

# DW spectrum<sup>®</sup> IPVMS

Complete Scalable Video Management



## Video Management Anywhere, Anytime. Built for Users.<sup>™</sup>

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

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

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

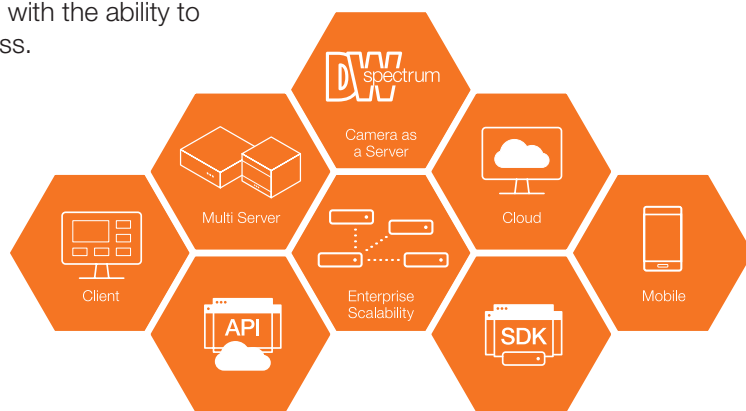
Installs in seconds, configures in minutes. Instantly usable for novices, operators, integrators, or developers.

**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 SDK's, and integrator-friendly tools like a built-in API generator DW Spectrum<sup>®</sup> IPVMS users can quickly integrate any 3rd party device or system.



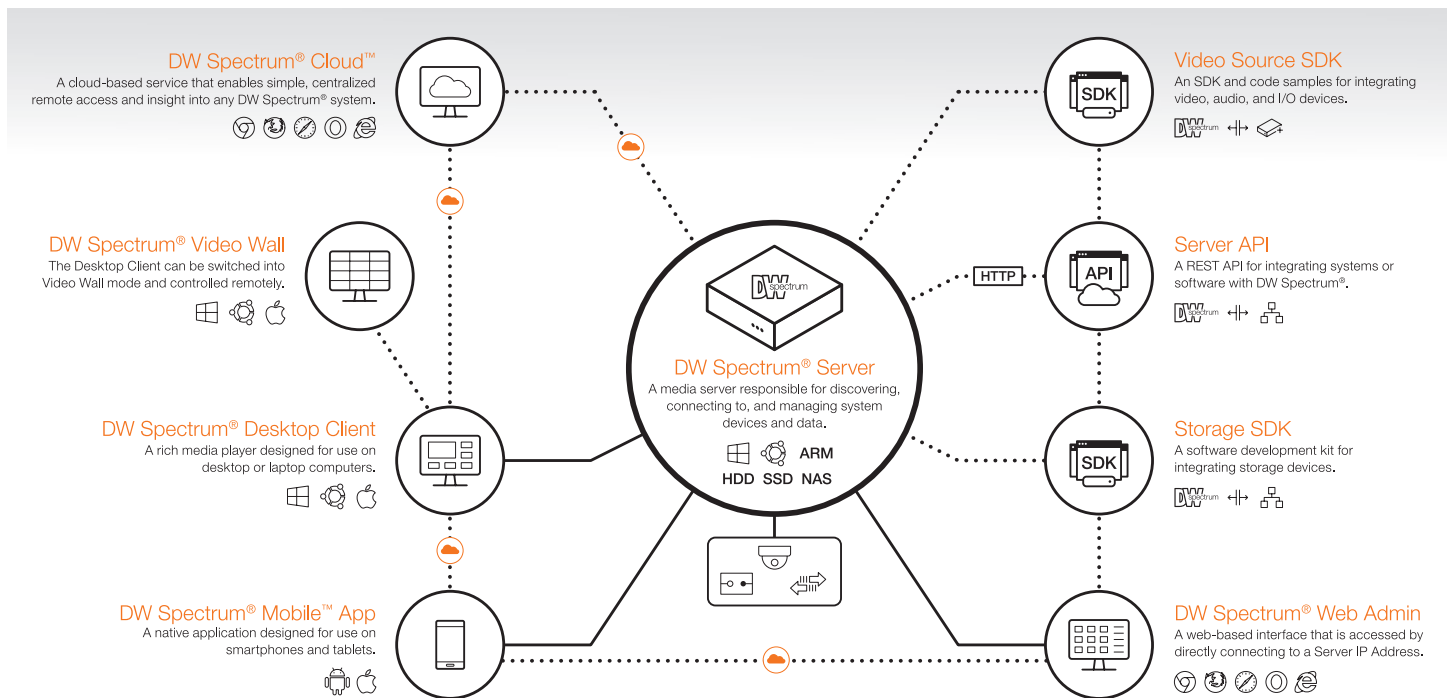
Made in U.S.A. 

DWClarity.com

# Simple. Reliable. Customizable.

DW Spectrum® IPVMS is an endlessly customizable IP Video Management platform that gives users the ability to create tailored networked video solutions for any type of project, for use by anyone, on any device.

## 1 Open architecture / cross platform.



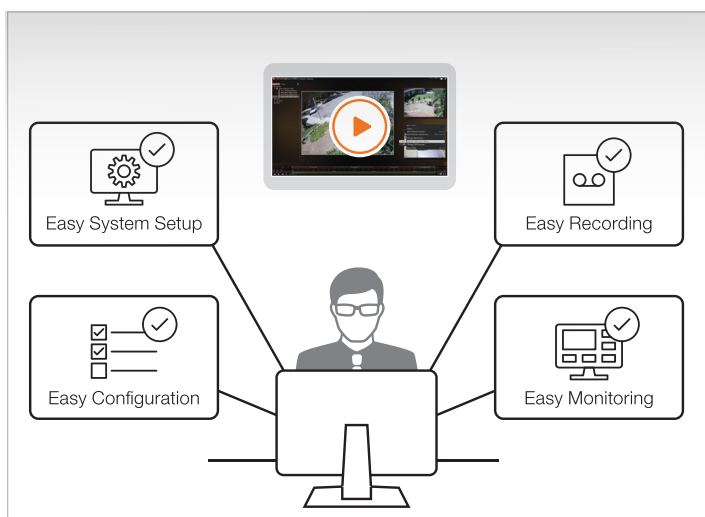
### Open Architecture

- Now with DW Cloud™, connect from anywhere to share access instantly.
- Now with even more device support.
- 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 is compatible with Google Chrome®, Firefox®, Safari® and Internet Explorer®.

## 2 Interface is dramatically easier to use.



### 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

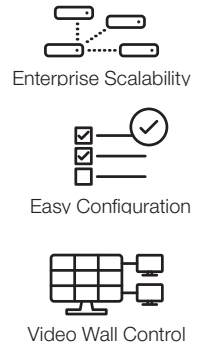
#### Downloading Video

- Multiple Download options
- Storage Backup



### 3 Enterprise features are standard.

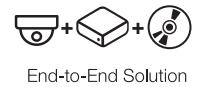
- **Custom User Role Management:** create custom roles and share groups of hardware and layouts
- **Multi-Server and Centralized Management**
- **Health Monitor:** provides real-time insight of camera and server status.
- **Video Storage Analytic:** insight into storage requirements each camera is using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



### 4 Part of a complete end-to-end IP solution.

Although DW Spectrum® IPVMS is open to be deployed on a vast number of solutions. It is also part of DW's complete end-to-end IP solution, With

Blackjack® servers or VMAX® IP Plus™ NVRs and MEGApix® IP Cameras.



### 5 Lifetime upgrades included / no annual agreements.

While other companies require annual maintenance agreements, DW Spectrum® IPVMS system up-

grades are always available free of charge.



### 6 Scalable from one to thousands of devices.







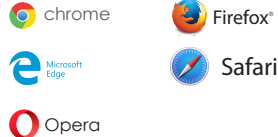

The unified user experience for applications requiring one or thousands of cameras, it is deployed at thousands of locations worldwide, making DW

Spectrum® the industry's fastest growing VMS on the market today.



## You choose your devices.

DW Spectrum® has applications for all major operating systems so our users are not limited by what device or operating system they choose to use on their desktops, mobile devices, rack mount servers, or even low-powered embedded devices.

 Server	 Client	 Cloud	 Mobile
A media server responsible for discovering, connecting to, and managing system devices and data.	A rich media player designed to view and manage a single DW Spectrum® system from a desktop or laptop PC.	A cloud-based service that enables simple, centralized remote access and insight into any DW Spectrum® system.	A mobile app designed for viewing DW Spectrum® system video and events while on-the-go.
<b>SERVER OS SUPPORT:</b>	<b>DESKTOP OS SUPPORT:</b>	<b>SUPPORTED BROWSERS:</b>	<b>MOBILE OS SUPPORT:</b>
			



Server

# Discover. Manage. View. Integrate.

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

## Blackjack®

Servers Powered by DW Spectrum® IPVMS



Designed and Commissioned in the U.S.A.



Pre-loaded 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
	Events & Rules Engine	Log Files	Storage SDK
	Failover	Audit Trail	Video Source SDK
	Transcoding	Storage Status	Any Device or System



### SCALABILITY

# OF CLIENTS PER SERVER: THOUSANDS

# OF CLIENTS PER SYSTEM: UNLIMITED

# OF STREAMS PER SERVER: 128

# OF SERVERS IN A SERVER SYSTEM: 50 \*

\* 50 is a recommended maximum. Depends on server configuration and network environment.

Contact support for more info.

### SUPPORTED OPERATING SYSTEMS

#### WINDOWS



Windows  
Windows 7  
Windows 8  
Windows 8.1  
Windows 10  
Windows Server 2008  
Windows Server 2008 R2  
Windows Server 2012  
Windows Server 2012 R2  
Windows 10 Enterprise

#### LINUX



Ubuntu Linux 14.04 LTS  
Ubuntu Linux 16.04 LTS

### BLACKJACK™ SERVER WEB 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® IPVMS 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

### OTHER

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  
STORAGE SDK

NAS: ISCSI

# 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® IPVMS 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 & Drop	 IP Cameras / Encoders / DVRs	 Events & Rules Engine	 Smart Motion Search
 Consolidated Notifications	 RTSP / HTTP Streams	 User Management	 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

**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 7  
Windows 8  
Windows 8.1  
Windows 10  
Windows Server 2008  
Windows Server 2008 R2  
Windows Server 2012  
Windows Server 2012 R2  
Windows 10 Enterprise

**LINUX**



Ubuntu Linux 14.04 LTS  
Ubuntu Linux 16.04 LTS

**MAC**



OSX 10.11  
OSX 10.12

**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 System

**VIDEOWALL:** Put DW Spectrum® Desktop into VideoWall mode to control remotely

**SHOWREEL:** Fully customizable timed viewing tour of any GRID media

# DW Cloud™ Simplifies Everything.

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

## Quick setup

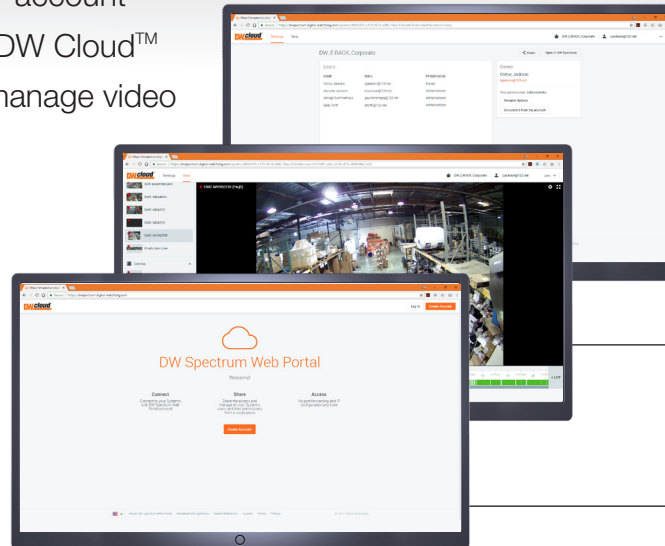
1. Create a DW Cloud™ account
2. Link your system to DW Cloud™
3. Connect, view and manage video anywhere, anytime.

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® IPVMS Systems.

SUPPORTED BROWSERS:  chrome  Microsoft Edge  Opera  Firefox®  Safari

CONNECT	VIEW	MANAGE	SCALABILITY / INTEGRATION
 NAT Traversal	 Live Video (adaptive)	 System Settings	 Unlimited # of Systems
 Data Proxy via AWS	 Recorded Video (adaptive)	 User Permissions	 Unlimited # of Users
 Simple Credentials	 Camera Details	 Cloud Connections	 Unlimited # of Devices
 Encrypted Communications	 Keyword Search	 Email Notifications	 Cloud API
 Wifi / LAN / WAN	 Calendar Search		
 4G / LTE / Data	 Flex Timeline		



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.



USER MANAGEMENT

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

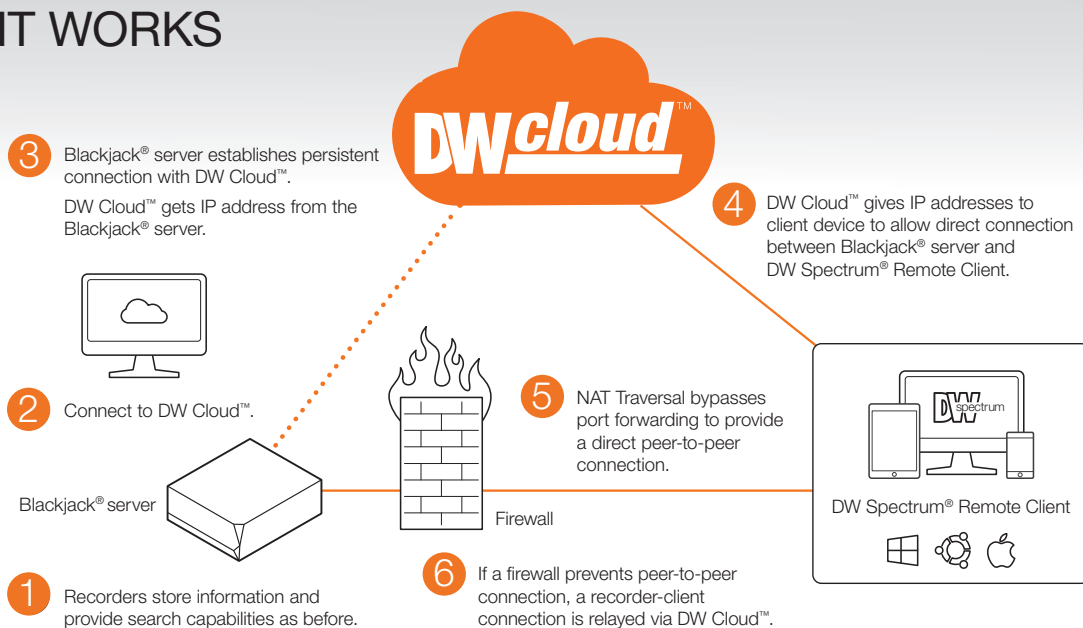
**SECURE PASSWORD RECOVERY:** Via e-mail

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

**EMAIL:** (transport layer security)

**PASSWORDS:** Complex, multi-level hash

HOW IT WORKS



# Smart phone or tablet. Smart video.

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
















View, playback and capture still images from a surveillance system on your smart phone 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	 2-Way Audio
	 Available Systems		 Soft Trigger



COMPATIBLE DEVICES

SMART PHONES:

64 Items (e.g. 64 live streams)

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

SUPPORTED OPERATING SYSTEMS

ANDROID



Jelly Bean	4.1 - 4.3.1
Kit-Kat	4.4 - 4.4.4
Lollipop	5.0 - 5.1.1
Marshmallow	6.0 - 6.0.1
Nougat	7.0 - 7.1.2
Oreo	8.0

iOS



iOS 5	5-0 - 5.1.1
iOS 6	6.0 - 6.1.6
iOS 7	7.0 - 7.1.2
iOS 8	8.0 - 8.4.2
iOS 9	9.0 - 9.3.5
iOS 10	10.0 - 10.3.3
iOS 11	11.0



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

Support and Resources to Ensure Our Success.



## Exceptional Pricing and Service for Our Best Customers.

The Digital Watchdog® Partner Integrator Program is dedicated to those who sell the complete line of DW® video surveillance solutions.

## What's in it for me?

With your annual purchase commitment, you receive:

- Partner Pricing Program
- Project Registration Program
- Training and Certification
- Demo Equipment
- Product Roadmap Meetings
- Co-Marketing Collateral (MDF)
- Extended Warranty
- Enhanced Tech Support Experience

See Program details for qualifications and inclusions at:  
[portal.digital-watchdog.com](http://portal.digital-watchdog.com).

### Contact Us:



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Cerritos, California USA 90703  
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Hours: 8:30am – 5:30pm EST.

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 Fax ..... 1.813.888.9262  
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 Customer Service (International) ..... 1.813.888.9555  
 Customer Service (French)..... 1.514.360.1309  
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 Tech Support Email ..... DW-Tech@dwcc.tv