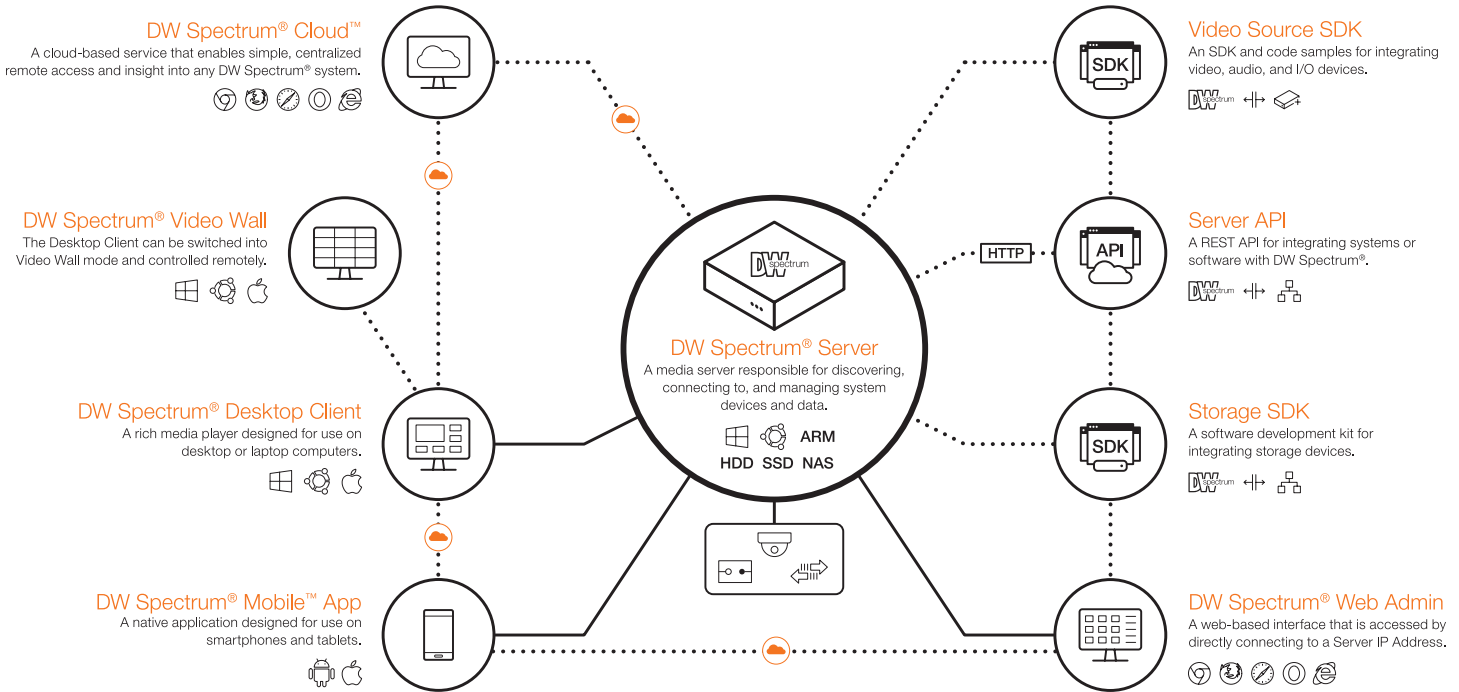
With an open Restful API, a suite of SDKs, and integrator-friendly tools like a built-in API generator, DW Spectrum users can quickly integrate any 3rd party device or system.



Simple. Reliable. Customizable.

DW Spectrum® Pro Video Management Services is a cloud- managed, cutting-edge approach to surveillance that addresses the primary challenges of managing enterprise-level video while offering actionable, data-driven monitoring at the lowest total cost of deployment on the market.

1 Open architecture/cross-platform.



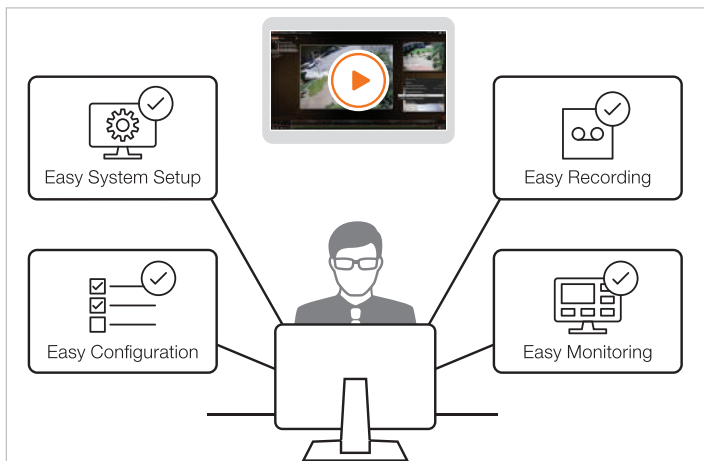
Open architecture

- With mobile, desktop and DW Cloud™, connect from anywhere to share access instantly.
- Support of thousands of devices, including cameras, encoders and I/O modules from leading manufacturers.
- Support cameras at every resolution.
- Built-in API allowing managed video to be accessed and reviewed by any willing 3rd party device.

Cross-platform

- DW Spectrum's recording engine runs on Windows® and Linux® Operating Systems.
- Client software is Windows, Linux, or Mac® compatible.
- Mobile apps are iOS® and Android® compatible.
- Web client compatible with Google Chrome®, Firefox®, Safari® and Internet Explorer®.

2 Easy to use and powerful



Highly refined GUI

Viewing video

- Seamless transitions.
- Customizable camera layouts.
- Zoom, create regions of interest and enhance images.

Searching video

- Fastest video search in the industry.
- Users can bookmark specific video segments.

Downloading video

- Multiple download options.
- Storage backup.

System programming

- Intelligent high-definition multi-streaming video management with no user programming required.
- Server and system programming from a single interface.

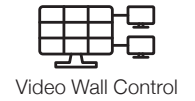
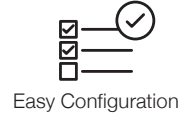
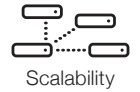
Advanced features

- Interactive alarms, events/notifications, and universal fisheye de-warping are available from a single interface.
- External alarm events can be delivered right from the IP camera or via network I/O modules.



3 Advanced features are standard.

- Custom User Role Management: create custom roles and share groups of hardware and layouts.
- Multi-Server and Centralized Management
- Health Monitor: provides real-time insight into camera and server status.
- Video Storage Analytic: insight into storage requirements each camera is using in real-time and forecasts the impact of additional storage.
- Minimize Video Recording Loss: includes failover to protect video recordings from hardware failures and network interruptions.
- LDAP/Active Directory integration for ecosystem-wide user management is standard.
- Video Wall users can create and remotely manage remote monitors with just a few clicks.



4 Future-proof infrastructure

Designed to grow with your needs, DW Spectrum Pro features a hive architecture that ensures your surveillance network is ready to expand, accommodating increasing data and device requirements seamlessly.



5 Cloud connectivity

Use the power of DW Cloud to access, manage, and control your surveillance system from anywhere. With cloud-based flexibility, ensure secure, remote connectivity for real-time surveillance without geographical limitations.



















6 AI-driven solution.

Bring any camera or IoT device from a constant-growing database of 3rd party technology partners to ensure a versatile and flexible surveillance system that meets your unique needs.



You choose your devices.

Enhance your surveillance system and get more from your investment with a solution that helps you make data-driven decisions in all aspects of your business.

|  Server |  Client |  Cloud |  Mobile |
|---|---|---|---|
| A media server responsible for discovering, connecting to, and managing system devices and data. | A rich media player with a flexible GRID interface designed for connection to and managing DW Spectrum systems. | A cloud-based service that enables simple, centralized remote access and insight into any DW Spectrum system. | A mobile app designed to view DW Spectrum system video and events while on the go. |
| SERVER OS SUPPORT: | DESKTOP OS SUPPORT: | SUPPORTED BROWSERS: | MOBILE OS SUPPORT: |
|   |    |      |   |



Discover. Manage. Control. Integrate.

The DW Spectrum media server application is a lightweight, powerful media server responsible for discovering, connecting to, and managing DW Spectrum system devices and data. The application is preloaded on all Blackjack® servers.

Blackjack®

Servers Powered by DW Spectrum® IPVMS



NDA/TAA
COMPLIANT PRODUCT

Designed and Commissioned in the U.S.A.



Preloaded Blackjack servers

SUPPORTED OPERATING SYSTEM: Windows® Linux®

| DISCOVER | MANAGE | VIEW | INTEGRATE |
|----------------------------|-----------------------------|------------------------------|---------------------------|
| IP Cameras (ONVIF, Custom) | IP Cameras / NVRs / DVRs | Live Video (adaptive) | HTTP Generic Events |
| RTSP / HTTP Streams | Advanced Routing | Recorded Video (adaptive) | HTTP Request-as-an-Action |
| I/O Devices | Storage (HDD/NAS/DAS) | Server Health | Server API |
| Samba NAS | Events and Rules Engine | Log Files | Storage SDK |
| Virtual Camera | Failover | Audit Trail | Video Source SDK |
| H.265 on ONVIF Cameras | Transcoding | Storage Status | Any Device or System |
| Webcam Support | Failover on Storage Failure | Dual-Stream RTSP | C2P Integration |
| Camera Replacement | System Update | Layout-as-an-Action | Metadata SDK |
| | Archive Encryption | Health Monitoring Dashboard | Plugins |
| | ZFT Support | Intel Quick Sync Video | Re-Stream Between Sites |
| | Remote Log Download | SSL/TLS Connections | |
| | ONVIF Profile Selection | Session-Based Authentication | |
| | | Import Data from Device | |



SCALABILITY

OF CLIENTS PER SERVER: THOUSANDS

OF CLIENTS PER SYSTEM: UNLIMITED

OF STREAMS PER SERVER: 128

OF SERVERS IN A SERVER SYSTEM: 10*

* 10 is the recommended maximum. Depends on server configuration and network environment.

Contact support for more info.

SUPPORTED OPERATING SYSTEMS

WINDOWS



- i. Windows 11
- ii. Windows Server 2016
- iii. Windows Server 2019
- iv. Windows Server 2022

LINUX



- i. Ubuntu 18.04 LTS "Bionic Beaver"
- ii. Ubuntu 20.04 LTS: "Focal Fossa"
- iii. Ubuntu 22.04 LTS: "Focal Fossa"

BLACKJACK SERVER ADMIN



SUPPORTED MEDIA STREAMING

LIVE STREAMS (Viewed in DW Spectrum Desktop)

VIDEO: H.265 H.264 MJPEG

AUDIO: AAC PCM (Mu-Law, A-law) g726 MP3

LIVE STREAMS (Available to pull from DW Spectrum media server to 3rd party)

VIDEO: H.265 H.264 MJPEG WebM

AUDIO: AAC PCM (Mu-Law, A-law) g726 MP3

PROTOCOLS: RTSP MJPEG WebM HLS

MEDIA FEATURES

AUTOMATIC CAMERA FAILOVER: -1 min. configurable

TRANSCODING: Supported (for web, client, mobile, API)

DATABASE: SQLITE + proprietary archive index

SINGLE SIGN-ON: LDAP/active directory

SECURITY: OPEN SSL, SALTED MD5 HASH, TLS/SSL, HTTPS

DEV TOOLS: Server API (HTTP), video source SDK, storage SDK

NAS: ISCSI



Client

Dramatically easier to use with almost immediate video load.

A rich media player with a flexible grid interface, unmatched speed and responsiveness, instant event notifications, an embedded browser, and a user experience unlike any other video management software.



Video Wall users can create and remotely manage remote monitors with just a few clicks.





















































One app. Many features.

DW Spectrum Pro client combines performance, ease-of-use, and a 'let the user decide how best to use the software' approach into a single cross-platform lightweight app capable of running any server.

SUPPORTED OPERATING SYSTEM:  Windows®

 Linux®

 MacOS

| USABILITY | | MEDIA | | CONFIGURATION | | SEARCH | |
|---|---------------------------------------|---|------------------------------|---|---|---|---------------------|
|  | Drag and Drop |  | IP Cameras / Encoders / DVRs |  | Events and Rules Engine |  | Smart Motion Search |
|  | Consolidated Notifications |  | RTSP / HTTP Streams |  | User Management/LDAP |  | Keyword Search |
|  | Flex Timeline |  | I/O Devices |  | IP Cameras / Encoders |  | Calendar Search |
|  | Customizable Layouts |  | Web Pages |  | Server Management |  | Time-Slice Search |
|  | Digital Maps |  | Videos |  | I/O Device Management |  | Bookmarks |
|  | Adaptive Scaling |  | Images |  | Storage Management |  | Audit Trail |
|  | Minimum Grid Size on Layouts |  | Secure Export |  | Add Device |  | Smart Search Lists |
|  | Resource Panel |  | Chromium Browser In-Client |  | Custom Watermark over Video | | |
|  | Launch Desktop Client with CLI |  | Native Support for DW® Ai™ |  | Video Wall Failover | | |
|  | Notifications Panel |  | Fisheye Dewarping Precision |  | Independent Desktop Client Updates | | |
|  | Two-Factor Authentication |  | Video Preview Thumbnail |  | Session-Based and Multi-Factor Authentication | | |
|  | OS SSL / TLS for Internet Connections |  | Audio-Video Mapping |  | Restore Previous Session | | |
|  | Client Javascript API |  | Custom Resource Groups |  | ONVIF Profile Selection | | |
|  | Cloud Layouts |  | Web Page Proxy |  | Temporary Users | | |
|  | Remote Log Download |  | Camera Hot Spots | | | | |
| | |  | Maps | | | | |

MAXIMUM # OF GRID ITEMS

64 BIT OS: 64 Items (e.g. 64 live streams)

32 BIT OS: 24 Items (e.g. 24 live streams)

SUPPORTED OPERATING SYSTEMS

WINDOWS



- Windows 11
- Windows Server 2016
- Windows Server 2019
- Windows Server 2022

LINUX



- Ubuntu 18.04 LTS “Bionic Beaver”
- Ubuntu 20.04 LTS: “Focal Fossa”
- Ubuntu 22.04 LTS: “Focal Fossa”

MAC



- macOS 11.0, 11.1, 11.2 “Big Sur”
- macOS 12 “Monterey”
- macOS 13 “Ventura”
- macOS 14 “Sonoma”

HARDWARE REQUIREMENTS

CLOUD CONNECT

HARD DRIVE: HDD

RAM: 2GB

CPU: Quad-Core Intel 7 CPU or higher

GRAPHICS: Intel HD Graphics 3000 w/
Open GL2.1 support

NETWORKING: 1GB NIC

PERFORMANCE SPECS

HARD DRIVE: Performance SSD

RAM: 16 GB RAM

CPU: Intel Core i5

GRAPHICS: NVIDIA GeForce GTX 1050
(Open GL2.1 support is required)

NETWORKING: 1GB NIC

DW SPECTRUM CLIENT APPLICATION



SUPPORTED MEDIA PLAYBACK ON GRID

LIVE STREAMS

CODECS: H.265 H.264 MJPEG

OFFLINE MEDIA

VIDEOS: AVI MKV MP4 MOV TS M2TS MPEG MPG FLV WMV 3GP

IMAGES: JPG PNG GIF BMP TIFF

CONNECTED DEVICES

I/O DEVICES: Status and triggers

SERVERS: Server health monitoring

BROWSER

WEB PAGES: Responsive websites / progressive web apps

VIEWING MODES

MEDIA PLAYER: View, edit, and export offline videos and images

CONNECTED: View, configure, and manage any
DW Spectrum[®] IPVMS SystemVIDEO WALL: Put DW Spectrum[®] Desktop into Video Wall mode to
control remotelySHOWREEL: Fully customizable timed viewing tour of any GRID
media

DW Cloud™ simplifies everything.

The DW Cloud™ service makes connecting to and managing DW Spectrum system(s) simple. Set up in seconds. Connect from anywhere. Share with an unlimited number of users.

Quick setup

1. Create a DW Cloud™ account.
2. Link your system to DW Cloud™.
3. Connect, view and manage video anywhere, anytime.

Browser-based user interface



Manage users


























View live or recorded video

Quickly connect to any system

Connect. View. Manage. Scale.

DW Cloud™ is a public cloud application hosted on Amazon AWS that enables simple remote connectivity, streaming and management of one or an unlimited number of DW Spectrum systems.

SUPPORTED BROWSERS:  chrome  Microsoft Edge  Opera  Firefox  Safari

| CONNECT | VIEW | MANAGE | SCALABILITY / INTEGRATION |
|--|---|---|--|
|  NAT Traversal |  Live Video (adaptive) |  Server Settings |  Unlimited # of Systems |
|  Data Proxy via AWS |  Recorded Video (adaptive) |  User Settings |  Unlimited # of Users |
|  Simple Credentials |  Camera Details |  Cloud Connections |  Unlimited # of Devices |
|  Encrypted Communications |  Keyword Search |  Email Notifications |  Cloud API |
|  Wi / LAN / WAN |  Calendar Search |  Cloud System Merge | |
|  4G / LTE / Data |  Flex Timeline |  Health Monitoring Dashboard | |
| |  Save and Share Bookmarks |  License Management | |
| | |  Camera Settings | |

SCALABILITY

OF CONNECTED SYSTEMS: UNLIMITED

OF USERS: UNLIMITED

DW CLOUD™ SERVICES

CLOUD CONNECT



Connect any DW Spectrum® IPVMS System to DW Cloud™ for simple remote connectivity from anywhere using NAT Traversal and Cloud Data Proxy technology.



Add an unlimited number of users to a single DW Cloud™ system.

Share access to your DW Cloud™ system in seconds using only email addresses.

Create custom roles to simply and quickly assign access to multiple DW Cloud™ connected systems.

DEVELOPER TOOLS

CLOUD API: AVAILABLE UPON REQUEST

DW CLOUD™ BROWSER & DEVICES INTERFACE



DW CLOUD™ FEATURES

CONNECTIVITY

NAT TRAVERSAL: Connect directly to proxied Blackjack® servers

CLOUD DATA PROXY: Connect via AWS cloud proxy service

INTERFACE TABS

SYSTEMS: View connected system tiles

SETTINGS: View users, rename systems, disconnect systems

VIEW: USE DW Cloud™ to view live or recorded video

SECURITY

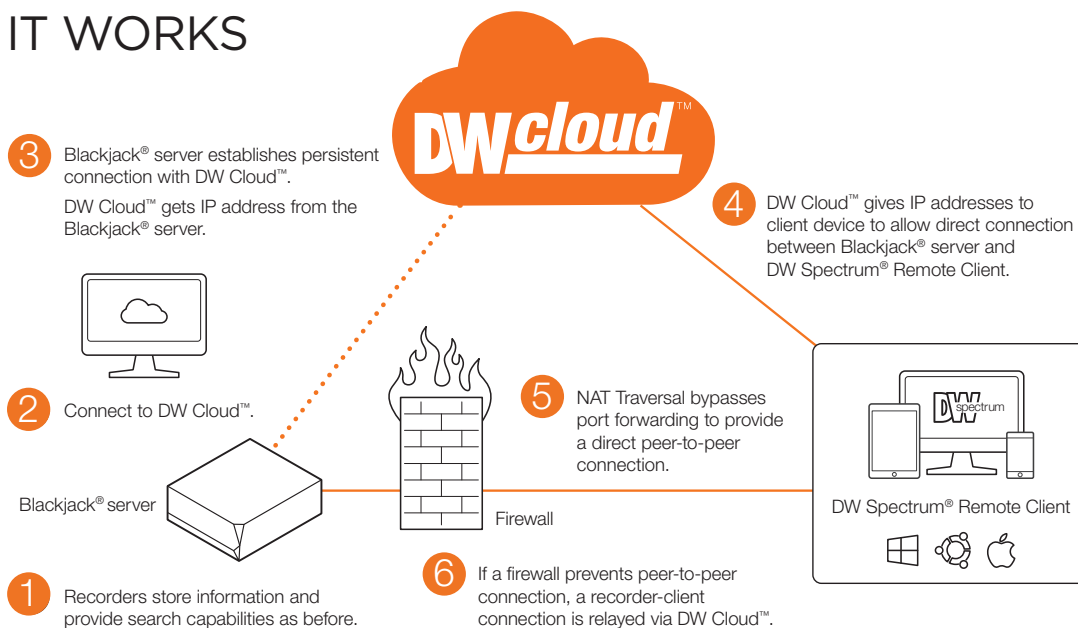
SECURE PASSWORD RECOVERY: Via email

HTTPS: Open SSL, encrypted server/client/cloud connections

EMAIL: (transport layer security)

PASSWORDS: Complex, multi-level hash

HOW IT WORKS



Smartphone or tablet. Smart video.

DW Spectrum Mobile for iOS and Android smartphones and tablets provides fast, dependable mobile access to any DW Spectrum system.



View, playback and capture still images from a surveillance system on your smartphone and tablet.

Connect. View. Search. Control.

DW Spectrum Mobile - with a custom-developed media player - is a low-latency, user-friendly mobile application for iOS and Android devices that allows users to connect to, view, search, and control IP cameras over wifi or data networks.

SUPPORTED OPERATING SYSTEM:



| CONNECT | VIEW | SEARCH | CONTROL |
|-------------|---------------------------|-----------------|-----------------------------|
| WiFi | Live Video (adaptive) | Keyword Search | Fisheye Dewarping |
| Data 4G/LTE | Recorded Video (adaptive) | Calendar Search | Advanced PTZ / Standard PTZ |
| | Layouts | Flex Timeline | Push Notifications |
| | Available Systems | | |

COMPATIBLE DEVICES

SMARTPHONES:

64 Items (e.g. 64 live streams)

iOS 24 Items (e.g. 24 live streams)

SUPPORTED OPERATING SYSTEMS

ANDROID



Android 8
Android 9
Android 10
Android 11
Android 12

iOS



iOS 12
iOS 13
iOS 14
iOS 15



DW SPECTRUM MOBILE



SUPPORTED MEDIA PLAYBACK

STREAMS

CODECS: H.265 H.264 HLS

FEATURES

REMOTE CONNECT: Login using local or DW Cloud™ credentials

LIVE THUMBNAILS: Thumbnails refresh in real-time

KEYWORD SEARCH: Search for cameras or layouts by name

CALENDAR SEARCH: Search by date and time

ADVANCED PTZ: Point, pan, zoom, tilt controls, move to presets

FISHEYE DEWARPING: Dewarp fisheye images

ADAPTIVE SCALING: Hi / low resolution switching transcoding

LAYOUTS: View thumbnails of system layouts

QUICK SYSTEM SWITCH: Quickly switch between multiple DW Spectrum IPVMS systems

DW Spectrum Developer Tools

DW Spectrum's Toolkit for developers includes everything you need to bring your vision to life with APIs and SDKs for a truly customizable solution.

HTTP Server API

An open, comprehensively documented RESTful HTTP Server API. The DW Spectrum API provides the ability to access nearly every feature available in the system's thick client.

Metadata SDK

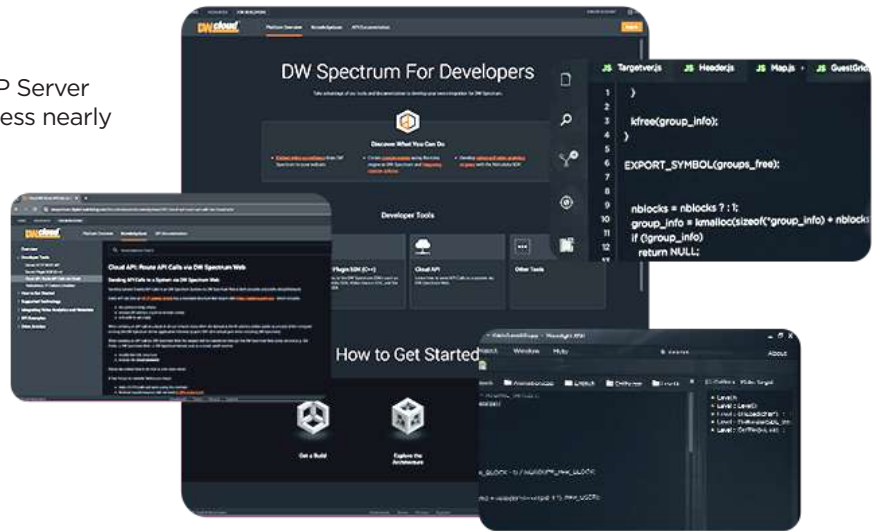
DW Spectrum's Metadata SDK is used to create Plugins of 3rd party applications that can be installed on the DW Spectrum Server.

Video Source SDK

Integrate live and recorded video, alarm, sensor and audio sources. The video SDK enabled the integration of any video source into the DW Spectrum system architecture.

Storage SDK

The DW Spectrum Storage SDK enabled the integration of 3rd party storage solutions, both hardware and software-based.



Technology partners and 3rd party integration

DW Spectrum offers extensive equipment integration, supporting thousands of devices, including cameras, encoders and I/O modules from leading manufacturers. Its refined user interface guarantees seamless surveillance management. And its cross-platform variability also allows users to access and manage surveillance data from anywhere, at any time.



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