

Inscape Data

The Expert in Wireless and IP Video Systems

Summer 2007 Edition

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New Product Release : NAC 6100

Inscape Data, the leading manufacturer in digital broadband wireless and IP video systems launches the AirEther NAC6100 network access gateway. The NAC6100 will be available from Inscape Data authorized channel partners in Q3, 2007. The NAC6100 is a stand-alone network access controller designed with public access network in mind such as small businesses, motels, MDU, coffee shops, ect making it a critical part of the internet service delivery network.

The AirEther NAC 6100 boast features unparalleled to other access gateways in the market for the price range. The customizable provisioning, billing, and access control provides intelligent control over your wired or wireless infrastructure. It integrates AAA RADIUS Control, Billing and Traffic Control into one system to fulfill the needs of demanding public access network applications. Standard feature of the NAC6100 includes load balancing, WAN port fail over, QOS, traffic prioritization, content filtering, and firewall security systems. The AirEther NAC6100 incorporates convenience, efficiency, friendly, and host of advance feature for the public access network applications.

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Premier Partner Program Giveaway

Inscape Data is giving away a Garmin GPS to customers that are part of the Premier Partner Program that purchases from July 1st 2007, through September 30th 2007. Premier Partners that purchase at least \$500 per order will receive one entry in to the drawing. If you are interested in becoming a Premier Partner, please go to inscapedata.com/sales.htm to read more and enroll in to the program.

Technology Corner: Security Unwired

In an Era of IP network explosion, the license-exempt wireless communication platform has expanded its role beyond simple data communication. It has reached the mass market segment to provide a reliable alternative to hard wiring for voice over IP, IP TV, and security applications to name a few. There are several great reason why wireless is a preferred medium over hard wiring. Wireless is economical, faster time to deployment, secure, and reliable. In many cases, wireless is the only option.

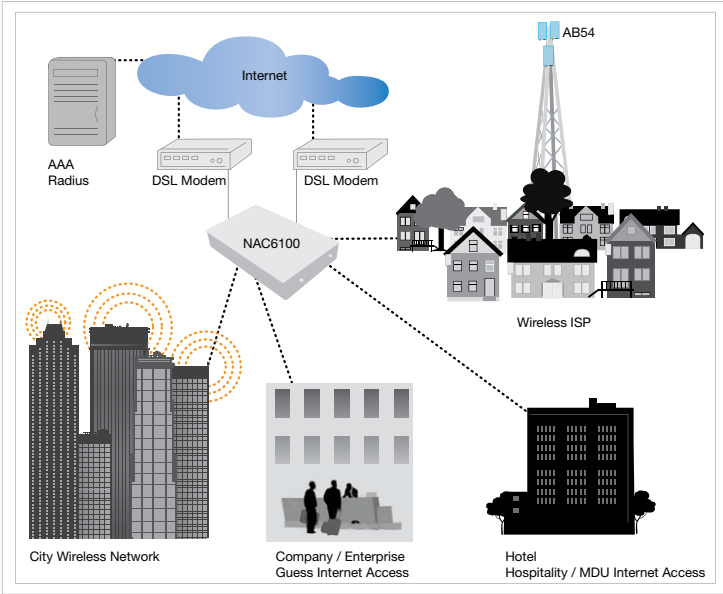
License exempt wireless is available in several frequency bands, mostly between 900 MHz and 6 GHz. Most commonly available and cost effective are 2.4 GHz and 5.1 ~ 5.8GHz. License exempt allows for any security professional to deploy the wireless equipment without a license as long as the equipment conforms to the regulator's guidelines, i.e. FCC for North America.

When considering wireless communication for security applications, there are two wireless technology options, proprietary or standardized. The install base for proprietary wireless technology is small and costly relative to standardized wireless technology based on Wi-Fi (802.11). Wi-Fi is well proven and readily available since late 1998. It is also one of the most successful industry standards in history. Wi-Fi is experiencing rapid advancement with newer extensions released to enhance wireless performance. WiMax is another wireless standard rapidly gaining grounds and hold a lot of promise for the licensed bands. However, the industry anticipates cost effective WiMax equipment to emerge within a few years time frame. Long range wireless equipment by Inscape Data based on WiFi is available today and brings host of benefits to the security market.

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Features at a glance

- Zero configuration connectivity
- Dual WAN fail-over port
- Forced browser redirect
- Intrusion protection system
- Per user bandwidth control
- Traffic Prioritization
- Intelligent firewall system
- Content management and filtering
- Traffic analysis
- Universal plug and play
- Remote administration
- Software DMZ
- 500 Concurrent Users
- 2500 Local User Accounts
- 2000 On-demand Accounts
- 50 mbps system throughput



Network Access Control Possibility with NAC6100

New AirEther Infrastructure Addition

The NAC6100 when used with AirEther outdoor wireless system creates seamless public wireless access infrastructure. The NAC6100 function as a trunk interceptor, where all network traffic to and from the wireless infrastructure network must pass through the system. The dual WAN port fail-over capability ensures high network availability and uptime. Long range wireless connectivity paired with zero configuration end user access control creates an enjoyable network access experience for all user types.

Management

As an administrator, the NAC6100 provides simple management yet powerful user access configuration supporting up to 2500 local user accounts, 2000 On-Demand Accounts, 500 concurrent users, and throughput capability of 50 mbps in a compact footprint measuring 9.5" (W) x 5.9" (D) x 1.8" (H). Internet content management, bandwidth control, application filter, TCP/IP service management, traffic control, walled garden, on-demand user accounts, and system reports along with host of advance features allows administrator high accessibility and low maintenance network management.

Application

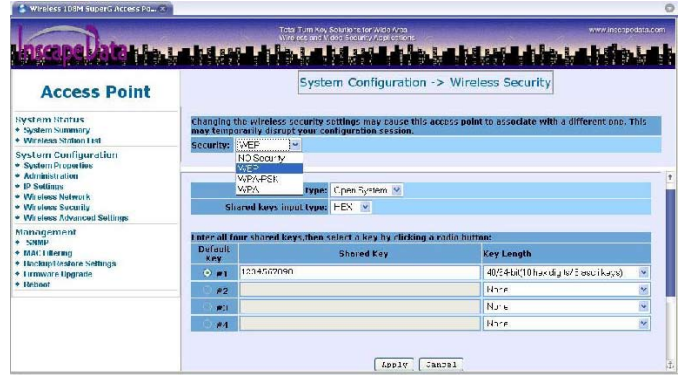
The NAC6100 is a critical component for the fixed wireless broadband service providers, Municipal WI-FI, Hospitality customer internet access, Multi-dwelling units (MDU), Campus internet access, and airports. It ensures total network control, restrict access to subscribers, customizable service levels, manage bandwidth hogging applications, filter internet content for undesirable web pages, and includes a full suite of intelligent firewall rules and filters customizable to suite your network needs.

Inscape Data manufactures hardware solution which provides an end-to-end long range license free wireless infrastructure and IP based video surveillance solution. The NAC6100 is an indispensable technology addition to the AirEther wireless infrastructure products line-up. Contact an Inscape Data channel partner for pricing information.

Wireless Security Settings

Wireless encryption is an optional feature on Inscape Data outdoor wireless radios. Encryption technology scrambles messages sent over wireless networks so that they cannot be easily read by humans. There are several types of encryptions, so you will want to pick the pick the encryption strength suitable for your wireless application. Keep in mind, all of the Inscape Data outdoor wireless radios in the same network must share the identical encryption settings.

Inscape Data radios support several types of encryptions such as WEP, WPA-PSK with TKIP and AES.



Inscape's AB54 Wireless Security GUI

Here are a few tips to keep your wireless network secure: Change default passwords and usernames. Change default SSID. Enable Mac Address Filtering. Disable SSID broadcast. Choose a level of encryption from none to AES that is suitable for your application. If your application requires the highest level of security protection, backend network encryption like VPN should be used in conjunction with wireless security. We believe these security approaches will enhance your network security greatly.

How to Setup a Wireless Bridge

A Wireless Bridge is used to connect two or more segments that are physically separated. The AB54 series 2.4 GHz wireless bridge and BR108 5.1 GHz ~ 5.8 GHz wireless bridge provide layer 2 transparency between network segments. Interoperability between bridges of different make and models is not supported for reliability and performance considerations.

Inscape Data Wireless Bridges are a very practical, easy, and in most cases inexpensive way to connect Ethernet LANs or extend the range of existing wireless LANs. They are quick to set up and easy to configure, making them an ideal choice to quickly set up voice and data networks.

We offer Wireless Bridge solutions in the 2.4GHz (AB54) and 5 GHz (BR108) ranges. The AirEther™ BR108 is a carrier class long range outdoor wireless bridge and is an ideal outdoor wireless backhaul solution.

For setting up bridges, all the bridges must be set on the same SSID, channel and security mechanism if implemented.



AirEther™ BR108 Wireless Bridge Graphical Interface

Security Economics

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. With the industry boom in WiFi and fixed broadband wireless, economies of scale in 802.11 based standardized hardware brought fourth lower cost outdoor and rugged long range radios. The great news in the trend of mass market acceptance of WiFi based wireless transceivers is the lower cost of equipment ownership. Saving money and lowering project cost is perhaps the largest benefit of deploying a license-free wireless video link.

An Inscape Data AirEther CB54 turnkey rugged IP67 outdoor wireless IP transceiver with embedded 12 dBi antenna, power over Ethernet, and pole mount bracket retails for only \$207. The CB54 transceiver boasts to operate between few hundred feet to 3 miles range with line of sight. Gone are the days of few thousand dollar point-to-point wireless transceivers and welcomes the two-hundred dollar multiple device IP wireless transceiver for the security industry. With license exempt digital wireless medium as an effective option to hard wiring security surveillance cameras, the lowering of economical cost barrier allows security professionals to revisit or take on hard to or once impossible outdoor video surveillance applications.

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 an Inscape Data 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 Inscape Data's 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 alignment of 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.

Radical Reliability

Once upon a time, 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.

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, access point 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.

To obtain the most benefit out of wireless video deployment, you need to understand the challenges to its successful deployment. The challenges are understanding of wireless fundamentals, overcoming wireless obstacles, and maximizing available bandwidth. Wireless signals are invisible. To make it visible enough to manipulate it to our advantage requires learning and practice.

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Success Stories

To delivery reliable and quality products is always our number one business objective, Inscape Data is pleased to present the following customers who have purchased Inscape Data's products and would like happily share with their experience:

George Rubio – Konecta
Calexo, CA

We have successfully deployed 12 BR108 in Mexico, providing internet connection to hundreds of customers. So far the performance has been exceptional. I am impressed by the capability of the devices as they cover a wide area so we can provide Internet connection to remote locations. The features I like most are the reliability and ease of use.

Bob Meisner – Smart Hands Technology, Inc.
Lewis Center, OH

We have deployed AB54 and CB54 and are very happy with their performance. We provided a solution for a customer in Eastern Ohio extending their wireless network to a football field and other facilities. Easy installation and configuration, reliability and price are certainly a plus. Also your camera, the NVC210 helped prevent a theft in one of our customer's facility.

Proactive Network Management

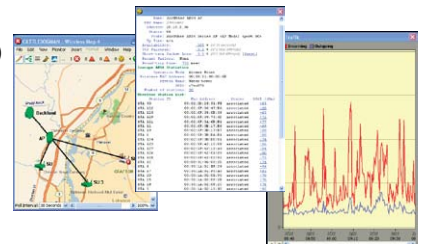


InterMapper
Network Monitoring & Alerting Software

Free Non-Expiring Download for 10 devices

With InterMapper you can track your fixed wireless gear (AP, CPE), Backhauls and other networked equipment. It will:

- Monitor your network 24/7
- Ensure Quality of Service (QoS)
- Realize ROI quickly
- Chart data/analyze trends
- Display signal strength
- Send alerts about problems



Free Non-Expiring Download for 10 devices

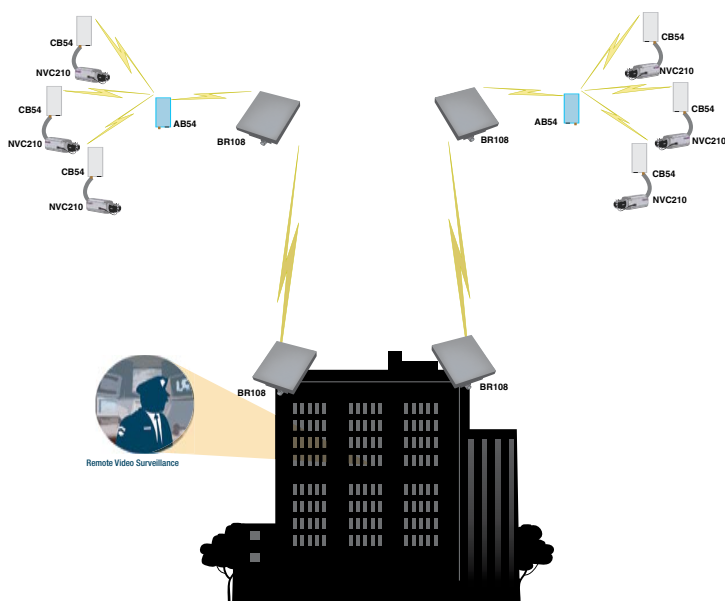
Courtesy of Inscape Data

www.dartware.com/inscapedata

Dartware
Network Monitoring & Troubleshooting Software

Due to the laws of physics, wireless signals spread out and get weaker as they leave the antenna, lose significant strength when incident with an obstacle, and reflect off ground, bodies of water, or a building. Understanding the fundamental wireless knowledge will lead to the understanding most wireless signal operates optimally with line of site and using two access points or base stations on the same channel will lower overall network bandwidth, which means less number of cameras.

One of the common mistakes of outdoor wireless video network deployment is the default use of omni-directional antennas. Omni-directional antennas radiate wireless signal in all direction and is great to radiate signals everywhere. However, antennas also function as a receiver, therefore accepting noise and possible interfering signal from all direction as well. Care should be taken when selecting the type of antenna used and in most cases determines a successful and reliable wireless video network deployment. Remote wireless video surveillance in the distance beyond several miles is also possible with license exempt wireless video transmission. Long range remote wireless video surveillance makes possible to centralize video surveillance from several remote areas. This opens up deployment of video surveillance cameras almost anywhere. You may learn the fundamental of wireless and more from Inscape Data Certified Professionals (IDCP) two day training course offered to Inscape Data premiere resellers.



Wireless Video Security Network Diagram

A World of Possibilities

Armed with wireless fundamental knowledge and deployment confidence, the application possibilities brought fourth by license exempt long range wireless transceivers are many. The commercial parking lot video surveillance project once too costly maybe revisited. The multi-billion dollar homeland security application to secure our borders and ports may fall into your pipeline. There are also many video surveillance applications where long range wireless video transmission and power via solar panels is the only available option.

Wireless communication for the security sector is not limited to video surveillance. Wireless Access control has seen traction and is gaining popularity. The increasing demand for wireless access control has similar patterns and reasons as seen for demand in wireless video surveillance. Similar demand is required in the access control market to transmit video, voice, relays, and sensors from the satellite stations to the master station economically and reliably. License exempt wireless transceiver along with a solid video server multiplex input and outputs from the satellite station and serve the master station the data and signal it requires. This opens up

access control applications to managing hundreds of entrances or gates across from several campuses from a single location without dedicated hard wiring. If the cost savings of no wires and fast time to deployment is still not considered enough, consider the savings of non-recurring cost of remote access control or video surveillance. Traditional hard wire remote option requires leased T1, fiber, or DSL lines. With wireless there is network ownership and no inherent recurring monthly cost to operate.

Final Thought

Wireless communication as an economical transport medium alternative for security application is a driving factor for security professionals to keep up with the technology trend. Many security projects will be won and lost with the deciding factor as to the cost savings of using wireless. Despite previous trend or myth in under performed and over priced wireless options, new wireless technology and manufacturing process has brought forward to the security market economical, secure, and reliable alternative to hard wiring. This trend will gain more momentum as the convergence of IP based products in the era of explosive growth in IP enabled devices. For inquiries about Inscape Data's line of turnkey long range outdoor wireless products and IP video surveillance, please visit Inscape Data's website at www.inscapedata.com.

Inscape Data

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About Inscape Data Corporation

Founded on a culture of business excellence and product innovation, Inscape Data is an industry leader in long range wireless communication and IP based video surveillance systems. They offer a full suite of turnkey solutions for long range 2.4GHz & 5GHz wireless and IP based video surveillance applications, including their AirEther™ Wireless Systems with IP67/68- (Ingress Protection) certified all-weather wireless systems and their AirGoggle™ IP based Video Security Systems based on MPEG-4 video compression standards.

With strong, dependable, and proven manufacturing capabilities in Taiwan, Inscape Data is committed to delivering products that provide differentiated value to its customers and partners worldwide. Continuing in this pioneering spirit of excellence and innovation, Inscape Data looks forward to developing and introducing cutting-edge technology solutions with a unique competitive advantage to the marketplace in the future.