



## Core features

- Ideal for special operations
- Low footprint for concealed operations
- Robust design and packaging
- Modular power sources
- Optional lenses (MSS-1500 only)
- Scalable - supports tailored topologies
- Strong IVA / VMD (optional)
- Rapidly deployable
- Operational in many outdoor environments and climatic conditions

## Description

Magal S<sup>3</sup> offers two rapidly deployable surveillance systems to complement its sensors for Perimeter Intrusion Detection Systems (PIDS).

**MSS-1500** is a dual camera (day and night) deployable system.

**RCS-1** is a day only deployable Remote Camera System.

These systems are tailored for law enforcement, security and special operations forces. They allow for camera deployment close to the required area under surveillance and communicate data to a remote center.

Each stand alone system includes a tripod with a high quality optical camera(s), a power supply package, a wireless communication package, a camera control unit and an optional Intelligent Video Analytics (IVA) suite. The MSS-1500 has two high quality optical cameras - thermal and CCD. The wide bandwidth communication package enables deployment of the camera observation unit to be within 2 kilometers (1.2 miles) away from the surveillance cameras. The surveillance module has a small footprint so it can be easily concealed and operational in less than 5 minutes.

The technology of the system is leading edge in all aspects: advanced thermal detector (MSS only) high quality, long range CCD camera, state-of-the-art IVA, VMD (Video Motion Detection) from Magal, and a sophisticated encrypted wireless communication.

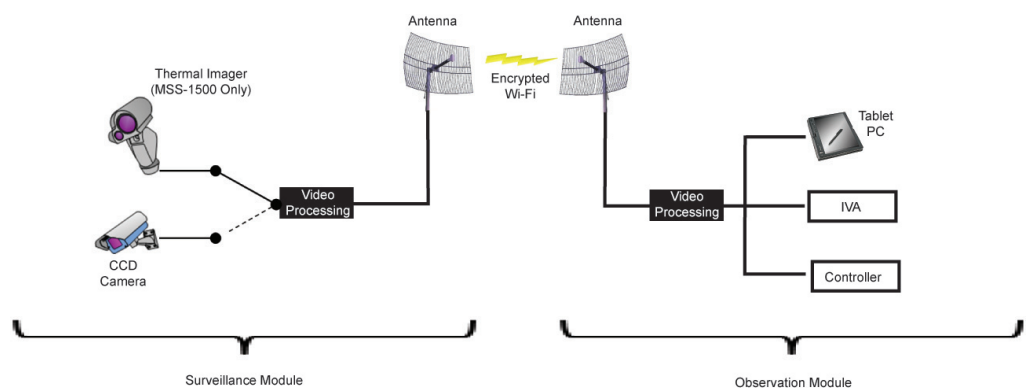
## Markets

The systems have been designed and packaged to fit defense, law enforcement and security special operations in various vertical markets and scenarios. These applications include intelligence-based operations for border protection, homeland security and fighting organized crime. Other applications include securing VIPs while they commute and providing temporary surveillance protection of exposed perimeter zones in sites under construction.

## How it works

### Basic system

A dual camera package (single for the RCS-1) is mounted on a tripod supported by a Pan-Tilt-Zoom-Focus (PTZF) engine. Video (thermal or CCD) is processed, compressed, encrypted and transmitted through a wide bandwidth wireless network into a remote observation site. At the observation end, data is decrypted, decompressed, processed and displayed on a regular tablet PC or alternate display.



## Advanced configurations

Each surveillance system can serve as a building block within a wider solution:

- By networking several surveillance sensors into a single observation module
- By connecting a basic system into a wider context Command and Control (C & C) center
- By relaying the transmission from an intermediate mobile C & C into a remote C & C site

## Building blocks

The system consists of 4 main modules in robust packaging, optimized for continuous outdoor operation.

**Observation module** - The observation module consists of: CCD and thermal cameras (CCD only for the RCS-1) mounted on a single pedestal and packaged in a robust all-weather sealed container; a two-meter high tripod, which also supports the communication antenna and high quality PTZF engine with tilt, zoom, focus and free 360 degree rotation capability.

**Wireless communication array** - The wireless communication package consists of two antennas, one on the sensor side and one next to the observation side, and two transceivers (one per side). The communication package enables the physical separation between the sensors and the observation force team which is critical for concealed operations. The communication is encrypted for security reasons and to overcome organized crime and hostile terrorist operations. The communication can be based on either Wireless LAN (WLAN) or any other commercial wide band platform. Optional Very Small Aperture Terminal (VSAT) communication through satellites provides an unlimited range of communication.

**Power package** - Up to 4 hours of continuous operation of surveillance are supported by the power package which can be assisted by auxiliary batteries, an external supply or solar panels.

**Control unit** - The control package consists of a tablet PC which enables video monitoring, a joystick to drive the cameras pedestal and an optional video server which is used for video storage, IVA functionality and other services. The control unit, which is the heart of the remote observation point, can be located in a vehicle, a shelter or outdoors.

## TECHNICAL SPECIFICATIONS

### OBSERVATION MODULE POWER

- Battery package capacity of 48 Ah (Amper / hour) sufficient for at least 4 hours of continuous operation for a single observation module
- Charged by 16 Ah charger (110 VAC / 220 VAC input)

### COMMUNICATION (Standard configuration)

- Frequency band: 2.4 - 2.4835 GHz ISM band (ETSI, FCC)
- Optional bands: 5.725 - 5.850 GHz, 5.47 - 5.725 GHz, 5.15 - 5.35 GHz, 5.03 - 5.091 GHz
- Security: AES 128-bit authentication

### OPERATING TEMPERATURE

-40° C to 60 °C (-40 °F to 140 °F)

### PAN / TILT

- Rotation: 360° continuous
- Preset accuracy: 0.02° / 0.25° (MSS / RCS)
- Tilt:
 

MSS-1500:	+40° (up); -45° (down)
RCS-1:	+33° (up); -83° (down)
- Tilt speed:
 

MSS-1500:	0.1° - 10° / sec
RCS-1:	0.5° - 20° / sec
- Pan speed:
 

MSS-1500:	0.1° - 40° / sec
RCS-1:	0.5° - 40° / sec

### THERMAL CAMERA (MSS only)

- Focal plane array: amorphous silicon / vanadium oxide microbolometer
- Spectral range: 8 - 14 μm
- Number of pixels: 640 x 480 or 320 x 240
- Pixel size: 25 x 25 μm
- NETD: <70° mk @ F/1 lens
- MTBF: 25,000 hours
- Polarity: Black hot or white hot

### CCD CAMERA (MSS-1500)

- Focal plane array: 1/4 Super HAD CCD
- Lens: 36x zoom
- Number of effective pixels: approximately 440,000
- Focal length: 3.4 (wide) to 122.4 (tele)
- Angle of view: 57.8° (wide end) to 1.7° (tele end)
- Video output: VBS - 1.0 Vp-p, Y/C output (PAL or NTSC)
- S/N ratio: better than 50 dB
- Iris: auto
- Pressurized enclosure

### CCD CAMERA (RCS-1)

- 1/3 inch image format interline transfer CCD
- Lens: x10 / x20 / x30 zoom (depends on model)
- Number of effective pixels: approximately 440,000
- Focal length for a x30 camera: 5.5 to 165 mm
- Diagonal angle of view: 2.1° - 58.7°

### THERMAL CAMERA PERFORMANCE (ΔT of 2°c)

#### Vehicle target (2.3 m x 2.3 m):

- Detection range - 6,900 m (22,637 ft.)
- Recognition range - better than 2,300 m (7546 ft.)

#### Human (1.7 m x 0.5 m):

- Detection range - better than 2,766 m (9,075 ft.)
- Recognition range - better than 922 m (3,025 ft.)

*Specifications are subject to change without prior notice.*