Agenda

• Key Benefits

• Camera Details

• Technical Specifications
3-Dimensional Benefits of Matrix Video Surveillance

- Better Reliability
- Greater Visibility & Control
- Enhanced Security
Matrix SATATYA Key Benefits

- Better Image Quality
- Bandwidth and Storage Optimization
- Intelligent Video Analytics
Better Image Quality

Exceptional Low Light Images  Consistence Performance  Greater Coverage
Low Light Performance

- Exceptional Performance during Challenging Lighting Conditions
- Color Images even at 0.01Lux
Technology

- Powered by Sony STARVIS Sensors with EXMOR Technology
- Back-illuminated Sensor with No Internal Reflection, Hence Reduced Noise
- Higher Photon Absorption Capacity - Exceptional Low Light Performance
Consistent Performance

- Smartly Varies Difference in Light Levels in an Image
- Rectifies Over-exposed and Under-exposed Areas
- Clearer, Detailed Images
Technology

- Captures Varying Lighting Conditions
- Takes Two Snaps:
  - Slow Shutter Speed - For Dark Areas
  - Fast Shutter Speed - For Bright Areas
- Combines Them into One Image
Greater Coverage

• Covers Large Area to Provide a Wider Field of View
• IP Camera 3.6mm Lens: FOV 90°
• IP Camera 6mm Lens: FOV 56°
• IP Camera 2.8-12mm Lens: FOV 113°-33°

Higher Field Of View
Technology

• Field of View: Area Covered by Camera

• Depends on Camera and Lens

• Smaller the Focal Length, Wider the Field of View
Smart Optimization

- Latest Compression Technique
- Optimized Storage & Bandwidth
- Onboard Storage Support (512GB)
Compression Technique

- Save 50% on bandwidth and storage

<table>
<thead>
<tr>
<th>Compression Technique</th>
<th>Bit-rate: 1300Kbps</th>
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</thead>
<tbody>
<tr>
<td>H.264</td>
<td>MATRIX</td>
</tr>
<tr>
<td>H.265</td>
<td>OTHERS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bit-rate: 2500Kbps</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1R1</td>
</tr>
</tbody>
</table>
Technology

• H.264:
  • The video frame is divided into equal number of pixels
  • It is irrespective of the region information of the adjacent pixels

• H.265:
  • One pixel compares itself to its adjacent pixels
  • The ones having similar information get bundled up as one pixel
Optimized Storage

• Automatic Bit-rate Reduction during No Activity Period

Bit-rate: 800kbps ; Fps:15fps

Bit-rate: 2500kbps ; Fps:25fps

Adaptive Streaming
Technology

• Automatically Reduces Frames/Second based on the Activity in the Region.

• Saves Storage Cost, up to 40%
Optimized Storage

- Divides a Single Stream into Multiple Bitrates based on its Importance

Smart Streaming
Technology

Bandwidth: 500kbps

Bandwidth: 900kbps

Bandwidth: 1400kbps
Optimize Bandwidth

- **Region Of Interest**: Streaming and Recording of only critical areas
- **Four Stream Support**: Different Streams for Viewing, Storing and Recording
Onboard Storage

- Edge Recording-Up to 512GB

SD Card Support
Intelligent Video Analytics

- Motion Detection
- Intrusion
- Trip Wire
Motion Detection

• Mark Critical Areas where Motion is Prohibited.
• Sends Instant Notification on Motion Detection
Intrusion

- Mark virtual box where Intrusion is Prohibited
- Sends Instant Notification on Entry or Exit
- Provides Safety
- Retains Secrecy
Trip Wire

• Identifies Motion Over a Defined Virtual Line
• Perimeter Security by Virtual Fencing
Alerts

- Snapshot Schedule
- Email With Snapshot
- Pre/Post Alarm Recording
- Upload Image/Clip
- SMS
Events

Network Disconnect

IP Conflict

Storage Alert

Real Time Notification Through SMS and E-mail

MATRIX

OTHERS
Reliability

• Bigger Metal Enclosure with Better Heat Dissipation and Better Endurance

Rugged Construction
Certifications

BIS

IP66 Weatherproof

IK10

CE CERTIFIED

FCC

V1R1

*IK10 for Dome Variants Only
All of this, Indigenously designed and manufactured in India!
Matrix SATATYA Camera Details
## Camera Nomenclature

<table>
<thead>
<tr>
<th>C</th>
<th>I</th>
<th>B</th>
<th>R</th>
<th>20</th>
<th>FL</th>
<th>36</th>
<th>C</th>
<th>W</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>

### 1. Camera Type
- C: Project Camera
- M: Professional Camera

### 2. Camera Type
- I: IP

### 3. Camera Range
- B: Bullet
- D: Dome

### 4. Sensor
- R: IR

### 5. Resolution
- 20-2MP
- 30-3MP
- 50-5MP

### 6. Lens Type
- FL: Fixed Lens
- VL: Varifocal Lens
- MVL: Motorized Varifocal Lens

### 7. Focal Length
- 36-3.6mm
- 60-60mm
- 12-2.8-12mm

### 8. Sensor Type
- C: CMOS

### 9. Camera Color
- W: White

### 10. Camera Series
- S: Standard
- P: Premium

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V1R1
PRODUCT RANGE (DOME IP CAMERA)

DOME IP CAMERAS

PROJECT SERIES

PREMIUM

5MP
- 2.7mm
- 3.6mm
- 4mm
- 6mm
- Motorized
- Varifocal

3MP
- 2.8
- 3.6mm
- 6mm

2MP
- 2.8
- 6mm

STANDARD

5MP
- 2.7mm
- 3.6mm
- 4mm
- 6mm
- Motorized
- Varifocal

3MP
- 2.8
- 3.6mm
- 6mm

2MP
- 2.8
- 3.6mm
- 6mm
- Motorized
- Varifocal
PRODUCT RANGE (BULLET IP CAMERA)
PRODUCT RANGE (BULLET IP CAMERA)
Matrix SATATYA Technical Specifications
PTZ Cameras

- 32x Optical Zoom, 4.8-153mm Varifocal Lens
- 6 Piece IR Array LEDs with IR Distance of 150m
- 1 Audio Input and 1 Audio Output
- 2 Alarm Input and 1 Alarm Output
- H.264/M-JPEG, Quad Streams
- Real-time Alarm actions
- IP67, TVS 4,000V Lightning & Surge Protection
- CE and RoHS Certification
Technical Specifications
## Technical Specifications

<table>
<thead>
<tr>
<th>Sensor Type and Size</th>
<th>1/2.8&quot; SONY - CMOS 5MP Active Pixel Progressive Scan, Back Illuminated Image sensor (EXMOR Technology - STARVIS Series)</th>
</tr>
</thead>
</table>
| Minimum Illumination | Colour - 0.01 Lux @F1.2 (AGC ON)  
                             Monochrome - 0 Lux                                                                                   |
| Focal Length        | 2.8mm/3.6mm/4mm/6mm/2.8-12mm/2.7-13.5mm                                                                    |
| Focus Range         | 0.3m to infinity                                                                                           |
| Field of View (FOV) | HFOV - 104°/80°/50°                                                                                       |
|                      | VFOV - 75°/58°/37°/                                                                                       |
|                      | DFOV - 129°/108°/62°                                                                                      |
| Lens Mount          | M12                                                                                                         |
| Focus               | Fixed focus                                                                                                |
| Aperture (F#)       | F 1.8/ F 1.6                                                                                                |
| Iris Type           | Fixed                                                                                                       |
| IR Range            | 30m/ 50m                                                                                                    |
| IR Led Wavelength   | 850nm                                                                                                       |
| IR Switching        | Auto/ Manual                                                                                               |
## Technical Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio IN</td>
<td>1</td>
</tr>
<tr>
<td>Audio OUT</td>
<td>1</td>
</tr>
<tr>
<td>Two-way Audio</td>
<td>Supported</td>
</tr>
<tr>
<td>Audio Compression</td>
<td>G.726 and G.711</td>
</tr>
<tr>
<td>SD Card</td>
<td>Up to 512GB</td>
</tr>
<tr>
<td>Camera Adjustment Angle</td>
<td>Pan: 0° to 180°</td>
</tr>
<tr>
<td></td>
<td>Tilt: 0° to 180°</td>
</tr>
<tr>
<td></td>
<td>Zoom: 0° to 360°</td>
</tr>
<tr>
<td>No of Stream Profiles</td>
<td>3/4</td>
</tr>
<tr>
<td>Stream Profiles</td>
<td>Profile 1: 2592X1944 @30fps (H.264/H.265)</td>
</tr>
<tr>
<td></td>
<td>Profile 2: VGA @30fps (H.265/H.264)</td>
</tr>
<tr>
<td></td>
<td>Profile 3: 2048x1536@8fps (MJPEG)</td>
</tr>
<tr>
<td>Available Resolutions</td>
<td>2592 X 1944, 2592 X 1520, 2048 X 1536, 1920 X 1080, 720p, D1, 2CIF, VGA, CIF, QCIF</td>
</tr>
<tr>
<td>Max Resolution</td>
<td>2592 x 1944</td>
</tr>
</tbody>
</table>
## Technical Specifications

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bitrate</strong></td>
<td>128kbps-16Mbps</td>
</tr>
<tr>
<td><strong>Bitrate Type</strong></td>
<td>CBR, VBR</td>
</tr>
<tr>
<td><strong>Video Compression</strong></td>
<td>H.265, H.264, MJPEG</td>
</tr>
<tr>
<td><strong>Frame Rate</strong></td>
<td>1-30fps</td>
</tr>
<tr>
<td><strong>Shutter Speed</strong></td>
<td>1/25-1/59000</td>
</tr>
<tr>
<td><strong>Adaptive Streaming</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>ONVIF Profiles</strong></td>
<td>Both S and G</td>
</tr>
<tr>
<td><strong>Edge Recording</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Alarm Recording</strong></td>
<td>Pre and Post</td>
</tr>
</tbody>
</table>
## Technical Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motion Recording</td>
<td>Yes</td>
</tr>
<tr>
<td>Video Parameters</td>
<td>Snapshot, Region of Interest (ROI), BLC, Day/Night Settings</td>
</tr>
<tr>
<td>Privacy Masks</td>
<td>3</td>
</tr>
<tr>
<td>WDR</td>
<td>True WDR (120dB)</td>
</tr>
<tr>
<td>SNR</td>
<td>73db</td>
</tr>
<tr>
<td>Image Enhancement</td>
<td>Saturation/ Contrast/ Sharpness/Brightness/Auto Exposure</td>
</tr>
<tr>
<td>DNR</td>
<td>2D &amp; 3D</td>
</tr>
<tr>
<td>Video Analytics</td>
<td>Motion/No Motion Detection, Tamper Detection, Trip/No Trip Detection, Object Intrusion/Zone Intrusion, IP Conflict, Network Disconnect, Storage Full, Time Triggered</td>
</tr>
<tr>
<td>Upload Image</td>
<td>SD, NAS, FTP</td>
</tr>
<tr>
<td>Upload Clip</td>
<td>SD, NAS, FTP</td>
</tr>
<tr>
<td>Notifications</td>
<td>E-mail, SMS, TCP</td>
</tr>
<tr>
<td>Supported protocols</td>
<td>TCP/IP, HTTP, DHCP, DNS, DDNS, RTP, RTCP, RTSP, PPPOE, SMTP, NTP, HTTPS, TLS/SSL, FTP, ICMP, IGMP v2 &amp; v3</td>
</tr>
<tr>
<td>Web Viewer</td>
<td>Supported in IE 8.0-11.0, Firefox 15.0-47.0, Chrome 20.0-54.0</td>
</tr>
<tr>
<td>Plugins</td>
<td>IE: Matrix ActiveX</td>
</tr>
<tr>
<td></td>
<td>Chrome: VLC plugin(2.0.4) and Quicktime(7.7.5)</td>
</tr>
<tr>
<td></td>
<td>Mozilla: VLC Plugin(2.0.4) and Quicktime(7.7.5)</td>
</tr>
</tbody>
</table>
## Technical Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Supply</td>
<td>12V (DC); 802.3af (PoE)</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>&lt;6W</td>
</tr>
<tr>
<td>Operating Humidity</td>
<td>Less than 90% RH (non-condensing)</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0°C to 50°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-20°C to 50°C</td>
</tr>
<tr>
<td>Communication interface</td>
<td>10Base-T/100BaseTX Ethernet (RJ-45)</td>
</tr>
<tr>
<td>Weight</td>
<td>450gm</td>
</tr>
<tr>
<td>Colour</td>
<td>Pantone 7527C</td>
</tr>
<tr>
<td>Dimensions</td>
<td>301.6 x 84 x 92.5 (Length x Height x Width)</td>
</tr>
<tr>
<td>Storage</td>
<td>NAS, SD Card</td>
</tr>
<tr>
<td>Certifications</td>
<td>BIS, CE, IP66, FCC Part-15 Class-A, ONVIF S &amp; G, IK10</td>
</tr>
</tbody>
</table>
Who Are We

1 Million+ Customers  2,500+ Partners  60+ Products  50+ Countries
www.MatrixVideoSurveillance.com