



Wide Area Digital Outdoor Wireless Video Security Surveillance System

Overview

Inscape Data Outdoor Wireless Video Security Surveillance System is suite of outdoor wireless and IP video system providing a reliable alternative to hardwiring for security applications. There are several great reason why wireless is a preferred medium over hard wiring. Wireless is economical, fast time to deployment, secure, and reliable. In many cases, wireless is the only option.

Inscape Data provides turnkey total outdoor wireless video solution in the License exempt frequency bands of 2.4GHz and 5.1 ~ 5.8 GHz and fixed or PTZ outdoor rated IP network camera system. License exempt wireless allows for any security professional to deploy the wireless equipment without a license as long as the equipment conforms to the local communication regulatory body guidelines.

Product High Lights & Advantages

Economical

Network video, also known as IP video, over wireless medium is not a new concept. Wireless analog video system has long been available in the surveillance industry, but has been very limited to few applications, prone to RF interference, and operates in simplex mode. Inscape Data is in the forefront of providing the most economical and cost effective outdoor wireless and IP video solution for the market. Saving money and lowering project cost is perhaps the largest benefit of deploying an Inscape Data license-free wireless video link. The lowering of economical cost barrier also allows security professionals to revisit or take on hard to wire or once impossible outdoor video surveillance applications.

Faster time to deployment

In addition to economical reasons for outdoor video surveillance over wireless, faster time to deployment is a benefit high on the list for the security industry. Security professionals can tackle large outdoor video surveillance projects without long project life cycles; shorter life cycles means faster ROI and more satisfied customer.

After a base station or access point is deployed, as long as line-of-site wireless path is achieved, new or additional camera wireless transceivers can be deployed or redeployed in matter of hours instead of days. The architecture flexibility brought fourth by license exempt wireless transceivers is also unmatched compared to other transport mediums. Redeployment consists of uninstalling from the old location and reinstalling at the new location. After aiming the antenna is complete, the new video link should be ready to go without any delay. This flexibility opens up application for video surveillance in the construction industry as well as video surveillance for seasonal events.

Secure

There are myths of wireless communication being insecure, which maybe true with the days of analog wireless transmission and first generation IEEE 802.11 device. WEP encryption available on the first generation 802.11 and 802.11b devices has proven to be insecure. Latest software tools and wireless sniffers are able to derive the network key within just minutes of sampling a communication link.

New outdoor wireless video transceivers now have the latest chipset technology with strengthened wireless security. With IEEE 802.11a/g digital transceivers, Advance Encryption System (AES) is a standard feature made available by most manufacturer of outdoor wireless radio. AES is an encryption standard recognized by the U.S. government and approved for the used for transmittal of classified information. AES was an encryption option once available only to high cost wireless transceivers.

Reliable

Wireless video links when deployed correctly can offer reliability equivalent to or exceed wired installations. Wired installations are prone to cable or interface corrosion, accidental disturbances, and costly to replace when defective. Wireless video link has the added feature of link redundancy (1), base station fail over, and reliability up time in the range of 99.9999%.

Adding new video surveillance camera nodes to the video surveillance wireless network could be as simple as adding new wireless transceiver and video camera system. This is possible because radio transceivers which operates in the wireless point to multipoint mode allows a single access point or base station to communicate with multiple wireless transceivers. With access to more than 20 mbps of wireless network throughput on an 802.11g transmission link and 50 mbps on an 802.11a transmission link, a wireless video network can scale to accommodate large outdoor camera system reliably.

(1) BR108 with STP enabled



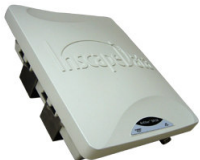
Inscape Data Fixed IP Camera



Free 16-Channel NVR Monitor and Recorder PC Software

System Components

Wireless Backhaul / Ethernet Bridge



The AirEther BR108 is the core backhaul IP networking bridge which ties all the remote Inscape Data IP security surveillance camera system to a central location for video monitoring and recording. The BR108 operates in the 5.1 ~ 5.8 GHz frequency band and is able to provide point to point or point to multipoint configuration. Antenna configuration of 12, 18, & 21 dBi are available and provide distance connectivity from 0.5km to 10km and actual throughput up to 25/50mbps respectively.

Camera Client Bridge

The AirEther CB54 client bridge has an integrated 12 dBi antenna and is used to wirelessly connect the AirGoggle NVC series cameras to the local AirEther AB54 series access points. The distance between CB54 and AB54 is most optimal if used under 5km. In areas with high 2.4 GHz activity, it is best used under 0.5km. Each CB54 has one RJ-45 PoE port and utilize 12VDC power supply. For IP camera application, 5 CB54 is best used with 1 AirEther AB54 access point.



Camera Access Point



The AirEther AB54 series access point is the premiere outdoor 2.4GHz camera access point. It is available in AB54 or AB54E models. Which model best used depends on the angle of coverage to the Camera Client Bridge, the CB54. For optimal IP video bandwidth availability plus extra system operating margin, no more than 5 CB54 per AB54 series access point should be used. Refer to the chart below for best selection for cameras located no more than 0.5km.

Distance to farthest CB54 < 0.5km

Angle of Coverage	AB54	AB54E
< 40 degrees	+	
< 75 degrees		+ PA09
< 360 degrees*		+ OA09

Distance to farthest CB54 < 5km

Angle of Coverage	AB54	AB54E
< 40 degrees	+	
60 degrees ~ 180 degrees		+ SA1218
< 360 degrees*		Not recommended

* The use of Omni directional antenna is not recommended if the AB54 or AB54E & panel or sector antenna could be used.




IP surveillance camera

The AirGoggle NVC series professional IP security camera system is available in indoor, indoor or outdoor, and fixed or PTZ types. Refer to the below table for your reference:

Inscape Data IP Camera Matrix

Camera Type	Indoor	Indoor/Outdoor
Fixed	NVC300 	NVC210 
PTZ	NVC1018 NVC1026 	NVC3018 NVC3026 

Fixed IP Camera Optional Outdoor Housing

Accessories	Configurations	Feature
NVC210 Housing & Bracket	CH100HB + CB300 	All Weather Cable Management Heater & Blower -30C to +60C
	CH200HB + CB200 	All Weather Standard Enclosure Heater & Blower -30C to +60C
	CH300HB + CB100 	All Weather (IP66) Extended Length for Optional Camera Lens Optional Wiper Heater & Blower -30C to +60C

Please ask your Inscape Data sales associate or sales channel partner on the optional mounting accessories for the NVC1000 and NVC3000 series PTZ dome cameras and outdoor shielded cables.

Common Application Diagram

