

### MA-SERIES CLOUD-MANAGED HYBRID NVR

#### General Information:

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#### INTRODUCTION

The OpenEye MA-Series (OE-MA) Hybrid NVR is the latest M-Series offering designed to provide customers an affordable, plug-n-play, HD analog solution in a compact 1U chassis that is equally suited for single recorder or multi-location installations. Available with a built-in 8 or 16 channel HD Analog encoder, the MA-Series Hybrid NVR supports IP, HD-TVI/AHD and CVBS (traditional analog) cameras, features dual Intel® NICs, relay/sensor connections and 4K video output. The MA-Series recorder supports up to 24TB of internal storage which provides the flexibility needed to support the varying storage requirements of both HD Analog and IP recording. A solid-state OS drive is included standard to improve reliability and provide faster boot times.



#### VALUE PROPOSITION

The OpenEye MA-Series Hybrid NVR enables users to migrate existing analog deployments to OpenEye's powerful web services platform, allowing them to take advantage of features like centralized management, single sign on, health monitoring, alert notifications, and online clip sharing.

The MA expands the reach of OWS by giving users a migration path to connect existing analog deployments to OWS by only replacing the head end and not requiring a complete transition to IP. Users can retrofit their existing analog installation and upgrade cameras to HD without the expense of replacing existing Coax cabling, experiencing significant down time, or sacrificing the ability to add IP cameras over time.

1. **Retrofit** - Affordable means of migrating to OWS without having to replace existing analog infrastructure
2. **Competitively Priced** – allows competing in project bids and quotes against low-end incumbents
3. **Strong Differentiation** – US developed software, cyber secure, OWS enabled functionality
4. **Camera Compatibility** – Provides support for HD analog (HD-TVI, AHD @ 720, 1080p+), Traditional analog (CVBS @ CIF, D1, 960) and IP cameras.

## CUSTOMER NEED, FEATURE FUNCTION, VALUE

Customer Need	Feature / Function	MA-Series Value
<ul style="list-style-type: none"> <li>• Wants HD video and OWS in place of an existing analog installation</li> </ul>	<ul style="list-style-type: none"> <li>• HD Analog capabilities</li> </ul>	<ul style="list-style-type: none"> <li>• HD over coax cable to eliminate labor and cost of replacing it with Cat5 cable</li> <li>• OWS without requirement of using an IP system and IP infrastructure</li> <li>• Allows use of OWS in retrofit installs</li> </ul>
<ul style="list-style-type: none"> <li>• Future Proof</li> </ul>	<ul style="list-style-type: none"> <li>• Hybrid Capabilities</li> </ul>	<ul style="list-style-type: none"> <li>• Allows reuse of analog infrastructure without preventing future upgrade to HD analog or IP video</li> </ul>
<ul style="list-style-type: none"> <li>• Affordability</li> </ul>	<ul style="list-style-type: none"> <li>• The MA was specifically designed to be the first ever Hybrid recorder in the OWS/Apex product lineup. Marketed towards entry level affordability</li> </ul>	<ul style="list-style-type: none"> <li>• Lowest priced recorder in OWS lineup</li> <li>• Ability to reuse analog infrastructure further reduces cost of install in retrofits</li> </ul>
<ul style="list-style-type: none"> <li>• Ease of Use</li> </ul>	<ul style="list-style-type: none"> <li>• Online user management</li> <li>• Online export and sharing</li> <li>• Remote software updates</li> <li>• Single sign-on</li> </ul>	<ul style="list-style-type: none"> <li>• Improves operational efficiencies and drives value across an entire organization by simplifying user management and IT support.</li> </ul>
<ul style="list-style-type: none"> <li>• Cyber Secure</li> </ul>	<ul style="list-style-type: none"> <li>• Multi-factor authentication</li> <li>• Centralized role-based user management</li> <li>• Transport layer security</li> <li>• No inbound ports</li> </ul>	<ul style="list-style-type: none"> <li>• OpenEye Web Services uses state-of-the-art data centers and industry-leading technology providers to shield user data from unwanted access and protects you against data loss or down time.</li> </ul>
<ul style="list-style-type: none"> <li>• System Reliability</li> </ul>	<ul style="list-style-type: none"> <li>• A Standard OS SSD boot drive</li> </ul>	<ul style="list-style-type: none"> <li>• Allows for a significant decrease in boot time and also provides continued operation and error reporting in the event of a storage drive failure.</li> </ul>

## COMPARISON CHART

### OE-MA / E-Series / OE-SHM / OE-ME Comparison

Features	OE-MA	E-Series	OE-SHM	OE-ME RevB
OWS Enabled	Yes	No	No	Yes
Maximum Storage Drives	2	2	2	2
Maximum Storage Capacity	24TB	4TB	8TB	20TB
SSD Boot Drive	Standard	N/A	N/A	Standard
Recording Rate	100 Mbps	40Mbps	90Mbps	100 Mbps
HD-TVI/AHD support	Yes	No	No	No
Max Analog channels	Up to 16	Up to 16	Up to 16	N/A
Max total channels	24 (Analog + IP)	0	Up to 16	Up to 24
PTZ support	UTC (Up the coax)	RS-485	RS-485	IP Cameras
PoE+ Ports	No	No	No	8 or 16
Looping Outputs	No	Yes	Yes	N/A
Network Ports	2 x GbE	1 x GbE	2 x GbE	2 x GbE
Maximum Display Resolution	4K	1080P	1080P	4K
Monitor Outputs	HDMI, VGA	HDMI, VGA	HDMI, VGA	HDMI, VGA
CPU	Intel Celeron Quad Core	ARM Processor	Intel i3	Intel Celeron Quad Core
Base System Memory	4GB	1GB	4GB	4GB
Command Station	Yes	No (Radius)	No (Radius)	Yes
Software License	Embark / Traverse	Radius Enabled	Radius Enabled	Embark / Traverse
Operating System	Linux	Linux	Windows	Linux
Maximum Console Live View	16 Channels	16 Channels	4 Channels	16 Channels
Max Global Search	16 Channels	16 Channels	16 Channels	16 Channels
Max Client-Side Live View	16 Channels	16 Channels	16 Channels	16 Channels
Secondary Spot Monitor	Software	Hardware	Hardware	Software
Rack Mountable	Yes (Kit included)	No	No	Yes (Kit included)

## SPECIFICATIONS

	OE-MAX08	OE-MAX16
Max Analog Channels	8	16
Max Total Channels	24 (Analog + IP)	
Max Analog Recording Resolution	Up to 3MP	
Analog Video Technologies Supported	HD-TVI (up to v3.0) / AHD (up to v2.0) / CVBS	
Max IPS Per Channel	30 IPS	
Recording Rate	Up to 100Mbps	
Maximum Display Resolution	4K (HDMI) / 1080P (VGA)	
Video Compression	H264+	
Video Inputs	8 Channel (BNC)	
Audio Outputs	Line In / Line Out	16 Channel (BNC)
Video Outputs	1 x HDMI / 1 x VGA	
Alarm Sensor Inputs	4 x Form A contacts	
Digital Relay Outputs	2 x Form A contacts	
USB Ports	Front: 2 x USB 2.0 Rear: 2 x USB 2.0 / 2 x USB 3.0	
Maximum Console Live View	16 Channels	
Maximum Client-Side Live View	16 Channels	
Maximum Search	16 Channels	
Motion Detection	Server Side (Adjustable Sensitivity, Custom Grid)	
Remote Operation	Command Station (desktop VMS client) / Thin (web) Client / Mobile Apps	
User Management	Local or web based user permissions and account management	
Recording Mode	Continuous / Motion / Continuous + Motion	
Playback Search	Multi-channel playback (1, 4, 9) / Calendar / Timeline / Thumbnail	
Clip Backup	Cloud / USB	
Digital Signature Support	MP4	
Web Connect	Yes	
Operating System	Linux	
Network	Dual GbE NICs	
PTZ Control	Up the Coax (UTC)	
Keyboard and mouse	Included	
DVD Drive	N/A	
Power Supply	290W (100V-240V Auto Switching)	
Max power Consumption	195W	
Operating Temperature	Max Temperature: 104 °F (40 °C)	
OS Drive Configuration	eMMC	
Storage Configuration	Up to 24TB	
Dimensions	W: 17.25 x H: 1.75 x D: 13.5in (348 x 44 x 343mm)	
Rack Mount	Rack mount installation kit included	
Certification	UL	
Warranty	3 year, 1 year advanced replacement	

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## PART NUMBER BREAKDOWN

PRODUCT	DESCRIPTION		
OE-MAX08xx	<b>OE-MAXXXXXX</b>		
OE-MAX16xx	<b>OE-MAX</b>	<b>XX</b>	<b>XX</b>
	↓	↓	↓
	MA-Series	Onboard Encoder Ports (08 or 16)	TB storage configuration

### Rack Mount Kit

A complete rack mounting installation kit is included standard with every OE-MA order.

### Recording Licenses and Upgrades

**OE-ASE1** - Apex Embark 1 Ch Rec License

**OE-AST1** - Apex Traverse 1 Ch Rec License

**OE-ASE1-EXP** - Apex Embark 1 Ch Exp License

**OE-AST1-EXP** - Apex Traverse 1 Ch Exp License

### OWS Subscription Extensions

**OE-OWS1Y** - 1 Year OWS 1CH Access License

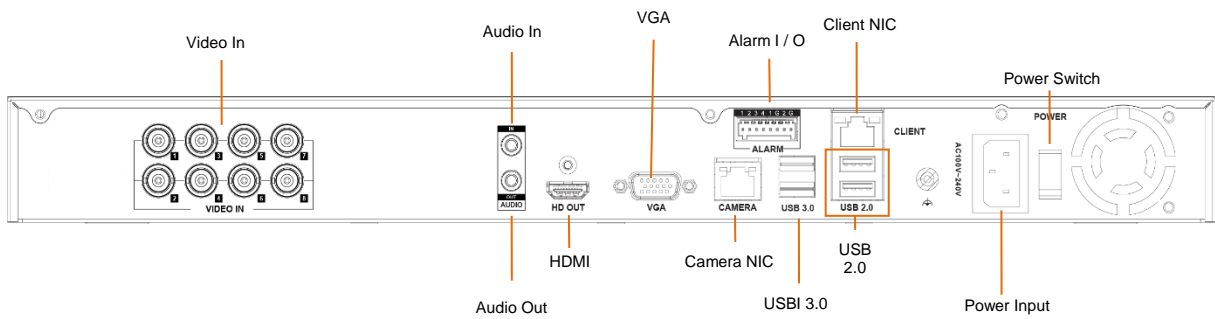
**OE-OWS4Y** - 4 Years OWS 1CH Access License

## LINE DRAWINGS

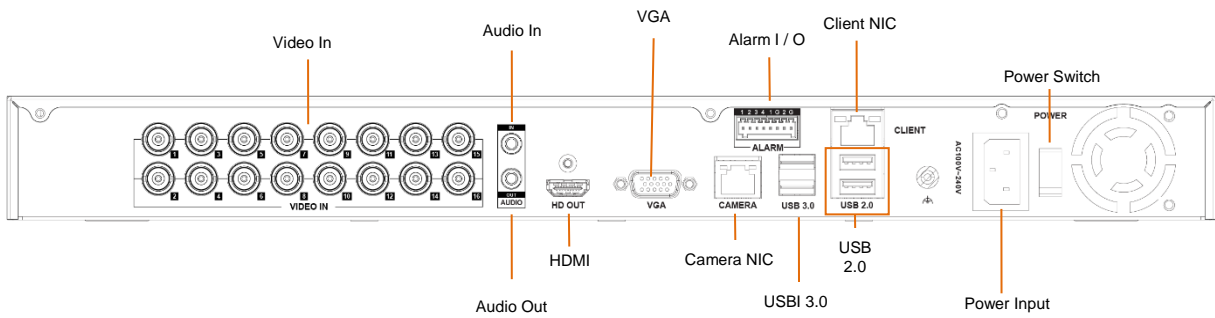
### OE-MA Front Panel



### OE-MA 8CH Rear Panel



### OE-MA 16CH Rear Panel



## ADDITIONAL RESOURCES

**Product page:**

<https://www.openeye.net/products/recorders/oe-ma>

**Specifications Sheet:**

<https://www.openeye.net/documents/ma-series-spec-sheet>

**Hardware Manual:** <https://www.openeye.net/documents/ma-series-hardware-manual>

**Quick Start Guide:** <https://www.openeye.net/documents/ma-series-quick-start-guide>

**Apex 1.3 Manual**

<https://www.openeye.net/documents/ows-apex-console-thin-client-software-manual>

**Supporting Products:**

<https://www.openeye.net/products/cameras/oe-c3422-wr>

<https://www.openeye.net/products/cameras/oe-c3442-awr>