OE-MB A&E SPECIFICATIONS  
OPENEYE CLOUD-MANAGED HYBRID APPLIANCE  
[www.openeye.net](http://www.openeye.net)

**DIVISION 28 -** ELECTRONIC SAFETY AND SECURITY

**Section 28 00 00** Electronic Safety and Security

**Section 28 20 00** Video Surveillance

**Section 28 05 19** Storage Appliances for Electronic Safety and Security

**Section 28 23 00** Video Management System

**PART 1 GENERAL**

* 1. **SUMMARY OF REQUIRMENTS**
     + 1. **OE-MB Cloud-managed Hybrid Appliance**
          1. A 40TB cloud-managed hybrid appliance
       2. **Related Requirements**
          1. 28 05 00 Common Work Results for Electronic Safety and Security
          2. 28 05 25 Cloud Based Storage for Electronic Safety and Security
          3. 28 05 19.11 Digital Video Recorders
          4. 28 05 19.13 Hybrid Digital Video Recorders
          5. 28 05 19.15 Network Video Recorders
          6. 28 23 13 Video Management System Interfaces
  2. **REFERENCES**
     + 1. **Abbreviations**
          1. Manufacturer’s installation and operations manuals in digital or printed form.

DHCP - Dynamic Host Configuration Protocol

DNS - Domain Name Server

HTTPS - Secure HTTP

IP - Internet Protocol

NIC - Network Interface Controller

NTP - Network Time Protocol over Ethernet

NVR - Network Video Recorder

OSD - On-screen Display

PoE - Power over Ethernet

PTZ - Pan Tilt Zoom

RTSP - Real-Time Streaming Protocol

SD Card - Secure Digital Flash Memory Card

TCP - Transmission Control Protocol

VMS - Video Management System

FF - Fast Forward

FR - Fast Reverse

LAN - Local Area Network

WAN - Wide Area Network

* 1. **CERTIFICATIONS, STANDARDS, AND RATINGS**
     + 1. Reference Standards
          1. Networking

IEEE – 802.3 Ethernet Standards

* + - * 1. Video

ITU-T Recommendation H.264

* 1. **SUBMITTALS**
     + 1. **Product Data**

1. Provide manufacturer’s datasheets in printed or electronic form.
2. Provide manufacturer’s installation and operating manuals/guides.
3. Provide manufacturer’s warranty statement.
   1. **QUALIFICATIONS**
      * 1. **Manufacturer**
           1. Company specializing in manufacturing products with at least ten years of experience.
        2. **Supplier**
           1. Authorized distributor of specified manufacturer with at least five years of experience.
        3. **Installer**
           1. Authorized installer of specified manufacturer with at least 5 years of experience.
   2. **DELIVERY, STORAGE AND HANDLING**
4. **Delivery**
   1. Deliver materials in original, unopened and undamaged packaging in accordance with manufacturer’s instructions.
5. **Storage**
6. Store and guard materials from environmental and temperature conditions in accordance with manufacturer’s instructions.
7. **Handling**
8. Handle and operate products and systems in accordance with manufacturer’s instructions.
   1. **WARRANTY**
      * 1. **Warranty Period**
           1. The manufacturer shall warrant appliance for a period of 3 years with the 1st year including advance replacement service.
   2. **CERTIFICATIONS**
      1. **Certification Types**
         1. CE
         2. FCC
         3. UL
         4. cUL
   3. **TECH SUPPORT**
      1. **Support**
         1. Technical support shall be based in North America
         2. Technical support shall be via email or toll-free phone number.
         3. Technical support shall be available weekdays from 6 a.m. to 6 p.m. EST.

PART 2 PRODUCT

* 1. **MANUFACTURER**
     1. **Manufacturer**
        1. OpenEye

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* + 1. **Product**
       1. OE-MB Cloud-managed Hybrid Appliance
    2. **Product Description**
       1. A 40TB cloud-managed hybrid appliance in (black) housing supporting up to 24 channels of video (with up to 16 BNC connections).
  1. **PRODUCT DESCRIPTION**

1. **General**
   1. All equipment and materials used shall be standard components, regularly manufactured, regularly utilized in the manufacturer’s system.
   2. All systems and components shall have been thoroughly tested and proven in actual use.
   3. All systems and components shall be provided with the availability of a toll-free technical support phone number from the manufacturer. The phone number shall allow for immediate technical assistance for the dealer/installer at no charge.
   4. All systems and components shall be provided with an explicit manufacturer warranty.
2. **Description**
   1. Appliance shall offer remote network connectivity and management through a centralized cloud portal that governs video client access and user permissions.
   2. Appliance shall offer a GUI that incorporates video display areas, toolbars, control palettes, and device lists.
   3. Appliance shall support exporting of video clips with audio.
   4. Appliance shall employ a high-profile H.264 compression algorithm in the video digitizing scheme. Network IP cameras shall be the primary video input devices.
   5. Appliance shall provide full digital video surveillance over a standard 100Base-T network.
   6. Appliance shall continually capture digital video streams. Each stream of video and audio data shall have the capability of being recorded to local storage media or transmitted to an independent recording device/service.
   7. Video in live or search view shall have selectable digital zoom.
   8. Appliance shall have the ability to backup important video to an external cloud-managed location, or a USB device. The appliance must not stop recording during the backup process.
   9. Appliance shall be capable of performing video analytics for the detection of persons and vehicles along with generating supporting attribute, bounding box, and sub-region metadata, stored with recorded video and transmitted to a central cloud database. Appliance analytic settings must be customizable with ability to create multiple analytic areas and independently adjust sensitivity or other parameters.
   10. Appliance shall support analytics to include motion detection, person detection, vehicle detection, line crossing, and loitering and intrusion detection.
   11. Appliance shall support searching of recorded video from motion events, analytic events, sensor events, date/time, and thumbnail images.
   12. Appliance shall also have full LAN, WAN and Internet connection capability. The appliance will require a broadband internet connection of a minimum 5 Mbps using either a static or dynamic type IP address. The appliance supports TCP/IP and DHCP protocol.
   13. Appliance shall support user selectable resolution, frame rate, bit rate, and GOP size set from within the GUI of the IP cameras.
   14. Operation of the appliance shall be facilitated using a web browser that can be Google Chrome, Apple Safari, Opera, Mozilla Firefox, or Edge.
   15. Appliance shall offer a GUI capable of recorder configuration and operation of the system shall be facilitated using a monitoring screen.
   16. Appliance shall use a HDMI/VGA monitor output for video display.
   17. Appliance shall incorporate an embedded operating system using a proprietary software application for control, management and display.
   18. The appliance shall support alarm in and relay out functions.
3. **Electrical Specification**
   * 1. Power Requirement: 100 – 240 VAC
     2. Max Power Consumption: 73W | Nominal: 59W
4. **Environmental Specification**
   * 1. Maximum Operating Temperature: 140°F (60°C)
5. **Hardware Specification**
   * 1. Dimensions: W: 17.3 x H: 1.9 x D: 13.6in (440 x 49 x 344mm)
     2. Weight: 9.5lbs (4.3kg)
6. **Mechanical Specification**
   1. System
7. Operating System: Linux
8. Processor: Intel N97
   1. Video
      1. Inputs: 16 BNC Connections
      2. Recording Rate: 150Mbps
      3. Outputs: 1 x HDMI, 1 x VGA
      4. Supported Video Input:
         1. HD-TVI: 8MP, 5MP, 4MP, 3MP, 2MP, 1MP
         2. AHD: 5MP, 4MP, 2MP, 1MP
         3. HD-CVI: 4MP, 2MP, 1MP
         4. CVBS: PAL, NTSC
      5. Encoding: H.264
      6. Resolutions:
         1. Primary Stream: 8MP @8FPS | 5MP @12FPS | 4MP @15FPS | 3MP @18FPS | 2MP @30FPS
         2. Secondary Stream: WD1, 4CIF, CIF, 30FPS
      7. Frame Rate: 30FPS
   2. Connections:
      1. USB:
         1. Front: x2 USB 2.0 Ports
         2. Rear: x2 USB 3.0 and x2 USB 2.0
      2. Digital Relay Outputs: 2x Form A Contacts
      3. Alarm Sensor Inputs: 4x Form A Contacts
      4. Client Network: Intel GbE Network Port
      5. Camera Network: Intel GbE Network Port
   3. Network
      1. Two 10/100/1000 RJ-45 Network Ports
      2. Protocol: IPv4, IPv6
   4. PTZ
      1. IP Protocol
   5. Remote Surveillance
      1. Control System: OpenEye Web Services
      2. Mobile Devices: iOS, Android
   6. Onboard Storage: 40TB
   7. External Storage: N/A

**PART 3 EXECUTION**

* 1. EXAMINATION

1. Device shall be inspected for physical and cosmetic defects.
2. Package box shall include device, USB Mouse, Power Cord, and Rack Mount Ears
   1. PREPARATION
3. ESD-sensitive parts shall be properly protected against static buildup through the use of static shielding material.
4. Package box shall contain adequate padding to prevent damage to device and parts during shipping.
   1. INSTALLATION
5. Device shall be installed in accordance with the manufacturers’ installation guide provided.
6. Device shall be installed by qualified service professionals.
7. Device shall be installed in accordance with the National Electric Code or applicable local codes.
8. Device shall be installed in locations which adequately supports the device’s environmental and electrical requirements.
   1. FIELD QUALITY CONTROL
9. Test for proper communication between device and supporting devices.
10. Test for proper operation of device’s system software and related software programs.
11. Determine and report all problems to the manufacturers’ customer service representatives.
    1. ADJUSTING
12. Make all necessary adjustments to the device and supporting devices to ensure the proper operation of the device.
13. Make all necessary adjustments to the devices to satisfy end-user requirements.
    1. DEMONSTRATION AND TRAINING
14. Perform final inspection to validate and ensure proper functioning of device.

- END OF SECTION -

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