

IP VIDEO LINK MPEG4

NSM Surveillance offers several Broadband Wireless pre-packaged and pre-configured high-speed solutions in NEMA approved outdoor weather resistant housing. These units have been used by the communications, broadcast, cable and law enforcement for years, thus blend in and deterring detection.

We offer a variety of outdoor **point to point** (one transmit and one approved receive site) and well as **multipoint to point** (Multiple transmit to one receive site) systems that deliver secure high-speed Internet and Ethernet transmission in the most demanding outdoor environments.

Our systems can be installed in fixed locations for long-term, use, or moved at will in a mobile configuration. Once purchased, there are no recurring costs, unless you need to upload digital imagery onto internet. Those costs and installation configuration would be set by your IP provider.

NSM Surveillance products use the highest MPEG4 standards to transmit video in the highest quality and greatest available speed. We offer superior reliability. Our microwave links are least prone to multi-path in congested city environment.

We use sector antennas whenever possible but omni antennas are available. Our turnkey video systems include digital OFDM transceiver, MPEG4 video encoder and incorporate 128 bit data encryption. The proprietary code modifications increase and optimize packet traffic for video, plus adaptive polling enables QOS for each user. Additionally, radio power output is adjustable by trained techs. As others use this technology in an area, units can be adjusted to operate at higher power output levels to improve performance.

Being a leader in the Law Enforcement community for years NSM Surveillance has combined ease of installation with flexible spectrum management. With limited training, the novice tech can create wireless broadband solutions to address limitless applications like:

- Covert cameras,
- Overt and citywide cameras, building, infrastructure, ports, harbors, traffic,
- Mobile video, command centers, aerial applications,
- Repeater operations,
- Interface with existing microwave, fiber, and coax.
- Citywide command and control centers.



Product Highlights

- **Point to Point and Multipoint to point video links**
- **Operation in the Unlicensed 5.8 GHz and Licensed 4.9 GHz public safety band**
- **State of the art MPEG4 video compression**
- **128bit AES data encryption**

Ordering guide

Model #	Description
90862	Point to Point camera encoder integrated 23dB panel antenna
90863	Point to Point camera encoder external antenna
90864	Point to Point camera decoder integrated 23dB panel antenna
90865	Point to Point camera decoder external antenna
90866	Multipoint camera encoder integrated 23 dB panel antenna (5.8 GHz only)
90867	Multipoint camera encoder external antenna (5.8 GHz only)
90868	Multipoint Base station external antenna 4 camera system
90869	Multipoint Base station external antenna 8 camera system
90870	Multipoint Base station external antenna 16 camera system
90871	Omni antenna 12 dB multi point base station
90872	120 degree sector antenna multipoint base station

* Order antennas separately see NS antenna data sheets for other available antennas

Networking Features

Network device type Ethernet bridge, IP router
 Media Access Control TurboCell Polling Protocol
 Engineered for multipoint networks
 Adaptive Dynamic polling algorithm
 SuperPacket Aggregation
 Optimized for Internet traffic
 RADIUS Authentication
 IP Routing RIP II
 Bridging Yes, 100% transparent (protocol independent)
 Bridge Filters MAC address, Protocol ID
 Spanning Tree
 Automatic channel searching CPEs
 Encryption DES (56-bit), Blowfish (128 bit), AES (128 Bit)
 DHCP Client & Server
 Static and Dynamic IP address
 NAT
 Roaming in the subnet
 Bandwidth Management:
 SNMP Management Yes,
 GUI Management utility included
 SNMP Support MIB II and Private MIB

Video Compression Features

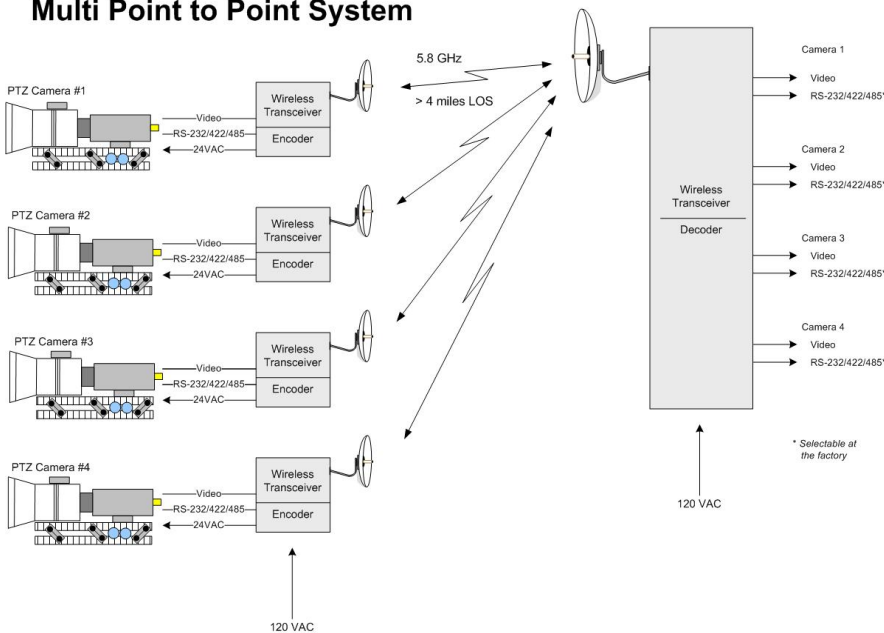
Compression: MPEG4-ASP video compression
 Resolution: QCIF (160x112), CIF (352x240), D1 (720x480)
 Frame rate: 30 fps at CIF resolution
 Protocols: TCP, UDP, HTTP, PPPoE, DDNS, DHCP, IGMP

RF Features

	5.8 GHz Freq. Specs	4.9 GHz Freq. Specs
Operational Freq. Band	5725 – 5850 MHz	4940 – 4990 MHz
	5 non-overlapping channels with a bandwidth of 20 MHz:	Single channel: 4965 MHz with a bandwidth of 20 MHz
	5745 MHz - Channel 149	
Channels (user selectable)	5765 MHz - Channel 153	
	5785 MHz - Channel 157	
	5805 MHz - Channel 161	
	5825 MHz - Channel 165	
Over-The-Air Data Rate	User selectable up to 36 Mbps	User selectable up to 36 Mbps
Throughput¹	16 Mbps ²	16 Mbps for single channel operation
Modulation Scheme	OFDM-QPSK	OFDM-QPSK
Radio Operation	Time Division Duplex (TDD)	Time Division Duplex (TDD)
FCC Certified	Yes	Yes
Transmit Output Power	+14 dBm for standard ver. +23 dBm for amplified ver.	+10 dBm for standard ver. +23 dBm for amplified ver.
Receiver Sensitivity³	-72 dBm @ 36 Mbps -76 dBm @ 24 Mbps -80 dBm @ 18 Mbps -82 dBm @ 12 Mbps -83 dBm @ 9 Mbps -84 dBm @ 6 Mbps	-72 dBm @ 36 Mbps -77 dBm @ 24 Mbps -81 dBm @ 18 Mbps -83 dBm @ 12 Mbps -84 dBm @ 9 Mbps -85 dBm @ 6 Mbps
Maximum Receive Level	-30 dBm	-30 dBm

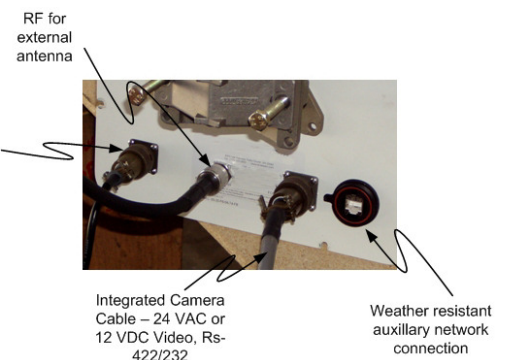
1. This is a typical figure. Actual throughput varies according to the specifications of the antenna used and the conditions of the terrain.
2. The throughput of a Flat Panel client is 12 Mbps.
3. Actual receiver sensitivity for individual products may vary based on manufacturing process and environmental variations.

Multi Point to Point System



Base Station, Camera Encode, Decoder, with External Antenna
 Camera Encoder, Decoder with 23 dB panel antenna

Camera Encoder Rear Panel Connections



Point to Point System

