

Airaya

Secure Outdoor
Wireless Video

WirelessGRID™ Outdoor Wireless Video Camera
(4.90-5.850 GHz, 10x Optical Zoom PTZ Camera, Heated/Cooled Enclosure)

(Model #'s: WPTZx10-I, WPTZx10-O, WPTZx10-ON)

Product Features

Each fully integrated IP-66 rated video camera unit contains a secure outdoor WirelessGRID bridge with an N-type female antenna connector, a heated and cooled camera enclosure and a 10x optical, 10x digital zoom Pan/Tilt/Zoom Network Camera

Outdoor Design – Rugged outdoor design allows for simple installation and configuration of outdoor Multipoint and P2P Video System

Configuration – Remotely over WirelessGRID using HTTP or Telnet, or locally using removable console port and password-protected access

Security – Embedded 128-bit AES data encryption and network bridge authentication ensure secure transmission of video images

Power – Outdoor radio, camera, and heated/cooled enclosure powered with a single outdoor-rated Cat-5e cable and full-range (100-240 Volt) power source

Distance – Supports monitoring of remote locations up to 30 miles away (depends on antennas used)

Speed – Up to 42 Mbps net TCP/IP throughput per 40MHz-wide channel

Camera - Camera features auto pan and auto patrol with built-in intelligent motion detection, adjustable image size, quality, and bit-rate, low-light mode to 0.05 Lux, and PC-based recording/monitoring software for up to 16 cameras

Enclosure - The camera enclosure features automatic fan and heater control, keeping the camera temperature between 30F (0 C) and 104F (40 C)

WirelessGRID Radios - More than 150 user selectable channels between 4.90 and 5.85 GHz, Up to 21 dBm of transmit power, Certified for use by ETSI, FCC and many other regulatory bodies



WPTZx10 Overview

The WirelessGRID WPTZx10 outdoor wireless video camera is a professionally integrated outdoor wireless Pan/Tilt/Zoom IP network camera supporting MPEG 4 and MJPEG video at up to 10x optical zoom. These outdoor wireless video cameras feature the latest in PTZ camera and encrypted radio technology, providing complete, pre-configured and easy to install outdoor wireless video systems for surveillance, real-time monitoring, and recording of activity.

WirelessGRID outdoor wireless video cameras are certified for use in most countries and frequency ranges, including 4.9 GHz licensed public safety bands. Utilizing 4.90 GHz to 5.85 GHz, these outdoor wireless video cameras provide the security, proven capability and bandwidth to support multipoint systems of up to 16 cameras.

FREE PC-based recording and monitoring software also supports up to 16 cameras so you can build a completely integrated outdoor surveillance system with minimal effort and high reliability.



Typical Outdoor Wireless Video Camera Applications

Homeland Security, Government and Law Enforcement	Airports, Shipping Ports, Border Regions, Utilities, Monuments Tourist Attractions, Public Areas, and other Critical Gov't Sites
Intelligent Traffic Systems Control	Highways, Intersections, Buses and Depots, Railways and Depots, Parking Lots and Garages
Security and Surveillance	Schools and Corporate Campuses, Storage Facilities...

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(Outdoor Wireless Video Camera Specifications)

Camera		
Video Source	Embedded CCD	
Image Sensor	1/4 inch color CCD image sensor	
Lens Type	10x Optical Zoom Lens with 4.2~42 mm focal length, F1.8~2.9	
CCD Resolution	542(H) X 493(V) NTSC	
Minimum Illumination	1 Lux / F1.8 (0.05 Lux / F1.8 in Low Lux Mode)	
Electronic Shutter Speed	1/60 ~ 1/120,000 second NTSC	
Zoom	10x Optical Zoom, 10x Digital Zoom	
Auto Iris Support	Built-in Auto-Iris	
Automatic Electronic Shutter (AES)	Automatic Gain Control (AGC)	Automatic White Balancing (AWB)
Supported	Supported	Supported

Video	
Algorithm Supported	Dual Codec: MPEG4 (Short Header Mode) and MJPEG
Average Compression Ratio	150 ~ 200 (MPEG4) / 12 ~ 20 (MJPEG)
Frames Per Second	Up to 30 / NTSC
Max Video Resolution	704 x 480 / NTSC
Resolution NTSC	Up to 30 frames per second at 176 x 120 Up to 30 frames per second at 352 x 240 Up to 15 frames per second at 704 x 480
Features	Adjustable image size, quality and bit rate, Time stamp and text overlay, Up to 3 motion detection windows, Upload snapshots (FTP or Email)

Pan/Tilt/Zoom Characteristics	
Pan Range	±135°, 10°~50°/sec
Tilt Range	+90° ~ -45°, 7°~25°/sec
Zoom	1x~10x Optical Zoom; 2x,4x,6x,8x,10x Digital Zoom

16 Camera Monitoring Station Requirements and Features	
Operating System	Microsoft Windows 98SE/ME/2000/XP
Browser	Internet Explorer 5.x or above with ActiveX
Features	Remote configuration and control of up to 16 devices Fast/Slow forward, replay and pause Scheduled backup Event-triggered, Scheduled and Manual recording Instant search with preview windows Hard disk quota warning AVI format export

About AIRAYA

AIRAYA was formed in November, 2001 by a team of wireless industry veterans with more than twenty years of combined experience in the field. The company's mission is to provide fast and affordable wireless bridges for the broadband fixed wireless marketplace. Our portfolio includes a complete line of high-performance indoor and outdoor wireless bridges, cameras, and TDM products and accessories for connecting IP network equipment at distances up to 30 miles.

Radio			
Multiple Frequency Bands Supported. 40, 20, 10, 5 MHz wide channel selections (Local regulations apply)	4.940-4.990 GHz Public Safety Band (FCC Part 90, licensed Intl.) Non-overlapping Channels: 9 x 5 MHz, 5 x 10 MHz, 2 x 20 MHz, 1 x 40 MHz		
	5.25-5.35 GHz license-exempt (FCC, Industry Canada, Mexico) Non-overlapping Channels: 15 x 5 MHz, 8 x 10 MHz, 4 x 20 MHz, 2 x 40 MHz		
	5.47-5.72 GHz license-exempt (ETSI, FCC, ITU) with TPC and DFS Non-overlapping Channels: 50 x 5 MHz, 25 x 10 MHz, 12 x 20 MHz, 5 x 40 MHz		
5.725-5.850 GHz license-exempt UNII & ISM Bands (ETSI, FCC, MII) Non-overlapping Channels: ISM, UNII: 22 x 5 MHz, 11 x 10 MHz, 5 x 20 MHz, 2 x 40 MHz			
Radio Type	Orthogonal Frequency Division Multiplexing (OFDM)		
Standards	802.3, OFDM hardware with proprietary bridging extensions		
Total System EIRP and Radio Output Power	Radio output power: Max: 21dBm (Set to local regulatory requirements to comply with transmit, conducted and EIRP power limits)		
Radio Receiver Sensitivity	Data Rate	Sensitivity	Modulation
	1 to 108 Mbps	-73 to -91 dBm	64QAM,16QAM, QPSK, BPSK
Antenna Type(s)	AI108-4958-BSU, AI108-4958-ON2 – Order a Sector, Omni, GRID, or Panel AI108-4958-SU and -1: Flat Panel directional antenna AI108-4958-0-xxx: 23 dBi integrated or 28dBi external directional antenna		

Radio Range Estimates	
FCC & Canada (Local regulations apply)	Up to 5 miles (8 km) with built-in 23dBi panel antennas Up to 30 miles (48.27km) with max radio output power and optional external 34.5 dBi antennas
International Version (Local regulations apply)	Up to 30 miles (48.27km) – N-Type version (AI108-4958-ON-xxx) with max radio power and optional external 34.5 dBi antennas

Configuration and Management	
Configuration Utility	Radio – Remote: Web server, telnet. Local: Console Cable Camera - Remote: Web server, telnet
Software upgrades	FTP Download
Antenna alignment	Built in RSSI (signal strength), link optimization and throughput maximization utility
Indoor LAN Status Indicator	Indoor Remote Power Indicator
Radio Monitoring	Secure Management Interface - Real-time signal strength, authentication data, system uptime, data rate, channel selection via HTTP, Telnet, and SNMP

SecureRF Radio Link Security	
Authentication and Data Encryption	SecureRF Architecture – Multi-layer link authentication. Embedded 128-bit AES or 152-bit WEP data encryption

ODU Interfaces	
RF (Antenna) connector on the ODU	N-Type Female
Baseband (IDU to ODU Units)	ODU: RJ-45 with weatherized sealed gland IDU: RJ-45 for Console Port Connection

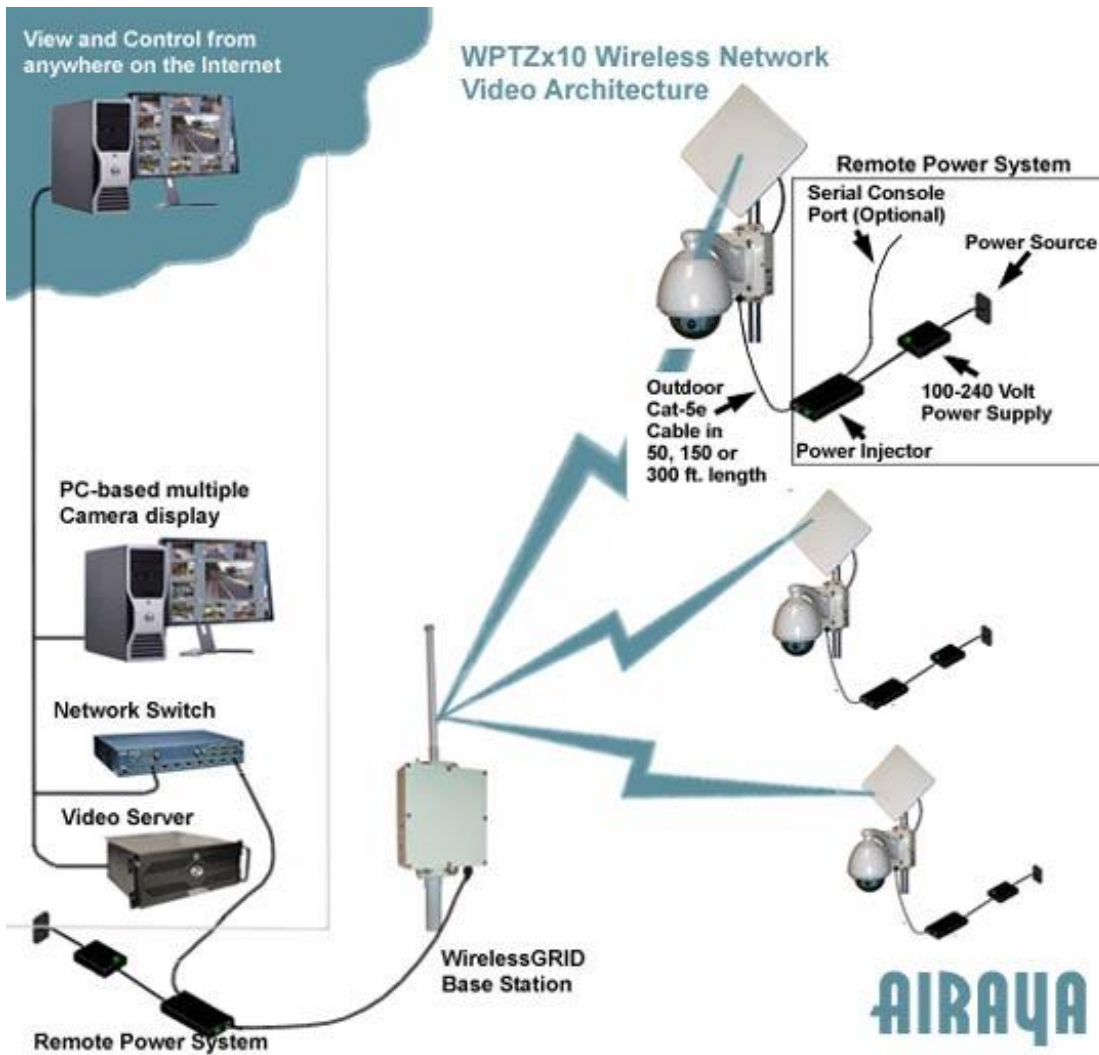
IDU to ODU Communication	
Cable Type	CAT 5e 4 x 2 x 24AWG gel-filled (UV protected, weatherized)
Maximum Distance	328 ft (100m) between network connection and outdoor camera

Electrical	
Remote Power Systems	Input: 100-240V , 0.5A Auto-ranging (50Hz-60Hz) Output: 48V, 1.5 A Max for remote powered ODU

Mechanical Dimensions	
AI108-4958-BSU/ON OD Unit	10 x 8 x 6 in (25.4 x 20.3 x 15.2 cm)
AI108-4958-BSU Antenna	22 x 3 x 3 in (52 x 7.6 x 7.6 cm)
Indoor Unit	6 x 3 x 1 in (15.2 x 7.6 x 2.5 cm)
Outdoor Unit Mounting	Includes mast mounts and clamp kit for 1" (26mm)diameter thru 4.5" (115mm)diameter masts

Environmental		
ODU Outdoor Rating	IP66	
Operating Temperature	IDU: 0 to 50°C	ODU: -20 to 50°C
Operating Humidity	IDU: 5 to 95% non-condensing	ODU: Fully weather protected
Material	ODU: Painted Aluminum Alloy	Camera Lens Dome: Strengthened Acrylic
Heater	Turns on at 0°C (+/- 5°C); Turns off at 10°C (+/- 5°C)	
Blower	Turns on at 40°C (+/- 5°C); Turns off at 30°C (+/- 5°C)	

Compliance and Certification	
Radio	Public Safety (Part 90), FCC 15.407 (UNII, ISM), Industry Canada RSS-210, ETSI (w/TPC and DFS)
Safety	UL - Canada, USA, CE Mark, RoHS, WEEE
EMC	FCC Part 15, Industry Canada RSS-210, Mexico, ETSI



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