



Viewer™

360° IMAGING SYSTEM



The Viewer Imaging System is a new surveillance solution designed for a variety of applications. It is ideal for situations that require viewing live or recorded video covering an entire area. It can be used stand-alone or in conjunction with fixed cameras and programmable domes. Using Viewer, the entire 360° field can be monitored and recorded with the camera always pointing in the right direction.

Viewer provides two composite video outputs. One is a fisheye image of the entire viewable area looking down from the ceiling. The second is a digitally processed image combining two corrected virtual views and two corrected panoramic strip views. For the virtual views, the user toggles between each image and maneuvers through the pan, tilt, and zoom controls on a video controller or matrix keyboard. The two panoramic strips show separate 180° views of the surrounding area and, combined, show a full 360° coverage of the area.



Fisheye Image



Multi-Image

FEATURES

- Full 360° image captures all activity, even images below the camera and in the periphery
- Pan, tilt and zoom “virtual views,” and handle pre-recorded video with Re-Viewer™ accessory
- Up to 96 user definable pre-sets (controller dependent)
- Supports SensorNet, RS-422/RS-485 and Manchester protocols
- Connects to your existing system - no PC required
- No moving parts increases reliability
- Choice of ceiling mounts, including “speaker grill”
- Easy to install and operate

Easily install Viewer in a drop or hard ceiling mount using standard lock down tabs. A 2x2 mounting plate is also available. A flat, vented, circular plate that resembles a ceiling-mounted speaker grill can be used to cover the camera assembly. Another option is to have the camera view the area from a small recessed hole in the ceiling. In either case, Viewer offers a unique approach to covert camera surveillance.

Using a controller or matrix switch keyboard, the optional Re-Viewer module allows for review of recorded video, namely the fisheye output, from the Viewer. With Re-Viewer, you can pause the video and use the virtual views to pan, tilt and zoom.

SPECIFICATIONS

Model Numbers

RASVWRAColor NTSC Viewer system
 RASVPMANTSC Re-Viewer processing module

Operational

Camera
 TypeColor Interline Transfer 1/3-inch CCD array
 Scanning Area3.2 (H) x 2.4 (V) mm
 Scanning System2:1 interlace
 Horizontal Resolution470 TV lines at center
 Video Out1.0 Vp-p / 75 ohms composite
 Signal/Noise50 dB (typical)
 Minimum Illumination1.2 lux (f/1.2 lens)
 White BalanceAuto/Manual selectable
 Backlight CompensationOn/Off selectable
 Automatic Electronic
 ShutterOn/Off selectable
 1/60 to 1/20,000 sec
 Synchronization ModesInternal/line-lock with phase adjustment
 Active Pixel Count768 (H) x 494 (V) pixels

Lens
 DesignSpherical, F-Theta (Equidistance Projection) Fisheye
 Aperturef/2.0
 Viewing Angle165.2°
 Lens Rim Distance
 Below CeilingAdjustable 0 mm to 25 mm
 Below Lens15 mm

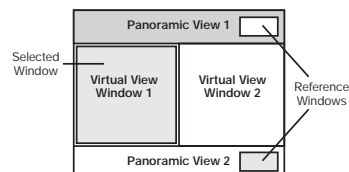
Fisheye Output
 ContentHemispherical view
 Horizontal Resolution470 TV lines at center
 Scanning System2:1 interlace
 Vertical59.9 Hz
 Video Out1.0 Vp-p / 75 ohms composite
 Video Output ConnectorFemale BNC

Processed Output
 ContentFour windows, two virtual views and two panoramic views
 Virtual View ControlIndependently pan, tilt, and zoom
 Panoramic View ControlIndependently pan and tilt
 Manual Pan/Tilt Speed20° to 100° per second proportional
 Pan Travel360° continuous, no end stops
 Digital Zoom4X
 Preset Access TimeLess than 50 ms to position
 Horizontal Resolution470 TV lines at center
 Video Out1.0 Vp-p / 75 ohms composite
 Video Output ConnectorFemale BNC

Electrical

Input Voltage24 to 30 VAC, Class 2 LPS
 Design Tolerance19 to 36 VAC
 Line Frequency50/60 Hz
 Power Consumption16 watts maximum
 Power On In-Rush Current1.5 amps
 Allowable Drop-out100 ms
 ConnectorEuro-style 3 pin removable
 5.06 mm terminal block
 Allowable Distance250 m from junction box using composite cable

Multi-Angle View



Surge Protection

Video OutputTVS rated at 12V/1A, 12A peak 300W
 Power Line8/20 us impulse discharge current@10kA gas discharge tube impulse rated at:
 TVS rated at 60V, 250A, 1.5 joules,
 8/20 us impulse
 SensorNet/ManchesterGas discharge tube impulse rated at: 8/20 us impulse discharge current@10k
 Isolation transformer coupled, 2000 Vrms
 PTC resettable fuse protects transformer
 TVS rated at 9.8V/1A, 20V/25 A, 500 watts,
 8/20 us impulse
 EIA-422/485TVS rated at 9.8V/1A, 20V/25 A, 500 watts,
 8/20 us impulse

Mechanical

Viewer, Hard Ceiling Mount
 Weight5 kg (11 lbs)
 Maximum Shipping
 Weight7.5 kg (16.5 lbs)
 Height Above Ceiling218.5 mm (8.6 in)
 Grill Cover Distance
 Below Ceiling6 mm (1/4 in)
 Lens Rim Distance
 Below CeilingAdjustable 0 to 25 mm
 Lens Apex Distance
 Below Lens Rim15 mm
 Grill Cover MaterialWhite painted aluminum
 Grill ScrewsCaptive security screws
 Cable Conduit
 AttachmentRomex clamp and four knock outs
 (1/2 in and 3/4 in, two ea)

Re-Viewer Module (optional)
 Dimensions (H x W x D)53 x 148.5 x 180.5 mm
 (2.1 x 5.8 x 7.1 in)
 Weight0.64 kg (1.5 lbs)
 Maximum Shipping
 Weight2.5 kg (5.5 lbs)

Environmental (Indoor applications only)

Operating Temperature-10° to 50° C (14° to 122° F)
 Humidity0 to 95% RH (non-condensing)
 Storage Temperature-20° to 65° C (-4° to 149° F)

Regulatory

EmissionsFCC 47 CFR, Part 15
 Subpart B, Class A
 ICES-003
 SafetyUL 60950
 CSA C22.2 No. 60950
 IEC 60950

Mounting Accessories

RH2X22 x 2 ft ceiling mounting plate

Basic System Diagram

