

ODISHA TRANSMISSION CORPORATION LIMITED



## **TECHNICAL SPECIFICATION**

**FOR**

**CCTV CAMERA (VIDEO MANAGEMENT SYSTEM)**

## **PROPOSED SPECIFICATIONS**

### **VIDEO MANAGEMENT SYSTEM**

#### **1. General Description**

The Video Management System (VMS) shall be a Microsoft Windows-based video management and surveillance system consisting of two primary components, as follows:

1. An IP video management system. This application shall:
  - a. Maintain the database of cameras and recording devices and to provide a web-based administrative portal to manage the video surveillance system
  - b. Route video traffic to users as requested and appropriate
  - c. Record and store video from resources on the network.
2. A client presentation application to allow users to view and manage live and recorded video.

#### **2. IP Video Management System Description**

i. The Video Management System (VMS) shall be a Microsoft Windows-based video management and surveillance system consisting in a single server performing the following functions:

1. Allow users to define users and assign sets of permissions (known as roles) to each user.
2. Record and store video per user-defined retention settings for up to 20 cameras per server.
3. Serve live and recorded video to clients on demand

ii. The IP video management system shall record video and audio streams from IP cameras and video encoders on the network.

1. Video: H.264 in High, Main, or Base Profile streams from both standard resolution and megapixel cameras

iii. The system shall support recording schedules, including the ability to record based on motion, analytic, and alarm events.

iv. The IP video management system shall be capable of continuous scheduled alarm/event and motion recording. Pre- and post- alarm recording shall also be available and shall be fully programmable on a per channel basis.

v. The IP video management system shall have the ability to record and playback audio streams along with associated video.

vi. The IP Video Management System shall support recording of primary or secondary streams.

vii. The IP Video Management System shall support video bookmarking, such that users can identify and recall important moments in recorded video.

viii. The IP video management system shall allow the administrator to set minimum and maximum retention periods for recorded video.

ix. The IP video management system shall support network health and monitoring utilizing third-party SNMP monitoring tools.

- x. The IP video management system shall indicate system performance and operation status utilizing a variety of reports.
- xi. The system shall be configurable remotely or over a network.
- xii. The system shall discover both OEM and 3rd-party cameras on the network.
- xiii. The system shall allow users to manually add cameras and devices by IP address.
- xiv. The system shall allow users with sufficient rights to control cameras (pan, tilt, and/or zoom).
- xv. The system shall support aggregation by a higher-level system, tying multiple VMS servers together in a single, unified environment.
- xvi. The system shall support third-party cameras using ONVIF profiles S and G or native drivers.
- xvii. The IP VMS shall support Lightweight Directory Access Protocol (LDAP) to authenticate users.
- xviii. The IP video management system shall allow archival of video data to external network locations or NAS devices over a network connection. The archival schedule shall be either automatic at user-defined intervals or manually executed.
- xix. The video management system shall be available as a hardware server with capacity to record 20 cameras at up to 200mbps recording throughput.
- xx. The video management system shall be available as a software product that can be installed on COTS hardware.
- xxi. The server shall support semantic grouping and organization of cameras/devices into groups using “tags”.
- xxii. The system shall allow users to export video on request; exported video shall be stored locally on the server or on another network location selected by the administrator.
- xxiii. The system shall support aggregation by a higher-level environment, allowing the IP video management system to belong to a confederation of servers.
- xxiv. Specifications / Minimum System Requirements:
  - 1. Processor: Intel Xeon E3-1220 v5
  - 2. Operating System: Microsoft Windows 10 IoT Enterprise 64-bit (LTSC)
  - 3. RAM: 8 GB
  - 4. SSD Storage: 120 GB
  - 5. HDD: Up to 12 TB (Minimum 3 Slots)
    - a. RAID Level: RAID 5 / JBOD
  - 6. Video
    - a. Outputs:
      - i. VGA
  - 7. USB Ports:
    - a. USB 2.0: 2x Front; 1x Rear
    - b. USB 3.0: 1x Rear

8. Networking: 2x Gigabit Ethernet (1000Base-T) Ports  
9. Throughput 200 Mbps

### **30X, 2Mpx High speed PTZ Dome Camera**

<b>Sr. No</b>	<b>Specification</b>	<b>Parameter</b>	<b>Compliance</b>	<b>Remarks</b>
1	Image sensor	1/3-inch CMOS Sensor		
2	Resolution	1920 X 1080		
3	Frame per Second	60 FPS		
4	Dynamic Range	100 dB or better		
5	Signal to Noise Ratio	>45 dB		
6	Minimum Illumination	Color 0.07 lux ; Mono 0.02 lux		
7	IR Illumination	150 Meter or better		
8	Lens	4.3 mm (wide) ~ 129.0 mm (tele)		
9	Optical Zoom	30X		
10	Digital Zoom	32x		
11	Horizontal Angle of View	58.9° (wide) ~ 2.11° (tele)		
12	Iris Control Auto	iris		
13	Back Light Compensation	Yes		
14	Digital Image Stabilization	yes		
15	Active Noise Filtering	3D Noise Filtering		
16	Presets	256 preset		
17	Tours	16		
18	Window Blanks	16		
19	Preset Accuracy	±0.1°		
20	Pan & Tilt Speed	Up to 300° per second/Up to 145° per second		
21	Vertical Tilt	+15° to -90° degrees		
22	Video Streams	Up to 3 simultaneous streams		
23	Audio Input/output	Yes		
24	Supported Protocols:	TCP/IP, UDP/IP (Unicast, Multicast IGMP), UPnP, DNS, DHCP, RTP, RTSP, NTP, IPv4, IPv6, SNMP v2c/v3, QoS, HTTP, HTTPS, SSH, SSL, SMTP, FTP, and 802.1x (EAP)		
25	Local Storage	Up to 2TB storage card		
26	Analytics Motion	Detection and Camera Sabotage		
27	Pan Movement	360° continuous pan rotation		
28	Alarms	2 X inputs and 2 X relay output		
29	Input Power	802.3bt, 24 VAC and 48 VDC		
31	Operating Humidity	0 to 90% RH (condensing)		
32	Environmental Protection	Ingress for Water & Dust - IP66 or higher		
33	Certificates	CE & FCC & UL cUL		
34	ONVIF Compliant ONVIF	Profile S and Profile G conformant		