

Wireless Remote Patrol (WIPAT-1)

Image Monitoring System

Private Long Range Wireless Image & Alarm Monitoring System

When there is more to the picture than simply an image, WIPAT Wireless Remote Patrol brings live images, video clips and sensors back from far off places for asset protection, event detection, and location monitoring. WIPAT tirelessly stands guard and reports everything.

In the field, the tailored WIPAT-1 vigilantly captures each moment locally with 2 unblinking cameras recording up to a month of video at full resolution and frame rate and sending live image updates back within seconds.

Each camera is housed for its specific environment and has options for enclosure type, Pan-Tilt-Zoom, Motion Detection, Hi Definition, and for Day, Night or Both.

With up to 8 digital input sensors, 6 output relays, customized response sequences and video clips; WIPAT-1 becomes a true centurion sending instant notification of any changes in status and video clips of captured events back to a central location, and on to e-mail, while simultaneously activating output relays to control lighting, alarms, and other response hardware.

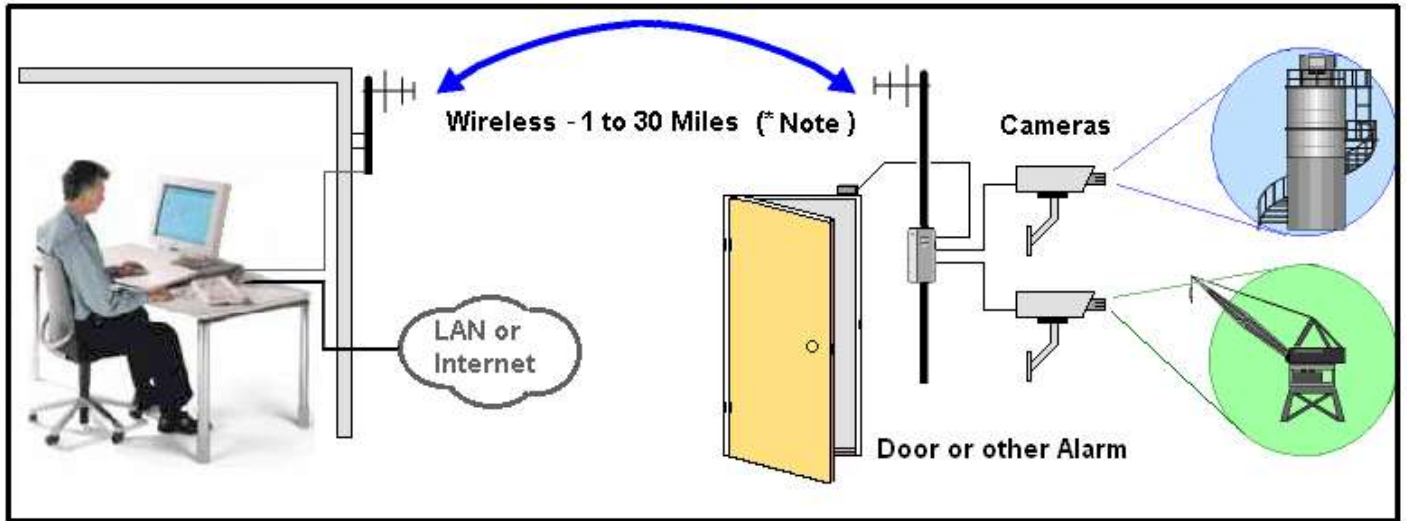
Traditional wireless video systems utilize microwave radio transceivers that severely limit their capabilities to short distances and "Line-of-Sight" applications.

WIPAT-1 reaches far beyond the limits of wireless video by utilizing UHF and VHF frequencies capable for carrying images and data many miles without repeaters or line-of-sight. WRP communication options are VHF, UHF and Satellite for the most remote and otherwise unreachable locations.

Additional options for solar power provide complete a completely self contained solution and web server upgrades open Remote Patrol to global access via the Worldwide Web.

The same stand-alone WIPAT-1 that watches over a single location is scalable to include additional cameras or span hundreds of locations. For advanced users, the included ActiveX Control, Modbus Gateway, OPC Driver, and integration tools, can be utilized to fully integrate Remote Patrol into most automated control system platforms and operator interfaces.





* **Note:** Range depends on surrounding terrain. While line-of-sight is not required, major obstacles may reduce the range. Satellite communications are available to any location otherwise unreachable by radio.

Technical Specifications	
Video	
Camera Type	IP Cameras
Resolution	160x120 - 1280x1024
DVR/ Camera Speed	30 Frames/Second, 150 total FPS
Storage	4 GB, approx. 5 Days @ Full Speed/ Resolution, Expandable
Live Image Frame Rate	up to 1 FPS, 3 FPM typical
Event Clip Frame Rate	up to 30 FPS, 10 FPS typical
Event Clip Length	2 seconds - 4 minutes
I/O Module	
Optical Isolation	5000V RMS
Inputs	8 Digital
Input Voltage	±150 mV, ±500 mV, ±1 V, ±5 V, ±10 V
Input Fault Protection	Overvoltage up to ±35 V
Outputs	6 Digital
Output Voltage (between terminals)	+10 to 30VDC
Output Current	200 mA (max per channel)
Turn-On Time (off to on)	7ms (Typical)
Turn-Off Time (on to off)	3ms (Typical)
Remote System (Video, I/O, Processor, Cameras, & Communications)	
Minimum Power Consumption	> 15 Watts, Varies by system configuration
Restart Time	< 5 Min.
Temperature Range	-40°F - +132°F (-40°C - +65°C)
Input Voltage	24-48 VDC, 120/240 VAC
Tx Delay	3 - 500ms
Event Response	11ms (Typical)

Communications	
VHF	
Frequency	138-174 & 218-238 MHz
Communication Mode	Half Duplex
Channel Spacing	12.5 kHz / 25 kHz
Tx Power	100 mW, 500 mW, 1 W, 5 W / 50 ohm
Rx Sensitivity	-115 dBm (BER <10E-3)
Power Consumption	6.6 VA @ 1 Watt Tx / 22 VA @ 5 Watt Tx
UHF	
Frequency	370-470 MHz
Communication Mode	Half Duplex
Channel Spacing	12.5 / 20 / 25 kHz
Tx Power	10 mW ... 35 Watt
Rx Sensitivity	-115 dBm (BER <10E-3)
Power Consumption	6 VA @ 1 Watt Tx / 25 VA @ 10 Watt Tx
900 MHz Spread Spectrum	
Frequency	902-928 MHz, Frequency Hopping Spread Spectrum
Communication Mode	Half Duplex
Channel Capacity	10 hop sequences share 50 channels
Tx Power	1, 10, 100, 500, 1000 mW
Rx Sensitivity	-115 dBm (BER <10E-3)
Power Consumption	6 VA @ 1 Watt Tx
Satellite	
Tx Frequency	Ku 14.0-14.5 GHz / C 5.85-6.35 GHz
Rx Frequency	Ku 10.95-11.45 GHz / C 3.4-4.1 GHz
Communication Mode	Full Duplex
Transmission Capacity	Additional Ethernet (RJ-45 Connection) Bridge
Power Consumption	36 Watts

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