CITY OF TORRINGTON

PURCHASING DEPARTMENT
140 Main Street, Room 206
Torrington, CT 06790

Pennie Zucco, Purchasing Agent
Phone: (860)-489-2225
Fax (860)-489-2547
Email: pennie_zucco@torringtonct.org

April 28, 2021

Mayor Elinor Carbone
Members of the City Council

RE: RF P#SCC-016-042121 INSTALLATION SURVEILLANCE CAMERA SYSTEM

The City of Torrington received seven (7) proposals for the Sullivan Senior Center Surveillance Camera System.

After review of the proposals and references, it is the recommendation from Joel Sekorski, Director of Elderly Services, Gerry Crowley, IT Director and the Purchasing Agent to have City Council authorize the Mayor to award the Sullivan Senior Center Surveillance Camera project to Setronics, Billerica, MA in the amount of $11,769.00 and to have the Mayor act on the behalf of the City regarding the execution of the contract and its administration.

Funding of this project is through Donations to the Sullivan Senior Center.

Thank you for your consideration on this matter.

Pennie Zucco
Purchasing Agent

cc: J. Sekorski; G. Crowley

4/29/2021 1:29 PM
RECEIVED FOR RECORD
TORRINGTON TOWN CLERK

	Setronics Billerica, MA	Nationwide Security Corp. Branford, CT	Environmental Sys. Corp. West Hartford, CT	ITS Wallingford, CT	Advanced Video Security Waterbury, CT	Mammoth Security Inc New Britain, CT	Soundworks & Security Torrington, CT
NON COLLUSION	YES	YES	YES	YES	YES	YES	YES
ADDENDUM	YES	YES	YES	YES	YES	YES	YES
PRICE PER CAMERA(11)	$261.00/ea.	$1,044.00/ea.	$1,195.00/ea.	788.85/ea.	$710.00/EA.	$270.72/ea.	$801.45/ea.
Wall mount	$45.00/ea.	$11,484	$13,145.00	$8,677.35	$7,810.00	$2,977.92	
	$3,276.00						
SERVER	$1,329.00	$5,394	$2,149.00	$1,942.50	$980.00	$1,888.56	$3,898
LICENSING FEE	N/A	N/A	N/A	N/A	N/A	$95.04	N/A
INSTALLATION	$4,651.00	included in camera cost	$957.00	$3,901.60	$1,000.00	$640.00	$4,885.00
				.			included in camera cost
Permit fee							$625.00
TOTAL PRICE	$9,256	$16,877	$16,251.00	$16,888	$9,790.00	$14,799.10	$16,572.80
OPTION 2							
PRICE PER CAMERA (3)	$261.00/ea.	$1,044.00/ea.	1578.00/ea.	incl. option 1	$710.00	$1,008.00	$801.45/ea.
wall mount	$45.00/ea.	$3,132	$4,734.00	incl. option 1			
	$873.00				$2,130.00		
HARDWARE	$358.00	$2,437	$497.00	incl. option 1	$1,460.00	$109.98	$1,100
LICENSING FEE	N/A	N/A	N/A	N/A	N/A	$95.04	N/A
Installation/training, etc.	$1,282.00		-	incl. option 1			$2,040.00
							included in camera cost
TOTAL OPTIONS 1 & 2	$11,769.00	$22,446.00	$21,482.00	$16,888.00	$13,380.00	$14,799.10	$22,237.22
TIME FRAME	Jun-21	3 WEEKS	1 WEEK	30-45 DAYS	2 WEEKS	4 DAYS	2 TO 3 WEEKS
CAMERA TYPES	VIVOTEK FD9388-HTV	MEGAPIX DWC-MB45WiAT		SPECO O8VD1	UNIVIEW IPC3635SBADZK10	WISENET XNV-9082R	PANASONIC M-87V-4K
		MEGAPIX DWC-MVC8WiATW			UNIVIEW IPC3638SBADZK10	WISENETQNV-801OR	ADVANCED DOME CAMERA

Proposal for City of Torrington - Installation of a Surveillance Camera System
RFP #SCC-016-042121

Prepared for:

Prepared by:

setronics
security integrators

Paul Ziemba
pziemba@setronics.com

setronics
security integrators

April 16, 2021

City Hall
Pennie Zucco
Purchasing Agent, Room 206,
140 Main St., Torrington, CT 06790

Re: **City of Torrington - Security Camera Installation – RFP# SCC-016-042121**

Dear Pennie,

Thank you for the opportunity to present our proposal and company credentials for the above-referenced project.

By way of introduction, Setronics designs, installs and services customized, fully-integrated security systems for a wide range of customers throughout New England and has been doing so since 1969.

We know and understand that customers have options when choosing the right partner. An Electronic Security Solution alone isn't a differentiator, it's how we do business with our customers. We've crafted the best solutions not just to support your security needs, but to support your overall business strategy. We have been told by our clients that the Setronics culture is one that positively influences the customer experience. From this simple yet often overlooked practice, we believe the greatest long-term customer relationships are developed based on trust, mutual interests and shared strategies.

Our security systems offerings include:

- Video Surveillance (CCTV)
- Access Control
- Intrusion Alarm
- Emergency Communications
- Fire Alarm Systems (including inspection services)
- Central Monitoring
- Electrical/Wiring

Thank you for the opportunity for your business.

Sincerely,

Paul Ziemba
Sales Executive
pziemba@setronics.com
413-758-5454

RFP #SCC-016-042121 INSTALLATION SURVEILLANCE CAMERA SYSTEM

Bid opening: April 21, 2021 **Time:** 11:00 AM **Location:** City Hall, 140 Main St. Room 206, Torrington, CT

Bid Bond or Certified Check required with bid: 5%

Performance Bond required if awarded bid: "See Instruction to Bidders"

MUST SUBMIT AN ORIGINAL AND (3) EXACT COPIES.

The City of Torrington reserves the right to accept or reject any or all bids or any portion thereof, to waive technicalities, and to award the contract as will best serve the public interest.

Omit State and Federal Taxes.

All prices must be F.O.B.: Destination (Torrington) unless otherwise requested.

Dated in Torrington: March 23, 2021   Purchasing Agent _____
                                                                              Pennie Zucco

Item	Extended Price
PURCHASE AND INSTALLATION OF VIDEO SURVEILLANCE CAMERA SYSTEM AT SULLIVAN SENIOR CENTER FACILITIES PER SPECIFICATIONS	*See Attached Price Sheet*

The Purchasing Agent is authorized to offer City based bidders that exceed the lowest bid by up to 6%, the opportunity to match the lowest bid. A City based bidder within the 6% differential who agrees to accept the amount of the lowest bid will be awarded the bid. When multiple City based bidders agree to accept the amount of the low bid then the City based bidders will be invited to submit a new bid, not to exceed the low bid. The bid will then be awarded to the lowest responsive, responsible bidder.

Bidder: ___Setronics Corp._____

Address: ___5 Executive Park Drive, Billerica MA & 48 Gospel Lane, Portland CT___

(Signed By) ___[signature]_____   Title: ___President_____

Name (please print) ___Brian LaCroix_____   Date: ___4.15.2021_____

Phone: ___978-671-5440___   Fax: ___978-671-5448___   E-Mail: ___blacroix@setronics.com___

Federal Tax Identification Number: (FEIN) ___47-3334460___

Comments: ___Contact Name of Sales Person submitting bid: Paul Ziemba / pziemba@setronics.com___

CITY OF TORRINGTON
Addendum # 1

ADDENDUM 1 HAS BEEN ISSUED REGARDING QUESTIONS FOR THE INSTALLATION SURVEILLANCE CAMERA SYSTEM

RFP# SCC-016-042121 INSTALLATION SURVEILLANCE CAMERA SYSTEM

Date of bid opening: **April 21, 2021** Time:**11:00 AM** Location: City Hall, **140 Main Street, Room 206, Torrington**

Submit signed addendum with Quote.

The City of Torrington reserves the right to accept or reject any or all bids or any portion thereof, to waive technicalities, and to award the contract as will best serve the public interest.

Dated in Torrington: April 14, 2021   Purchasing Agent _____
                                                                    Pennie Zucco

Contact name _____ Brian LaCroix _____ Phone: 978-671-5450 _____

Authorized Representative ____ Brian LaCroix _____

Authorized Signature _____

Company name _____ Setronics Corp _____

Address _____ 5 Executive Park Drive _____

City, State, Zip _____ Billerica, MA   01862 _____

Fax _____ 978-671-5458 _____ Email _ blacroix@setronics.com _____

Federal Tax Identification Number: (FEIN) ___ 47-3334460 _____

Q1) Are Hikvision products permitted in the bid?
A1) NO, will not be allowed for this bid

Q2) Will the City of Torrington waive the permit fee?
A2) Building Department Fees will be waived, but the State Fees of $0.26/$1,000.00 must still be paid by the Contractor. Awarded Contractor will still be required to get a permit

Q3) Is there asbestos in the building?
A3) NO

Q4) Is the project Prevailing Wage?
A4) No, Only over $100,000.00

Q5) Is 24/7 support with 2-hour response required?
A5) No, this is not going to be a requirement for this bid. It is preferred that the company respond to issues and questions within 24 hours during business hours.

Q6) Is there Wi-Fi in the garage and buildings?
A6) The building has Wi-Fi but the garage does not have Wi-Fi or Internet.

EXHIBIT A - PRICE SHEET

OPENING DATE: **APRIL 21, 2021, 11:00 AM**

ꞮEM: **INSTALLATION SURVEILLANCE CAMERA SYSTEM PROJECT AS SPECIFIED.**

Unit Price per Camera installed __Camera - $261 Wall Mount - $45 *Actual price per installed camera varies depending on wiring distance from NVR__

Unit Price NVR/DVR __$1085__

Unit Price Licensing (if applicable) __N/A__   PRICE OF

INSTALLATION CONFIGURATION: _____ Complete system installation, programing, wiring, training $4,651

TOTAL PRICE DOLLARS/CENTS: __Option 1) $9,256__

TOTAL PRICE IN WORDS: __Nine thousand, two hundred fifty six dollars and 00/100__   **(option 1 Main Building only)**

TIMEFRAME FOR COMPLETION OF PROJECT: __June 2021 - 1 week onsite__

OPTION 2:   **TOTAL PRICE FOR OPTION 1 & 2 = 11,769.00**

Unit Price per Camera installed __Camera - $261 Wall Mount - $45 Actual price per installed camera varies depending on wiring distance from NVR__   Unit Price

Network Bridge Hardware (if applicable) __$358__

Unit Price Licensing (if applicable) __N/A__
Price of installation configuration: Complete system installation, programing, wiring, training $1,282
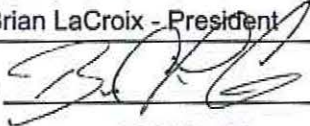**Total price: $2,513   (option 2 Garage Building only)**
ADDITIONAL ORDERS: The City would like the option to increase the quantity of Cameras/ Hardware at the quoted price through additional orders. Please indicate the timeframe allowed for additional orders: ___6 weeks___

Optional Preventative Maintenance Program Including 2 on site PM visits per year: **$2500**

COMPANY NAME: __Setronics Corp.__   DATE: __4.16.2021__

ADDRESS: __5 Executive Park Drive, Billerica MA / 48 Gospel Lane, Portland CT__

COMPANY REPRESENTATIVE/TITLE: __Brian LaCroix - President__

COMPANY REPRESENTATIVE (signature) _____

FEDERAL TAX IDENTIFICATION NUMBER (FEIN) __47-3334460__

Paul Ziemba <pziemba@setronics.com>
Tuesday, April 27, 2021 2:13 PM
Pennie Zucco; blacroix@setronics.com
Joel Sekorski

ibject: RE: SCC-016-042121 INSTALLATION SURVEILLANCE CAMERA SYSTEM

Hi Pennie,

I check on the bid and found that the submitted bid price was correct. There are 2 reasons for the discrepancy in the itemized bid pricing:

- Building #2 - Not all of the cameras require a wall mount, only the exterior cameras
    - The interior camera on building 2 does not require a wall mount. That accounts for the -$45 difference in Option 2. If you put in $45 x 2 in line 2 it will balance
- Building #1 - There are 2 cameras in the main building that do not require a wall mount (#2 & #14 in the submitted drawing) This accounts for -$90 of the difference in Option 1
    - There are (2) hard drives in the NVR. When I put in the cost of the NVR, I only included (1) hard drive in that calculation. The other one is $244.
    - +$244 -$90 = the $154 difference.

So again, the total submitted price is our correct bid. The above accounts for the difference in the itemization.

Sincerely,

Paul H. Ziemba
Sales Executive

setronics

..... **security integrators**

C 413-758-5454
Office 978.671.5450 Main
Office 978.941.4699 DIRECT
FAX 978.671.5448
www.setronics.com

ITC71 Security, Surveillance, Monitoring, and Access Control Statewide Contract

exacqVision
Elite
Reseller

AXIS COMMUNICATIONS

CERTIFIED PROFESSIONAL

APPENDIX A
STATEMENT OF REFERENCES
REQUEST FOR PROPOSAL
SCC-016-042121 INSTALLATION SURVEILLANCE CAMERA SYSTEM

List five references which demonstrate your ability to supply equipment and services included in the scope of the specifications. Attach additional pages if required. The City reserves the right to contact each of the references listed for additional information regarding your company's qualifications. Email addresses must be included with the contact information.

Reference No. 1
Customer Name: __Stamford Government Center, Liberation House – Stamford CT__
Contact Individual: __Arnold Knittel - Program Specialist__ Phone No: __203-977-5731__
Address: __115-119 Main St., Stamford, CT 06904__
Email address: __aknittel@stamfordct.gov__ Year: __2019__
Description of system installed: __Installed Security Camera System__

Reference No. 2
Customer Name: __Boston Sand & Gravel__
Contact Individual: __David Kelley - Director of Operations__ Phone No: __617-721-6072__
Address: __40 Bunker Hill Industrial Park, Charleston MA__
Email address: __dkelley@bostonsand.com__ Year: __2020__
Description of system installed: __Installation of Security Cameras and Access Control__

Reference No. 3
Customer Name: __Town of Dedham__
Contact Individual __Denise Moroney - Director of Facilities__ Phone No: __781-310-1141__
Address __140 Whiting Ave., Dedham, MA__
Email address: __dmoroney@dedham.k12.ma.us__ Year: __ongoing since 2016 - current__
Description of system installed: __Installed Security Cameras, Access Control, Intrusion Detection__

Reference No. 4
Customer Name: _____
Contact Individual: _____ Phone No: _____
Address: _____
Email address: _____ Year: _____
Description of system installed: _____

Reference No. 5
Customer Name: _____
Contact Individual: _____ Phone No: _____
Address: _____
Email address: _____ Year: _____
Description of system installed: _____

APPENDIX B
CITY OF TORRINGTON
RFP # SCC-016-042121 INSTALLATION SURVEILLANCE CAMERA SYSTEM
Acceptance of Terms of this Agreement
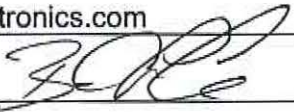
Name of Proposer: Setronics Corp.

Contact Person: Paul Ziemba - Sales Executive

Address: 5 Executive Park Drive

City/State/Zip: Billerica, MA 01862

Telephone: 413-758-5454   Fax: 978-671-5448

E-mail: pziemba@setronics.com

Authorized Signature _____   Title: President

Name Printed: Brian LaCroix   Date: 4.16.2021

It is agreed by the above signed proposer that the signature and submission of this proposal. Represents the proposer's acceptance of all terms, conditions, and requirements of the proposal specifications, and, if awarded, the proposal will represent the agreement between the parties.

The proposer agrees that the cost of any work performed, materials furnished, services provided, or expenses incurred, which are not specifically delineated in the proposal documents, but which are incidental to the scope, intent, and completion of this contract, shall be deemed to have been included in the prices for the various items scheduled.

FORM FOR OMITTED ITEMS:

N/A

NON-COLLUSION AFFIDAVIT

STATE OF __MA_____ COUNTY OF __Middlesex_____

I, __Brian LaCroix_____, being first duly sworn, deposes and says that:

1.   I am __the President_____
     of __Setronics Corp._____, the Bidder that has
     submitted the attached Bid for " __Video Surveillance System - City of Torrington__ ":

2.   I am fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such bid;

3.   Such Bid is genuine and is not a collusive or sham Bid;

4.   Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties of interest, including this affiant, has in any way colluded, conspired, connived or agreed directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Bid in connection with such Contract, for which the attached Bid has been submitted nor has it in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the price of any Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the City of Torrington or any person interested in the proposed Contract; and

5.   The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of it agents, representatives, owners, employees, or parties in interest, including this affiant.
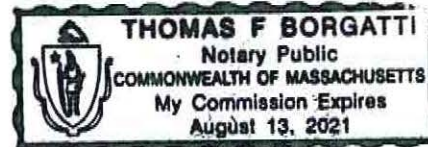
(Printed) __Brian LaCroix_____

(Signed) _____

(Title) __President_____

Subscribed and sworn to before this __15__ day of __April_____, 20__21__.

_____
Notary Public Printed

_____
Notary Public Signature

My Commission Expires __8/13/21__

THOMAS F BORGATTI
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
August 13, 2021

(Notary Seal)

NOTE: Documents must be signed before and sealed by a Notary Public. Only documents bearing a notary seal will be accepted.

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5 Executive Park Drive | Billerica MA 01862
48 Gospel Lane | Portland CT 06480
P: 800-640-4550
www.setronics.com

Vendor Information

1. **Name of firm:** Setronics Corp.
2. **Address of firm:** 5 Executive Park Drive, Billerica, MA 01862
3. **Years in Business: 50+**(established 1969)
4. **Phone / Fax:** 978-671-5450 / 978-671-5448
5. **Website / Email:** www.setronics.com / pziemba@setronics.com
6. **FEIN #:** 47-3334460

By way of introduction, Setronics designs, installs and services customized, fully-integrated security systems for a wide range of customers throughout New England and has been doing so for over 50 years. A sampling of customers that we have performed similar projects for include: Hannaford, Stop & Shop, Town of Dedham, Boston Sand & Gravel, Town of Bedford, Montachusetts Regional Transit Authority (MRTA), amongst many, many others. Setronics has performed similar projects throughout New England in Municipalities, Retail Establishments, Warehousing, Parking Garages, Housing Authorities, Educational Facilities, Distribution Centers and more.

The relationship of this project to our corporate purpose is that this project is an "exact" fit to everything we have been successfully doing for our clients since 1969. We know and understand that customers have options when choosing the right partner. An Electronic Security Solution alone isn't a differentiator, it's how we do business with our customers. We've crafted the best solutions not just to support your security needs, but to support your overall business strategy. We have been told by our clients that the Setronics culture is one that positively influences the customer experience. From this simple yet often overlooked practice, we believe the greatest long-term customer relationships are developed based on trust, mutual interests and shared strategies.

Our security systems offerings include: - Video Surveillance (CCTV) - Access Control - Intrusion Alarm - Emergency Communications - Fire Alarm Systems (including inspection services) - Fully Integrated Security Systems - Central Monitoring Services and more.

Setronics strongly believes that we would be best suited for this project based on the exceptional technical skillset we offer as a top leader in the security industry today for design, installation and service of integrated security solutions. Additionally, we offer:

- 50 years of providing integrated and cost-effective security solutions
- Over 500 man-years of related technical experience offered in-house
- Installation and aftermarket service throughout the Northeast

Setronics Support Offerings (Design Phase)

- Conceptual & system design studies
- Budgetary estimates & ROI justifications
- Technology recommendations & demonstrations
- Functional & system specifications

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- Risk, threat & vulnerability assessments
- Chapter Nine Narratives (MA)

Setronics Implementation Offerings
- Competitive costing & formal bids
- Full system supply & installation
- Commissioning & customer training
- Component supply & system configuration

Setronics Service Offerings
- Maintenance & Inspection programs
- Diagnostics & upgrades
- Full warranty & aftermarket service

We have direct relationships with suppliers.
No matter how unique the customer's situation may be, Setronics has immediate access to the latest security products to meet the needs of our customers. We have *direct relationships with suppliers* that allow us to pass on maximum value to our customers and ensure prompt availability of all components. We shorten delivery cycles by maintaining regional warehouses, each with an extensive inventory of products and parts.

We offer quality service.
Quality service is perhaps one of the biggest differentiators that sets us apart from any other security company. We not only talk the talk, but actually walk the walk and have been doing it seamlessly for many years. Setronics' technical support and repair capabilities have been carefully designed, from the ground up, to be more efficient and responsive than our competition. Our "Setronics Guarantee" provides comprehensive and uniquely customized, on-site service with every solution. This guarantee goes above and beyond most manufacturers' warranties. **But don't just take our word for it - go ahead and ask our customers!**

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our history

Incorporated in 1969, Setronics quickly garnered industry attention based on its depth and breadth of technical expertise combined with its ability to deliver on what is still the cornerstone of our Company today, Customer Service. Setronics' unique blend of talents as a manufacturer, engineer, consultant, integrator, service provider, certified repair center, network support administrator and financing entity have been continually demanded by businesses through today, including Fortune 500 companies and major corporate conglomerates. Our industry focus has historically been in retail environments as well as educational facilities, municipalities, financial institutions, corporate campuses, warehouse and distribution facilities and manufacturers among others.

Since its early beginnings, the security marketplace has continued to explode exponentially. Competitive pressures and advanced technical qualifications have made it increasingly difficult for many integrators to provide the full scope of expertise and quality support services customers expect. By blending traditional values and technological talents Setronics has stayed true to its core and ahead of its competition.

Among its many industry accomplishments throughout the years, Setronics has designed a conceptual IP Enterprise Solution for a major international financial institution. More recently, we have designed and engineered a multi-phase IP migration solution for a fortune-500 retailer, currently in the execution and early support stage of the project lifecycle. Finally, Setronics has played a significant engineering role in the advancement of the well-known American Dynamics DVR line, earning the company the past distinction as Product Advisory Board Member.

Technologies and business needs continue to change, but the one constant you can be assured of is Setronics' commitment to its valued customers long after a recommended solution has been implemented. Customers have repeatedly and very recently said "Setronics does whatever it takes to get things done, period". "Getting it done", in our eyes, is providing a level of service and professionalism that is not just talked about to attain a sale, but is based upon proven performance year after year, well after the original sale has taken place.

We take our reputation very seriously and are confident that it shows in all aspects of what we do.

As many of our written materials proudly boast:
"Our comm itm eitb the security of your busin ess does n ot en d with im plem en teti. It begins there."

vision statement

Setronics has always stayed true to its vision to be recognized as the leading industry supplier for security integration, offering the best-in-class design, service and support.

By combining our values of quality, integrity, and trust with our ability to identify and design systems using the best available products and technologies, we provide customized security solutions and exceptional service and support. We are committed to servicing our clients' needs for the lifetime of our relationship.

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Established in 1969 as a family owned and operated business, we have continuously grown our reputation as a security systems integrator known for innovative designs, quality installations, and exceptional service. All of our security offerings have been built around understanding the needs of our clients and developing long-term relationships with them. Now in our fifth decade as a respected industry leader, we continue to provide personalized integrated security solutions for thousands of customer locations. Setronics welcomes the opportunity to support your security requirements with a customized solution designed to help protect your facilities and enhance your business operations.

technology partners

Immediate access to the latest security products is critical in meeting the needs of our customers. We have direct relationships with our suppliers that allow us to pass on maximum value to the customer and ensure prompt availability of all components.

Setronics is an authorized distributor of security products from numerous technology product leaders. To shorten delivery cycles, we maintain regional warehouses, each with an extensive inventory of products and parts. And, our fully stocked service vans are equipped with a wide range of components, allowing technicians to immediately resolve many repair issues on-site.

a few of our key clients

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········ security integrators

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48 Gospel Lane | Portland CT 06480
P: 800-640-4550
www.setronics.com

licenses / certifications

Some of Setronics' major licenses, certifications and certifications pursuance are listed below:

- **Multi-State Licensed Electrical Contractors**
- **Multi-State Licensed Low Voltage Technicians**
- **Multi-State Licensed High Voltage Technicians**
- **Certified Repair Technicians**
- **Electrical Engineers**
- **Certified Professional Accountants**
- **Network Administrators**

services offered

We pride ourselves in our depth of expertise related to our core business, video surveillance, and our breadth of services within it. To truly be an expert in a Security Integration field, it is our firm belief that the selection of a core aptitude such as video surveillance and the ability to integrate that into other technologies such as access control, point of sale or alarm networks provides the customer with the greatest vendor competencies and solution alternatives. Within video surveillance applications, alone, there are a multitude of technology and equipment types, services and required professional qualifications. We are unequivocally second to none in our complete video surveillance capabilities.

Current services offered are listed below.

- Risk Assessment and Consultation
- Design and Engineering
- Product Procurement and Distribution
- Implementation and Integration
- Flexible Lease and Finance Options
- Complimentary On-Site Service Warranty
- Loaner Equipment Programs
- Extended Maintenance Plans
- Customer and Technical Support Hotlines
- On-Site Technical Support
- Equipment Repair
- Remote Video Network Support
- Post-Incident Video Network Auditing
- 24/7 Monitoring Services

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meet the team

Our most valued resource is our people. We proudly boast that all members of our team "know the business" top to bottom. Most, if not all, of our staff has at one time either been a field technician, repair technician, customer service representative or manager in various capacities. All of our employees have a strong retail and service industry background that is evident by our focus on Customer Service. It is not unusual for a Customer to receive a courtesy visit from one of our technicians or a phone call from one of our Managers to ensure that our promise is being delivered: unsurpassed commitment to our Customers and their security needs.

Some of our key contributors are listed below.

Brian A. LaCroix – President

Brian joined Setronics in 2002 as a Field Service Technician quickly distinguishing himself through his strong commitment to customer service and his ability to creatively design security system solutions. Throughout his tenure with Setronics, Brian has played a key role in engineering a wide range of customized integrated security solutions, each successfully deployed at major retail conglomerates among other industries. This led to Brian's promotion of Project Engineer in 2006. In 2010 Brian was promoted to Vice President of Engineering where he led a cross-functional team that designed, engineered and implemented a multi-phase IP migration project for a Fortune 500 retailer. He was also instrumental in identifying potential business partner ventures to expand on Setronics' industry expertise which led the company to its first business acquisition in 2012. In recognition of Brian's drive to grow Setronics' core competencies and his ongoing commitment to delivering security solutions that exceed customer expectations, Brian was promoted to President in April 2013. Brian holds an Electrical Engineering degree from Northeastern University, Massachusetts's electrical licenses, as well as various certificates from industry manufacturers.

Bill Edmonds

Bill brings more than 25 years of accounting and finance experience to help lead Setronics. Prior to joining Setronics Bill worked in many senior financial positions with companies in the Healthcare, Real Estate Management/ Development, Construction, Advertising, Technology, and Travel industries. His expertise in leading and organizing teams in accounting, finance, human resources, compliance and operations will help Setronics grow its company structure for the future. Additionally, Bill is a champion in risk management, health and safety, compliance and internal auditing, which will help safeguard all of Setronics internal and external processes.

Don Kwapien – Engineering Manager

An Electrical Engineer with a concentration in Network Engineering, Don is entering his second decade of physical security system integration and sales. His prior experience includes Software and Hardware Engineering, as well as product and business development across several industries. With one international instrumentation patent and several products launched by his team, Don has a history of succeeding in developing winning solutions for clients. His security expertise ranges from small business applications to demanding billion-dollar enterprise solutions for international organizations. His portfolio of solutions spans two to three dozen major product lines across video

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meet the team (continued)

surveillance, access control, fire, intrusion, and other supporting technologies. Don has earned a well-known and respected reputation in the industry as a persistent and value-driven technical expert.

Andy Wilder – Sales Executive

Andy has over 28 years of dedicated experience in sales, including 18 years in the security industry. Andy has held positions as National Sales Manager and Director of Sales where he developed and strengthened relationships with his customers and staff. Andy's customer relationships include hospitals, universities and other national commercial accounts. He has designed, sold, and serviced security systems for numerous federal and state agencies, for which he has acquired all necessary security clearances. Andy has held management positions at numerous security equipment manufacturers and has sold customized systems for access control, surveillance, intrusion, intercom, emergency notification, and active shooter programs. In his spare time, he enjoys playing recreational hockey and competitive golf.

Mark Scanlan – Sales Executive

Mark has been involved in the security industry for over twenty-five years. He got his start as a Commercial Locksmith in Irvine, CA where he was first introduced to electronic security. Mark used his installation and service experience to secure a position as an Outside Sales and Branch Manager for a National Distributor in their New England office. In 2005, Mark returned to the service field where he obtained his MA Systems Technician License, which he currently maintains. Most recently Mark was employed as a Regional Sales Manager for a NY based manufacturer of security hardware products and was responsible for sales throughout twelve Northeast US States as well as Eastern Canada. Mark specializes in electronic access control solutions with experience in video as well as intrusion and fire systems. During his career, Mark has been involved in providing custom security solutions to scores of schools, colleges, health care, and commercial facilities.

Paul Ziemba – Sales Executive

Paul joins joined Setronics with over 30 years of sales experience. Over the last 25 years Paul has been in technology, 7 years designing and selling POS systems for the hospitality industry and the last 18 years in the security industry. He has designed and sold systems for power generation plants, hospitals, universities, and various corporate and industrial facilities throughout the northeast. Paul is also certified in Axis.

Jim Bryant – New Business Development Executive

Jim brings Setronics over twenty-five years of retail management experience in the field of Loss Prevention and Asset Protection where he managed 80 retail locations with combined sales of $1.6B. During Jim's tenure in the retail industry he partnered with Setronics in the development of a patent-pending theft deterrent technology. Jim was also a customer of Setronics for nearly 20 years which piqued his interest into joining the service side of the physical security industry. Jim joins our team as a Business Development Executive to build & maintain close client relations as well as generate positive sales growth. Jim prides himself on his ability to foster long-term client relationships, which are based on the shared values of quality, integrity and trust. Jim holds multiple certifications

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meet the team (continued)

including: Loss Prevention, Wicklander & Zulawski Interview and Interrogation, Reid Interview and Interrogation, National Association of Drug Divergence Investigators and Management of Aggressive Behavior.

Tracy Ward – Operations Manager

Tracy joined Setronics in 2010 as Project Coordinator and brought with her eight years of solid Project Management experience in the construction industry. She was promoted to Operations Manager in 2012 and is now responsible for overseeing the daily operations of project installations in the Northern New England region and assisting in the scheduling of all projects throughout our other regions. She is extremely organized, goal-oriented and focused on customer satisfaction and, through her knowledge and experience, has been able to delegate effectively and motivate her team to achieve project completions on time and within budgets. Tracy holds a Bachelor of Science degree in Construction Management from Wentworth Institute of Technology and an MBA from the University of Massachusetts Boston.

Dan Dunn – Project Manager

Dan is a licensed Journeyman Electrician who joined Setronics in 2013 as a Field Technician. Through Dan's hard work and dedication of providing ultimate customer satisfaction he was promoted to Project Manager. Dan has mastered the skills to successfully fulfill his duties within this role and currently leads our field service team through beginning to end phases of security installations and service work. Dan has a wealth of experience behind him and is fluent in the design, installation, programming, networking and service of CCTV, intrusion and access control systems. He is factory certified in a multitude of product lines including Axis, Kantech, Exaq, Avigilon, Amag and many others. Dan attended Porter and Chester Institute and Mass Maritime Academy where he was recognized with a Mass Maritime Cadet Achievement Award.

Timothy Gilligan – Project Manager

Tim is an experienced project manager that has been working in the low-voltage electrical industry for over 13 years. Tim has managed a vast array of projects ranging from large construction projects to small adds/moves/changes and has completed projects with many different system types including: fire alarm, aspiration systems, intrusion detection, CCTV, access control, public address, intercom, clock, speech reinforcement, BDA, emergency phone, phone system, local sound, sound masking, IP television and Sprinkler. With a focus on customer satisfaction and an attention to detail, workmanship and safety, Tim has successfully demonstrated his ability to lead his team through the project lifecycle and provide stakeholders with custom tailored solutions. Tim graduated magna cum laude from Curry College in Milton, Massachusetts and he enjoys spending time outdoors with his wife Kerri and his 3 sons Ben, Nick and Max.

Dean Auger – Project Engineer

Dean joined Setronics in 2006 as a Repair Technician in the Analog Repair Department. Shortly thereafter Dean transitioned to the Digital Repair Division and then progressed forward to our Engineering Department where he assisted with numerous engineering projects. Because of Dean's inherent technical abilities, he was promoted to Project Engineer. In addition to his current responsibilities, Dean now manages the procurement of security

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meet the team (continued)

all components within the Security segment including CCTV, Access Control, Intrusion and **Emergency Comm.** and has been an asset in the field guiding our technicians in both installation and servicing of customer accounts. He is factory certified in Exaq, Avigilon & Amag. With Deans exposure to many facets of the business he has gained a tremendous amount of experience and has advanced **both personally** and professionally as an integral part of Setronics Team(s) including Sales, Engineering, Service, Installation and Finance.

Steve Sharaffa – Field Manager

Steve joined Setronics in 2015 as a Field Manager to oversee the Field Service Technicians and assist in the developmental growth of the Technical team. Since his joining, our team has gained additional skillsets which has brought detail, accuracy and compliance to our project work and customer base. Steve brings a wealth of experience to our organization and is an expert on electrical wiring, repairing electrical equipment, installing electrical systems, Fire Alarm Systems and Security Systems and is a Master Electrician by trade.

Rick Valera – Service Manager

Rick joined Setronics in 2020 as our Service Manager. Rick brings along 30 years of experience in communications, security and network design. His career includes 10 years working within 40 countries with government and military organizations and 24 years working for a large telecommunications company as a Senior Manager of Advanced Services for a client base representing over 1$billion in service revenue. Rick is a Cisco Certified Internet Expert as well as a Certified Business Architect. Rick has a passion for customer success and is known as a trusted advisor to his clients. In his spare time, Rick enjoys restoring antique motorcycles and British sports cars.

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BOSTON SAND & GRAVEL
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617-227-9000 || BostonSand.com

2-10-2021

To Whom It May Concern;

Our camera system is a very valuable tool that many people in this company use in its day to day operations. We have Setronics camera banks in our dispatch office, maintenance facility, and all of our key people can log on to the system from any computer at any time. Over the last five years our cameras have allowed us to correct a lot of bad behavior that we were unaware of before. Being able to show an employee video footage has allowed us to correct a wide range of issues ranging from SOP violations, up to serious safety violations and accidents. We've also used footage to modify best practices and to apply corrective actions when necessary. I can sincerely say that I couldn't imagine this company operating today without our Setronics camera system.

Over the last five years I've had the opportunity to develop a great working relationship with Paul Ziemba, and the Setronics sales and service team. Paul is very knowledgeable and his suggestions on design, hardware, and its placement have been invaluable to us. Sales and service have also been great, all of my dealings with them have been efficient and they were always very professional on site.

In closing I'd like to say that I'd highly recommend the Setronics team to any company that thinks that they could benefit in any way from their products and service. We definitely have.

Sincerely,

David Kelley
Director of Operations
Boston Sand & Gravel Company
dkelley@bostonsand.com
617.721.6072

GREEN-STAR
NRMCA

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System Training

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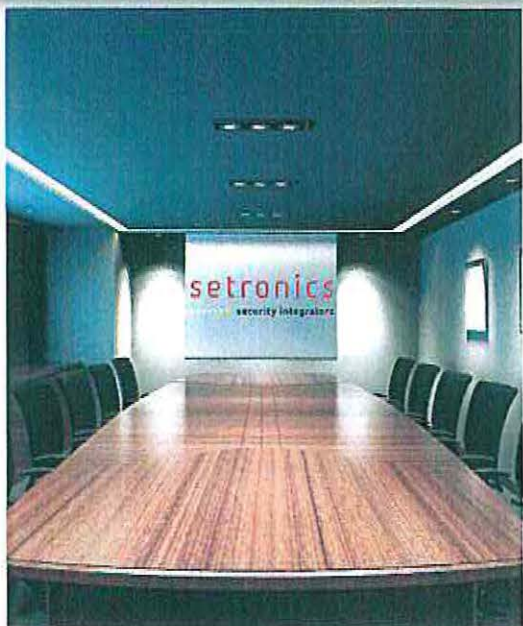
Training services are included in all the security systems Setronics installs and maintains. After the security system installation is complete your staff will be trained on how the system works. Keeping the people who need to know informed in the operation of your new system is important to ensure the smooth implementation of your security and safety protocols. All training is included in the cost of proposal. Training is conducted on-site, post installation and at the time specified by customer. There is no minimum person requirement during our training session. Setronics allots 2-4 hours of training, depending on system complexity. System training includes, but is not limited to:

- System Overview
- Getting Started
- Controls
- Viewing Live Video
- Finding Video Segments
- Playing Back Video Clips
- Remote View Monitoring
- Exporting Video
- Camera call up, recording search and downloading, and service request procedures
- Q&A

As stated on our website:

training is a key component to ensure end user success

Experience has shown that training clients properly on their installed integrated security system gives them an increased level of comfort and confidence. It also results in the correct use of system capabilities and, consequently, maximized return on investment.

Whether you're simply adding to your existing equipment or having a complete system installed at your facility, we will tailor a training program to your needs and skill level to ensure you are 100% comfortable with the system. We'll also provide your staff with training manuals, as well as any additional documentation necessary, to provide you with all the information needed to maximize the benefits of your security system solution.

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SULLIVAN SENIOR CENTER TORRINGTON NOTES

- All cameras quoted are 5 MP
- All cameras quoted are vari focal. This means that you can set the angle of view from 30 – 88 degrees. This allows you to focus more pixels on target on areas that are important to you.
- All cameras quoted are dome cameras. Dome cameras have a significant deterrent advantage over bullet cameras. It is easy for an intruder to see what direction a bullet camera is facing and simply approach from a different direction. An intruder cannot tell which way the dome is facing. Most people also find the dome camera to be more aesthetically pleasing.
- All exterior cameras quoted are mounted on an arm (wall mount). Surface mount cameras tend to get ice, snow, rain, and dirt across the face of the camera when mounted on an exterior surface. By utilizing a wall mount, the dome faces down, thereby keeping the dome cleaner and your view clearer. The wall mount does not in any way interfere with the ability to move and focus the camera on the desired field of view.
- NVR expandability:
  - The NVR quoted can support up to 32 channels. So if you ever need additional cameras you have plenty of room for expansion.
  - The NVR quoted does not require licensing for additional cameras.
  - The NVR quoted has 12TB of storage using (2) 6 TB hard drives. It is expandable using (2) additional hard drive slots if additional storage is required in the future.

VIVOTEK

ND9441P
ND9541P

H.265 16-CH/32-CH
Embedded Plug & Play NVR

H.265/H.264 · 16x PoE Port · 4x HDD · HDMI/VGA Local Display · PoE Management · RAID · Fisheye Dewarp · VIVOCloud · ONVIF · POS Integration

VIVOTEK's ND9441P and ND9541P are H.265 Linux-based standalone NVRs with embedded PoE. Equipped for up to 16-CH/32-CH network cameras, the NVRs both support 16x 802.3 at/af PoE ports which feature PoE Management function to help users troubleshoot the physical layer structure. Both also display the PoE power information, providing for a more convenient and smarter installation.

The ND9441P/ND9541P also supports remote and mobile access via VIVOCloud and iViewer apps for both iOS and Android handheld devices. The VIVOCloud app provides instant push notification and direct video playback functions when triggered by an alarm notification, providing users with a flexible and intelligent NVR for seamless use in small to medium sized video surveillance applications.

With H.265 compression technology and embedded with 4 HDD's providing up to 32TB, the ND9441P/ND9541P offers greater than 30% more recording capacity than H.264 systems. This advancement provides users with more storage space for longer durations of video recording. In addition, the RAID 0/1/5 configurations provide further data security in the rare event of a hard drive failure.

For high-quality and detailed images, the ND9441P/ND9541P supports a maximum network camera resolution of 12-Megapixels. To intelligently manage bandwidth while maintaining this high-quality, the "Auto Adaptive Stream" function will adjust the display resolution automatically for each different layout type. Furthermore, the NVR supports VIVOTEK's fisheye network camera "Fisheye Dewarp" function, which provides multiple de-warping modes in live view and playback, ensuring the correct angle of video view and detailed information for flexible usage. Lastly, to quickly and intuitively find any target event, the ND9441P/ND9541P is equipped with the "Story-Board Search" function, which provides a glimpse of past recordings over an intuitive timeline.

The ND9441P/ND9541P supports HDMI and VGA local video output, so users can control the GUI OSD interface via mouse & keyboard, eliminating the need for a separate PC to search video or playback from the NVR. Additionally, the intuitive and friendly VIVOTEK GUI design gives users a smoother control experience than ever before.

Key Features

- H.265/H.264 Compression Technology
- Plug & Play One Button Auto Setup
- VIVOCloud App & Portal for 24/7 Surveillance
- Support RAID 0/1/5 Storage
- VIVOTEK Camera Configuration and VAST CMS Integrated
- Live and Playback Fisheye Dewarp
- Embedded Linux OS

- Story Board Event Search
- Up to 12MP Camera Liveview & Playback
- PoE Management
- ONVIF Open Platform (Project Support Function)
- POS Integration (Project Support Function)
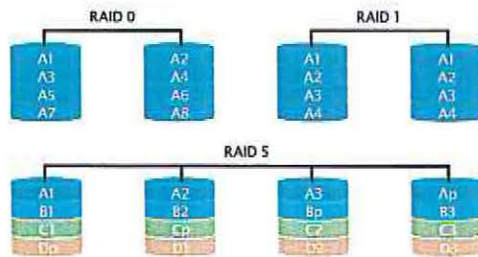- Watermark

Highlight Features

H.265 Compression Technology

To provide high-quality images and efficient video compression for today's surveillance applications, VIVOTEK presents these two NVRs. Endowed with H.265 technology, these NVRs offer more than 30% ~ 50% greater recording capacity than H.264 systems - effectively giving users larger storage capacity for longer durations of high-quality video recording.
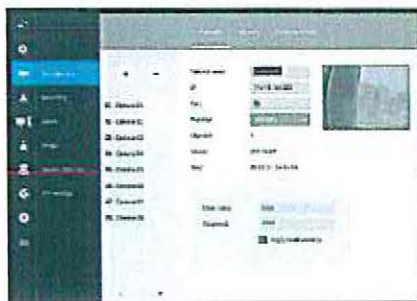
PoE Management

Both NVRs support 16 x 802.3at/af PoE ports which feature PoE management functions, allowing users to easily troubleshoot problems, control power budget for better operation, and set port priority settings to ensure the most important cameras are always on. When system power is overloaded, the PoE ports will auto-reboot for power supply recovery.

RAID

The RAID 0, 1, 5 configuration provides further data security and reliable video storage. (RAID Max. Volume: 16TB)

Auto/Constant Adaptive Stream

The resolution of a Camera's second Stream has two options according to the display layout selected: Auto-Adaptive Stream or Constant Stream. This increases the flexibility to reduce bandwidth and save on total project costs (auto-adaptive stream), or maintain superb video quality (constant stream).

Intuitive UI

With a friendly and elegant interactive design, users can enjoy the benefit of simple operation and an UI that's easy on the eyes.
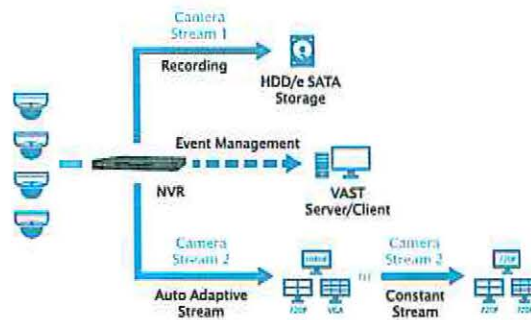
One Button Setup

In order to provide users a highly intuitive experience, VIVOTEK's NVRs provide Auto-Wizard for convenient system set-up, which takes less than 2 minutes to finish it.

Highlight Features

Story Board Event Search

To quickly and intuitively find any target event, we provide a glimpse of past recording over an intuitive timeline, allowing users to direct playback and archive their video within 10 seconds.
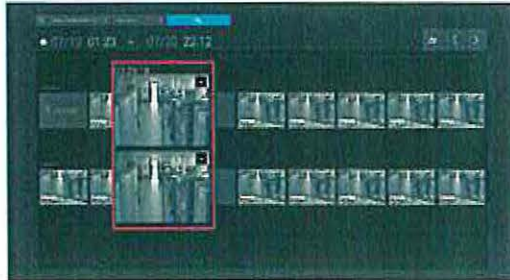

Fisheye Dewarp

VIVOTEK's NVR offers both LiveView and Playback modes for one fisheye network camera simultaneously. They also provide multiple fisheye de-warp display modes, including 1O, 1P, 1R, 1O3R, 1O8R, allowing users to monitor any angle, or to enjoy precise detailed images for a total surveillance experience.

*Support LiveView and Playback modes

VIVOCloud - Push Notification

Enhanced event notification for 24/7 mobile surveillance. Once the NVR has an alarm notification, the VIVOCloud app will receive the push notification and users can directly playback the video immediately via Android/iOS devices.

Push Notification

Direct Playback

VIVOCloud
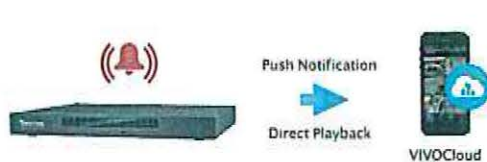
VAST CMS Integration

VIVOTEK's NVR is both CMS compliant and a totally scalable configuration thanks to VAST CMS. This powerful tool enables users to set up and manage advanced IP surveillance systems with ease.

- Camera Disconnection
- Motion Detection
- Camera Tempering Detection
- Camera Digital Input Trigger Event
- HDD Fail Events
- Camera Recording Status

NVR   NVR   NVR
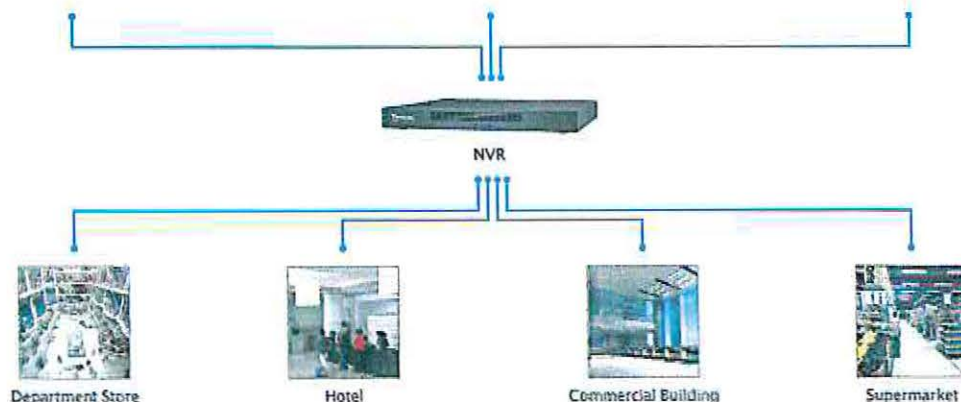
Applications

Rich Performance
- H.265/H.264
- Fisheye Dewarp
- Story Board Search
- PoE Management

High Reliability
- 12M IP Cam Support
- 16 PoE
- RAID

Scalable Solution
- ONVIF
- VIVOCloud
- VAST CMS

NVR

Department Store   Hotel   Commercial Building   Supermarket

Product - Order Information

Model	Description	Part Number
ND9441P	H.265, 16CH, 16 PoE, 4HDD NVR	100150900G, US
		100150910G, EU
		100150920G, UK
		100150930G, AU
ND9541P	H.265, 32CH, 16 PoE, 4HDD NVR	100150800G, US
		100150810G, EU
		100150820G, UK
		100150840G, AU

Accessory - Order Information

Model	Part Number
Surveillance HDD 1TB	900029300G
Surveillance HDD 2TB	900022500G
Surveillance HDD 3TB	900022400G
Surveillance HDD 4TB	900022300G
Surveillance HDD 6TB	900029100G
AM-612: Rack Mount Slide Rails	900030000G

Mechanical Information

Front View

LED Indicators   USB 2.0

Back View

USB 3.0   Reset
HDMI   VGA

16x 802.3at/af PoE Ports   2xGbE Ports   Audio In/Out   RS485   100-240V AC Power In
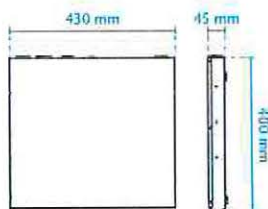
8x Alarm Input
4x Alarm Output

Technical Specifications

	ND9441P H.265 16-CH Embedded Plug & Play NVR	ND9541P H.265 32-CH Embedded Plug & Play NVR
Model		
Hardware Information		
System		
OS	Embedded Linux	
CPU	ARM Processor	
Flash	256 MB	
RAM	2 GB	4 GB
Watchdog	Hardware + Software	
Power Restoration	System Restart Automatically after Power Recovery	
Storage		
HDD Devices	Internal x4	
HDD Max. Capacity	8 TB x4	
Disk Management	Create, Format and Remove Disk HDD S.M.A.R.T RAID 0, 1, 5 (RAID Max. Volume: 16TB)	
Video & Audio		
Video Output	HDMI x1, VGA x1	
Resolution	1920x1080, 1280x720	
Graphics Decoder	Hardware decoding	
Decoding Capacity	H.265/H.264 2560x1920 @ 30 fps (1-CH) 1920x1080 @ 120 fps (4-CH) 1280x720 @ 240 fps (8-CH) 1280x720 @ 480 fps (16-CH)	H.265/H.264 2560x1920 @ 30 fps (1-CH) 1920x1080 @ 120 fps (4-CH) 1280x720 @ 240 fps (8-CH) 1280x720 @ 480 fps (16-CH) 720x480 @ 960 fps (32-CH)
Camera Position	Change the viewcell position on the Live View screens	
External Interface		
USB Interface	Front: 2 (USB 2.0) Back: 1 (USB 3.0)	
Alarm In	8	
Alarm Out	4	
Audio	3.5 Phone Jack Audio Output x1 3.5 Phone Jack Audio Input (Reserved) x1	
External HDD	USB 3.0 Port x 1	
RS485	1 Port (Reserved)	
Network		
Network Interface	10/100/1000Mbps Ethernet (RJ-45) x 2	
PoE	16x 802.3at/af Compliant PoE Ports (Total Max. 160W)	
Protocols	IPv4, TCP/IP, HTTP, HTTPS, UPnP, RTSP/RTP/RTCP, SMTP, FTP, DHCP, NTP, DNS, DDNS, IP Filter	
Power		
Power Input	100-240V AC, 50/60Hz	
Power Consumption	Max. 260 W	
LED Indicator		
LED Indicator	Status, Record, HDD1, HDD2, HDD3, HDD4, Net1, Net2, CH1 ~ CH16	
Mechanic		
Form Factor	Desktop	
Operation Buttons	Reset (Back)	
Dimensions	430 (W) x 400 (D) x 44.5 (H) mm	
Weight	4.5 kg (without HDD)	
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)	
Humidity	0 ~ 95%	
General		
Safety Certifications	CE, LVD, FCC, VCCI, C-Tick, UL	
Warranty	24 months	
Client PC Requirements		
Operating System	Microsoft Windows OS: XP/Vista/7/8/10/2008/2012	
CPU	Intel Celeron or above	
Memory	2 GB or above	

Technical Specifications

Model	ND9441P H.265 16-CH Embedded Plug & Play NVR	ND9541P H.265 32-CH Embedded Plug & Play NVR
Ethernet	10/100Mbps	
Display Resolution	1024x768 pixels or above	
Web Browser	Internet Explorer 10 (32 bit) or above	
Software AP	Installation Wizard 2, Shepherd, VAST , VAST 2	
Mobile/Tablet App	VIVOCloud (iOS/Android), iViewer (iOS/Android)	

Accessories

CD	User's Manual, Quick Installation Guide, Installation Wizard 2
Others	Power Cord, Quick Installation Guide, 32x H.D.D. Screws, 8x H.D.D. Brackets, 1x USB Mouse, 4x SATA Cables

Software Information

Record

Maximum Channel	16	32
Record Throughput (MB)	192 Mbps	
Network Throughput (MB)	96 Mbps	
Audio Format	G.711, G.726	
Video Format	H.265, H.264, MJPEG	
Video Resolution	Up to 12MP Camera	
Recording Time (sec.)	Pre-Record: 5 (Max. 10) Post-Record: 20 (Max. 300)	
Recording Stream	Single	
Recording Mode	Continuous, Schedule, Manual, Event, Activity Adaptive Streaming	
Recording Setting	Recycle (unit: Day)	
Recording Path	Local Path	
Record Video Format	3GP	
Watermark	Supported	

LiveView (Local Display)

Stream Application	Constant/Auto Adaptive Stream	
LiveView Display	16 Channels Multiple Layout Display: 1x1, 2x2, 3x3, 1P+3, 2P+3, 1M+5, 1P+6, 3V, 1M+12, 4x4	32 Channels Multiple Layout Display: 1x1, 2x2, 3x3, 1P+3, 2P+3, 1M+5, 1P+6, 3V, 1M+12, 4x4, 1M+31
Monitor Enhancement	OSD Display (NVR), OSD Display (Camera), Camera Information, Remote I/O Control, Event Notification, Aspect Ratio, Fisheye Dewarp (1O, 1P, 1R, 1O3R, 1O8R)	
PTZ Control	Panel Control/Joystick	
PTZ Operation	Direction Control, Home, Iris, Preset, Patrol (Group), PiP Control	

Playback (Local Display)

Playback Display	4 Channels Multiple Layout Display: 1x1, 2x2, 1P+3, 1V+3
Playback Control	Regular (Play, Pause, Stop), Rewind, Next/Previous Frame, Speed Control, Calendar, Event, Timeline, Timeline Scale, Thumbnail (Storyboard)
Video Search	By Calendar, Date/Time, Alarm
Thumbnail Explorer (Storyboard)	Listing the thumbnail of recorded video (Max. 2 CH)
Monitor Enhancement	OSD Display (Camera), Event Notification, Aspect Ratio, PiP Control, Fisheye Dewarp (1O, 1P, 1R, 1O3R, 1O8R)
Snapshot	JPEG
Video Clip Export	EXE

LiveView (Remote)

Stream Application	Stream Selection	
Audio Capability	One Way	
LiveView Display	16 Channels Multiple Layout Display: 1x1, 2x2, 3x3, 4x4, 1V+3, 1M+5, 1M+12	32 Channels Multiple Layout Display: 1x1, 2x2, 3x3, 4x4, 1V+3, 1M+5, 1M+12, 1M+31
Monitor Enhancement	OSD Display (NVR), Drag & Drop, Image Freeze, Audio Control, Remote I/O Control, Event Notification, Bookmark, Fisheye Dewarp (1O, 1P, 1R)	
PTZ Control	Panel Control	
PTZ Operation	Direction Control, Home, Zoom, Focus, Iris, Preset, Patrol (Group), PiP Control	
Snapshot	JPEG	

Playback (Remote)

Technical Specifications

Model	ND9441P H.265 16-CH Embedded Plug & Play NVR	ND9541P H.265 32-CH Embedded Plug & Play NVR
Playback Display	4 Channels Multiple Layout Display: 1x1, 2x2, 1V+3	
Playback Control	Regular (Play, Pause, Stop), Next Frame, Speed Control, Calendar, Timeline, Timeline Scale, Bookmark	
Monitor Enhancement	OSD Display (NVR), Drag & Drop, Audio Control, PiP Control, Fisheye Dewarp (1O, 1P, 1R)	
Snapshot	JPEG	
Video Clip Export	EXE	

Alarm Management

Schedule Type	Continuous, Schedule, Manual
Event	Motion Detection, PIR Detection, Tampering Detection, Digital Input (Camera), Digital Output (Camera), Connection Abnormal, Storage Abnormal, Storage Full, Camera Network Loss, DI, DO
Action	Record, Email (Text), Email (Snapshot), FTP, Buzzer, ePTZ Control (Go to Preset), NVR DO, Camera DO, VIVOCloud APP Notification
Recording Time (sec.)	Pre-Record: 5 (Max. 10), Post-Record: 20 (Max. 300)

Backup

Manual	USB Dongle (FAT Format)

System

User Management	User Account. 16 User Account Time Limit: 10 mins User Level: Administrator, Regular User User Feature Definition: By Camera
Log	System, Recording, User, Error
Date&Time	Time Zone, Manual, Automatic Sync NTP, Daylight Saving Time
Firmware	Manual update
Restore Default	Supported
Backup/Restore (Configuration)	Supported
Language	Czech, English, French, German, Italian, Japanese, Korean, Polish, Portuguese, Russian, Spanish, Simplified Chinese, Traditional Chinese

Camera Intergration

Insert Camera	Manual, Search
Video (Media) Setting	Compression, Resolution, FPS, Video Quality
Image Setting	Image Display, Image Adjustment
PTZ Control	Panel Control, Joystick
PTZ Operation	Direction Control, Home, Preset, Patrol (Group)
Motion Detection	Supported
ONVIF Core Spec	Version 2.2 or above (By Project)
ONVIF Stream	Video(H.264 & MJPEG)
ONVIF Recording	Continuous, Schedule, Manual
ONVIF Discover	Discover the other brand camera through "Insert Camera & Batch Insert"

Device Intergration

UPS	APC Model Compatible
Joystick	IPD-USB, AJ001

Dimensions

430 mm   45 mm   400 mm

VIVOTEK

C series

FD9388-HTV

Fixed Dome Network Camera

5MP • SNV • WDR Pro • Smart IR • 30M IR • Smart Stream III • IP66 • IK10

- H.265 Compression Technology
- 20 fps @ 2560x1920 (WDR Pro on)
- 2.8~12 mm, Remote Focus
- SNV (Supreme Night Visibility) for Low Light Conditions
- WDR Pro for Unparalleled Visibility in Extremely Bright and Dark Environments
- Smart Stream III to Optimize Bandwidth Efficiency
- Built-in IR Illuminators, Effective up to 30 Meters
- Trend Micro IoT Security
- Weather-proof IP66-rated and Vandal-proof IK10-rated Housing
- Built-in MicroSD/SDHC/SDXC Card Slot for On-board Storage
- Built-in Microphone

TREND MICRO   aws qualified device   Stratocast™

Technical Specifications

System Information

Model	FD9388-HTV
CPU	Multimedia SoC (System-on-Chip)
Flash	128 MB
RAM	512 MB

Camera Features

Image Sensor	1/2.7" Progressive CMOS
Max. Resolution	2560x1920 (5MP)
Lens Type	Motorized, Vari-focal, Remote Focus
Focal Length	f = 2.8 ~ 12 mm
Aperture	F1.4 ~ F2.8
Auto-iris	Fixed iris
Field of View	88° ~ 30° (Horizontal) 65° ~ 23° (Vertical) 115° ~ 38°(Diagonal)
Shutter Time	1/5 sec. to 1/32,000 sec.
WDR Technology	WDR Pro
Day/Night	Yes
Removable IR-cut Filter	Yes
IR Illuminators	Built-in IR illuminators, effective up to 30 meters with Smart IR, IR LED*2
Minimum Illumination	0.035 lux @ F1.4 (Color) <0.005 lux @ F1.4 (B/W) 0 lux with IR illumination on
Pan Range	353°
Tilt Range	75°
Rotation Range	350°
Pan/Tilt/Zoom Functionalities	ePTZ: 48x digital zoom (4x on IE plug-in, 12x built-in)
Storage	Seamless Recording to MicroSD/SDHC/SDXC card and recording to network-attached storage (NAS)
Built-in Installation Aids	Remote focus, remote zoom

Video

Video Compression	H.265, H.264, MJPEG
Maximum Frame Rate	20 fps @ 2560x1920
Maximum Streams	3 video streams (Up to 6 configurable profiles)
S/N Ratio	61 dB
Dynamic Range	120 dB
Video Streaming	Adjustable resolution, quality and constant bit rate control, Smart Stream III
Image Settings	General settings: video title and time stamp overlay, video orientation (flip, mirror, rotation), day/night settings; Illuminators: illuminators, anti-overexposure; Image settings: white balance, image adjustment (brightness, contrast, saturation, sharpness, gamma curve), defog, 3DNR; Exposure: BLC, HLC, exposure control (exposure level, exposure time, gain control), AE speed adjustment, WDR; Privacy mask; Scheduled profile settings

Audio

Audio Capability	One-way Audio
Audio Compression	G.711, G.726
Audio Interface	Built-in microphone
Effective Range	5 meters

Network

Users	Live viewing for up to 10 clients
Security	Access list, digest authentication, HTTPS, IEEE 802.1x, password protection, signed firmware, Trend Micro IoT Security (brute force attack event, cyberattack event, quarantine event), user access log, user account management

Protocols	802.1X, ARP, Bonjour, CIFS/SMB, DDNS, DHCP, DNS, FTP, HTTP, HTTPS, ICMP, IGMPv3, IPv4, IPv6, NTP, PPPoE, QoS (CoS/DSCP), RTSP/RTP/RTCP, SMTP, SNMP, SSL, TCP/IP, TLS 1.2, UDP, UPnP
Interface	10 Base-T/100 Base-TX Ethernet (RJ-45) *It is highly recommended to use standard CAT5e & CAT6 cables which are compliant with the 3P/ETL standard.
ONVIF	Profile G, S, T supported, specification available at www.onvif.org

Solution Integration

Video Motion Detection	Five-window video motion detection
VADP Package	Stratocast, Trend Micro IoT Security (1-year free trial), VIVOCloud

Alarm and Event

Event Trigger	Audio detection, camera tampering detection, cybersecurity events (brute force attack event, cyberattack event, quarantine event), manual trigger, motion detection, periodical trigger, recording notification, SD card life expectancy, system boot
Event Action	Event notification via email, HTTP, FTP, NAS server, SD card, push notification File upload via email, HTTP, FTP, NAS server, SD card

General

Connectors	RJ-45 cable connector for 10/100Mpbs Network/PoE connection
LED Indicator	System power and status indicator
Power Input	IEEE 802.3af PoE Class 0
Power Consumption	Max. 12.95 W/9 W (IR on/off)
Dimensions	ø 133.7 x 103.8 mm
Weight	819 g
Certifications	EMC: CE (EN 55032 Class B, EN 55024), FCC (FCC Part 15 Subpart B Class B), RCM (AS/NZS CISPR 32 Class B), VCCI (VCCI-CISPR 32 Class B); Safety: UL (UL 62368-1), CB (IEC/EN 62368-1, IEC/EN 60950-22, IEC/EN 62471); Environment: IK10 (IEC 62262), IP66 (IEC 60529); IA: BIS (IS 13252)
Operating Temperature	Starting Temperature:-10°C ~ 60°C (14°F ~ 140°F) Working Temperature: -30°C ~ 60°C (-22°F ~ 140°F)
Humidity	90%
Warranty	36 months

System Requirements

Operating System	Microsoft Windows 10/8/7 Mac 10.12 (Chrome only)
Web Browser	Chrome 58.0 or above Internet Explorer 10/11
Other Players	VLC: 1.1.11 or above

Included Accessories

Packing Contents	Quick installation guide, alignment sticker, screw pack, cable gland

Dimensions

Ø 133.7 mm

103.8 mm
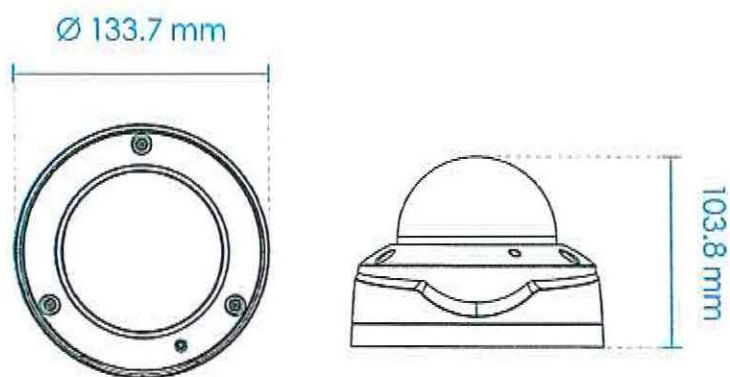
Compatible Accessories

Mounting Kits

AM-21A (V02)
L-shape Bracket

Mounting Kits

AM-51D
Adapting Plate

Mounting Kits

AM-528
Mounting Adapter

Mounting Kits

AM-71B
Outdoor Conduit Box

NanoBeam® AC GEN2

airMAX® ac CPE with Dedicated Management Radio

Model: NBE-5AC-Gen2

Uniform Beamwidth Maximizes Noise Immunity

Dedicated Wi-Fi Radio for Management

airMAX ac Processor for Superior Performance

UBIQUITI
NETWORKS

Overview

Ubiquiti Networks launches the latest generation of airMAX® CPE (Customer Premises Equipment), the NanoBeam® 5AC Gen 2.

Improved Noise Immunity

The NanoBeam 5AC Gen 2 directs RF energy in a tighter beamwidth. With the focus in one direction, the NanoBeam 5AC Gen 2 blocks or spatially filters out noise, so noise immunity is improved. This feature is especially important in an area crowded with other RF signals of the same or similar frequency.

Integrated Design

The radio and antenna are combined to create a more efficient and compact CPE. The NanoBeam 5AC Gen 2 gets maximum gain out of the smallest footprint.

Providing high performance and an innovative form factor, the NanoBeam 5AC Gen 2 is versatile and cost-effective to deploy.

Software

airOS 8

airOS® 8 is the revolutionary operating system for Ubiquiti® airMAX ac products.

Powerful Wireless Features

- Access Point PtMP airMAX Mixed Mode
- airMAX ac Protocol Support
- Long-Range Point-to-Point (PtP) Link Mode
- Selectable Channel Width
  - PtP: 10/20/30/40/50/60/80 MHz
  - PtMP: 10/20/30/40 MHz
- Automatic Channel Selection
- Transmit Power Control: Automatic/Manual
- Automatic Distance Selection (ACK Timing)
- Strongest WPA2 Security

Usability Enhancements

- airMagic® Channel Selection Tool
- Redesigned User Interface
- Dynamic Configuration Changes
- Instant Input Validation
- HTML5 Technology
- Optimization for Mobile Devices
- Detailed Device Statistics
- Comprehensive Array of Diagnostic Tools, including RF Diagnostics and airView® Spectrum Analyzer

Application Examples

PtMP Client Links
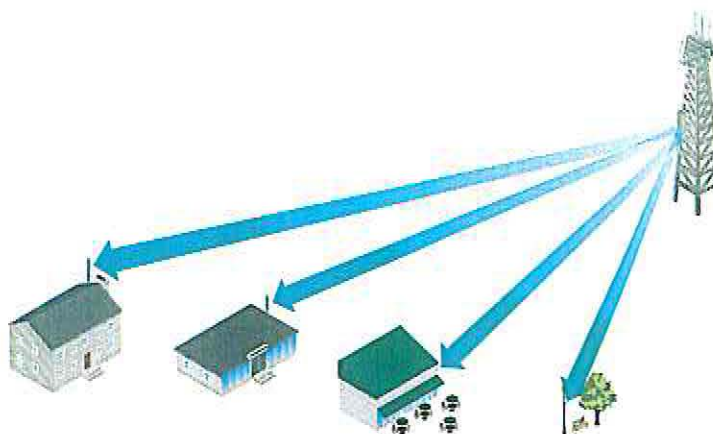
The NanoBeam 5AC Gen 2 used as a CPE device for each client in an airMAX PtMP network.

PtP Link
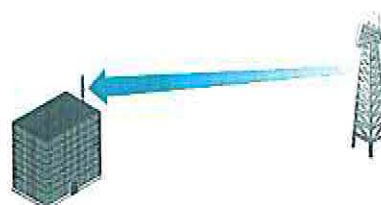
Use a NanoBeam 5AC Gen 2 on each side of a PtP link.
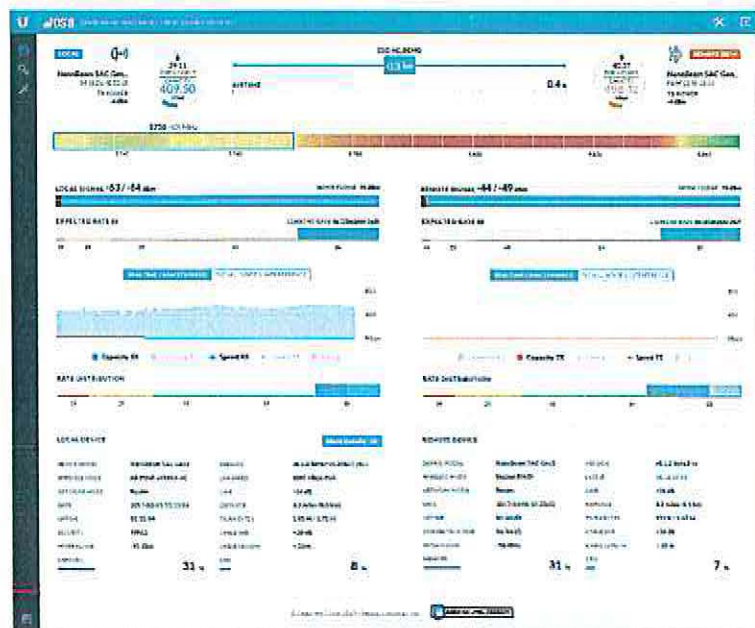
Advanced RF Analytics

airMAX ac devices feature a multi-radio architecture to power a revolutionary RF analytics engine.

An independent processor on the PCBA powers a second, dedicated radio, which persistently analyzes the full 5 GHz spectrum and every received symbol to provide you with the most advanced RF analytics in the industry.

Real-Time Reporting

airOS 8 displays the following RF information:

- Persistent RF Error Vector Magnitude (EVM) constellation diagrams
- Signal, Noise, and Interference (SNI) diagrams
- Carrier to Interference-plus-Noise Ratio (CINR) histograms

Spectral Analysis

airView allows you to identify noise signatures and plan your networks to minimize noise interference. airView performs the following functions:

- Constantly monitors environmental noise
- Collects energy data points in real-time spectral views
- Helps optimize channel selection, network design, and wireless performance

airView runs in the background without disabling the wireless link, so there is no disruption to the network.

In airView, there are three spectral views, each of which represents different data: waveform, waterfall, and ambient noise level.

airView provides powerful spectrum analyzer functionality, eliminating the need to rent or purchase additional equipment for conducting site surveys.

UNMS App

The NanoBeam 5AC Gen 2 integrates a separate Wi-Fi radio for fast and easy setup using your mobile device.

Accessing airOS via Wi-Fi

The UNMS™ app provides instant accessibility to the airOS configuration interface and can be downloaded from the App Store (iOS) or Google Play™ (Android). UNMS allows you to set up, configure, and manage the NanoBeam 5AC Gen 2 and offers various configuration options once you're connected or logged in.

Multi-Radio Architecture
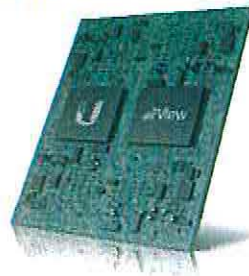
Constellation Diagrams
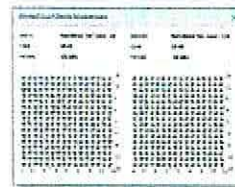
SNI Diagram and CINR Histogram

Dedicated Spectral Analysis
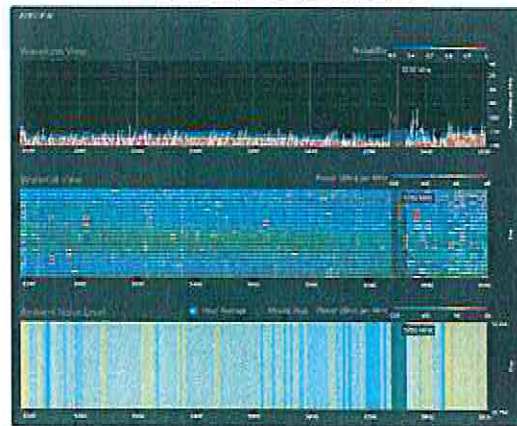
UNMS Configuration Screen

Technology
air**MAX** ac

Unlike standard Wi-Fi protocol, Ubiquiti's Time Division Multiple Access (TDMA) airMAX protocol allows each client to send and receive data using pre-designated time slots scheduled by an intelligent AP controller.

This time slot method eliminates hidden node collisions and maximizes airtime efficiency, so airMAX technology provides performance improvements in latency, noise immunity, scalability, and throughput compared to other outdoor systems in its class.

Intelligent QoS Priority assigned to voice/video for seamless streaming.

Scalability High capacity and scalability.

Long Distance Capable of high-speed, carrier-class links.

Superior Performance

The next-generation airMAX ac technology boosts the advantages of our proprietary TDMA protocol.

Ubiquiti's airMAX engine with custom IC dramatically improves TDMA latency and network scalability. The custom silicon provides hardware acceleration capabilities to the airMAX scheduler, to support the high data rates and dense modulation used in airMAX ac technology.

Throughput Breakthrough

airMAX ac supports high data rates, which require dense modulation: 256QAM – a significant increase from 64QAM, which is used in airMAX.

With their use of proprietary airMAX ac technology, airMAX ac products supports up to 450+ Mbps real TCP/IP throughput – up to triple the throughput of standard airMAX products.

airMAX ac TDMA Technology
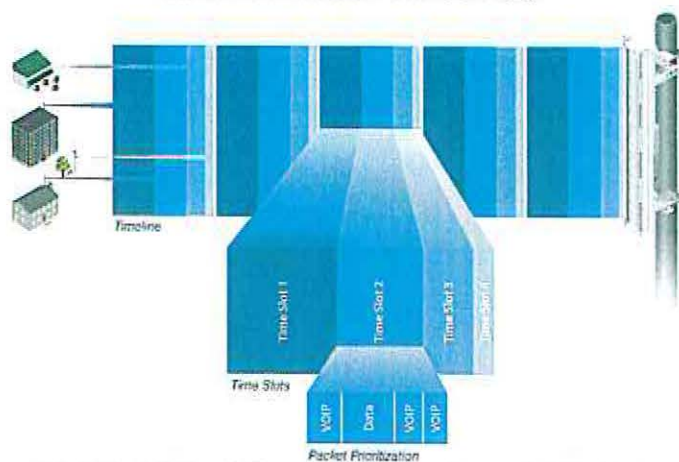
Up to 100 airMAX ac stations can be connected to an airMAX ac Sector; four airMAX ac stations are shown to illustrate the general concept.

airMAX Network Scalability

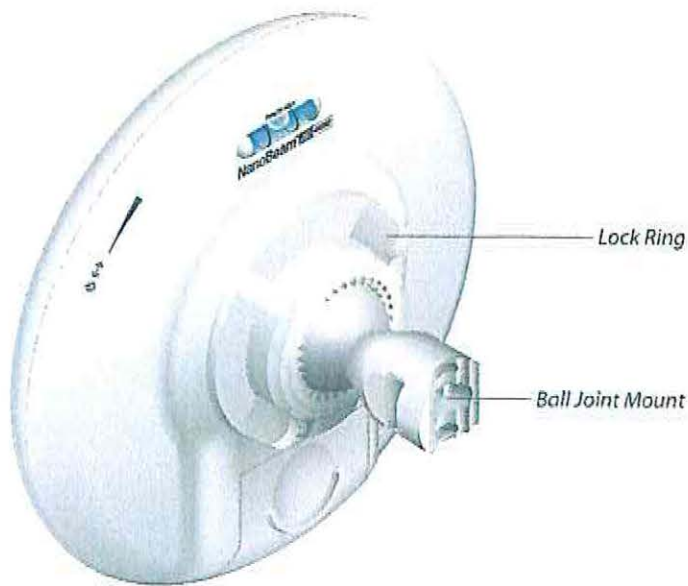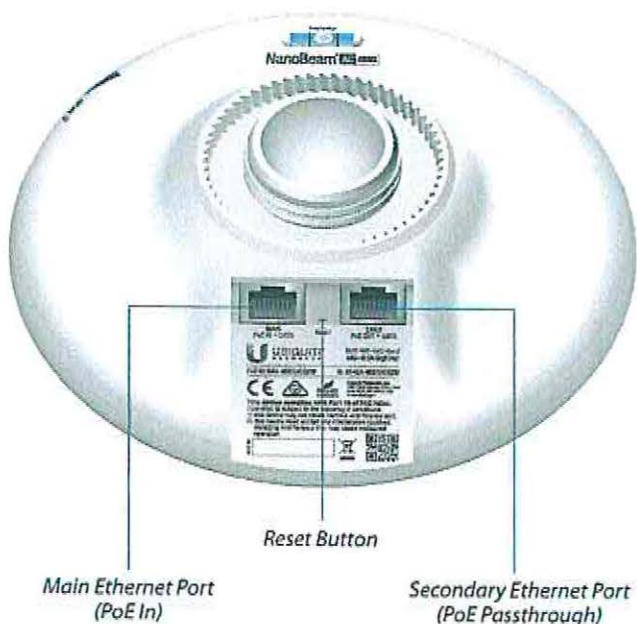## Superior Throughput Performance
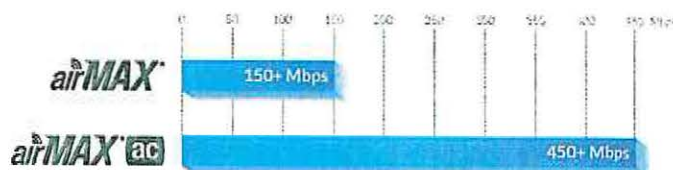
Hardware Overview

The NanoBeam 5AC Gen 2 features airMAX ac technology and enhanced protection against ESD events.

Ease of Installation

- **Quick Installation** No fasteners are required for pole-mounting, and a single wall fastener (not included) is required for wall-mounting.
- **Convenient Alignment** The NanoBeam 5AC Gen 2 pivots on its ball joint 3-axis mount for easy aiming.

Innovative Mechanical Design

- **Efficient Footprint** The radio and antenna are combined into a single body that takes up minimal space. The form factor features the highest gain for its size.
- **Aesthetics** The NanoBeam 5AC Gen 2 is small enough to blend discreetly into the background at a customer's location.
- **Versatile Mounting** The NanoBeam 5AC Gen 2 can be mounted in almost any position needed for line of sight.

Reset Button

Main Ethernet Port
(PoE In)

Secondary Ethernet Port
(PoE Passthrough)

Lock Ring

Ball Joint Mount

Mounting Accessories

NanoBeam®
Wall Mount Kit

Model: NBE-WMK

A wall mount kit is available as an optional accessory to enhance stability for wall-mounting.

NanoBeam®
Window Mount

Model: NBE-19-WM

A suction cup mount is available as an optional accessory to mount the NanoBeam 5AC Gen 2 on a window.

IsoBeam Accessory

IsoBeam™

Model: ISO-BEAM-19

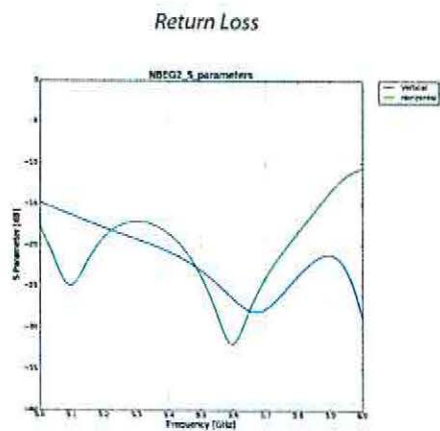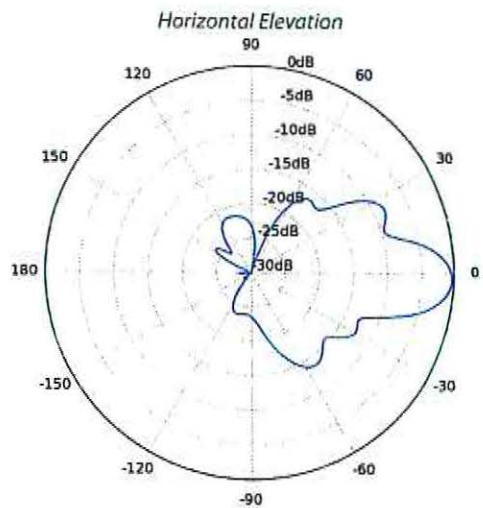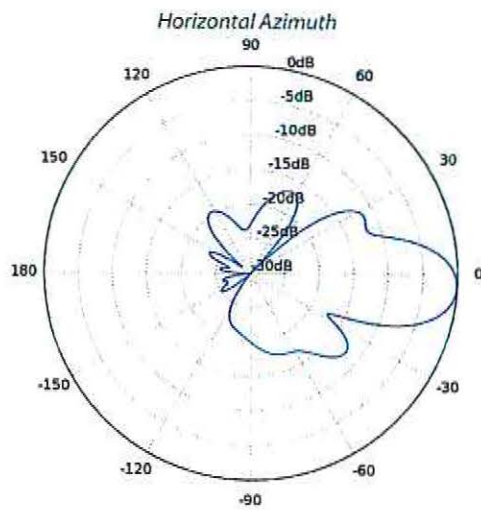An RF isolator shield is available as an optional accessory to enhance signal isolation.
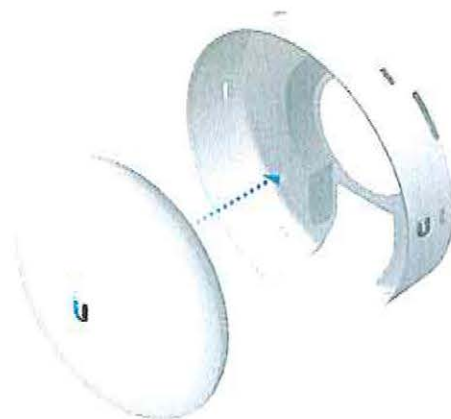
Specifications

NBE-5AC-Gen2		
Dimensions (Mount Included)		189 x 189 x 125 mm (7.44 x 7.44 x 4.92")
Weight (Mount Included)		0.530 kg (1.17 lb)
Power Supply		24V, 0.5A Gigabit PoE Adapter (Included)
Max. Power Consumption		8.5W
Gain		19 dBi
Networking Interface		(2) 10/100/1000 Ethernet Ports Wi-Fi for Management
Processor Specs		Atheros MIPS 74Kc, 720 MHz
Memory		128 MB DDR2, 8 MB Flash
LEDs		Power, Ethernet, (4) Signal Strength
Signal Strength LEDs		Software-Adjustable to Correspond to Custom RSSI Levels
Max. VSWR		1.5:1
Channel Sizes	PtP Mode	PtMP Mode
	10/20/30/40/50/60/80 MHz	10/20/30/40 MHz
Polarization		Dual Linear
Enclosure		Outdoor UV Stabilized Plastic
Mounting		Pole-Mount (Kit Included), Wall-Mount
Wind Loading		45.4 N @ 200 km/h (10.2 lbf @ 125 mph)
Wind Survivability		200 km/h (125 mph)
ESD/EMP Protection		Air: ± 24 kV, Contact: ± 24 kV
Operating Temperature		-40 to 80° C (-40 to 176° F)
Operating Humidity		5 to 95% Noncondensing
Certifications		CE, FCC, IC
RoHS Compliance		Yes
Salt Fog Test		IEC 68-2-11 (ASTM B117), Equivalent: MIL-STD-810 G Method 509.5
Vibration Test		IEC 68-2-6
Temperature Shock Test		IEC 68-2-14
UV Test		IEC 68-2-5 at 40° C (104° F), Equivalent: ETS 300 019-1-4
Wind-Driven Rain Test		ETS 300 019-1-4, Equivalent: MIL-STD-810 G Method 506.5

Operating Frequency (MHz)				
Worldwide				5150 - 5875
USA	U-NII-1: 5150 - 5250	U-NII-2A: 5250 - 5350 MHz	U-NII-2C: 5470 - 5725 MHz	U-NII-3: 5725 - 5850

Management Radio (MHz)	
Worldwide	2412 - 2472
USA	2412 - 2462

NBE-5AC-Gen2 Output Power: 25 dBm							
TX Power Specifications				**RX Power Specifications**			
Modulation	Data Rate	Avg. TX	Tolerance	Modulation	Data Rate	Sensitivity	Tolerance
airMAX ac	1x BPSK (½)	25 dBm	± 2 dB	airMAX ac	1x BPSK (½)	-96 dBm	± 2 dB
	2x QPSK (½)	25 dBm	± 2 dB		2x QPSK (½)	-95 dBm	± 2 dB
	2x QPSK (¾)	25 dBm	± 2 dB		2x QPSK (¾)	-92 dBm	± 2 dB
	4x 16QAM (½)	25 dBm	± 2 dB		4x 16QAM (½)	-90 dBm	± 2 dB
	4x 16QAM (¾)	25 dBm	± 2 dB		4x 16QAM (¾)	-86 dBm	± 2 dB
	6x 64QAM (⅔)	24 dBm	± 2 dB		6x 64QAM (⅔)	-83 dBm	± 2 dB
	6x 64QAM (¾)	23 dBm	± 2 dB		6x 64QAM (¾)	-77 dBm	± 2 dB
	6x 64QAM (⅚)	22 dBm	± 2 dB		6x 64QAM (⅚)	-74 dBm	± 2 dB
	8x 256QAM (¾)	21 dBm	± 2 dB		8x 256QAM (¾)	-69 dBm	± 2 dB
	8x 256QAM (⅚)	20 dBm	± 2 dB		8x 256QAM (⅚)	-65 dBm	± 2 dB
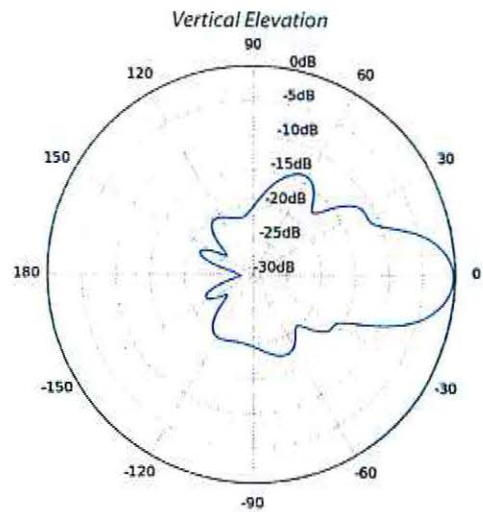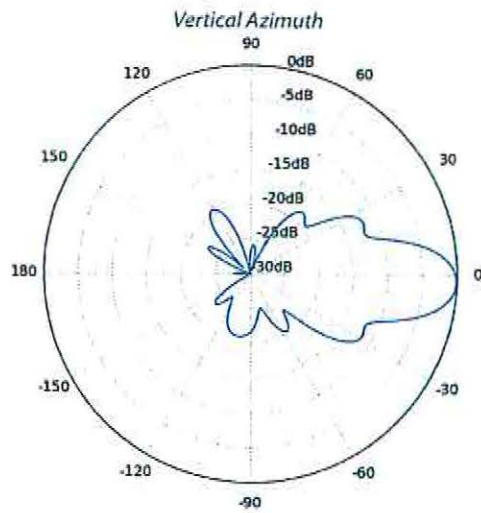
Vertical Azimuth

Vertical Elevation

Horizontal Azimuth

Horizontal Elevation

Return Loss

www.ubnt.com

AJNB020818

Expanding Wired Connectivity for desktop PoE SOHO Networks

NETGEAR 300 Series Gigabit Ethernet Unmanaged Switches with PoE provide easy, reliable, and affordable network connectivity for home and small offices. With these unmanaged plug-and-play switches, you can expand your network connections to multiple devices instantly.

The unmanaged switches provides power and data from a single Ethernet (CAT-5e) cable to devices such as IP cameras, VoIP/Internet-based phones, wireless access points, etc. The majority of these models also support PoE power auto-balance and allocation feature.

NETGEAR's unique PoE technology automatically balances the PoE power based on the device needs independent of PoE class detected. These switches deliver the power the device needs, at the most granular level.

Outstanding power flexibility with NETGEAR's exclusive FlexPoE

The GS308PP, GS316P, and GS316PP supports NETGEAR's exclusive FlexPoE upgradeable PoE power feature. Powered by the industry's first flexible PoE+ integrated technology, you can increase or decrease the PoE budget by simply purchasing a new NETGEAR. FlexPoE power supply, effectively futureproofing small business networks and budgets. With NETGEAR's exclusive FlexPoE, these two switches help businesses cost effectively increase their power budget to expand their network as needed.

All ports support PoE/PoE+ up to 30W per port, which makes them the perfect switches for deploying Wireless APs, Pan/Tilt/Zoom and fixed IP Cameras, VoIP Phones, access-limited security door locks or any other IoT PoE-powered devices.

The GS308PP, GS316P, and GS316PP have copper Gigabit Ethernet PoE+ ports featuring NETGEAR FlexPoE power. The GS308PP ships with 83W§ of PoE budget, GS316P ships with 115W§, and the GS316PP features an astounding 183W§ of PoE power budget.

Should you need more power in the future, rather than replacing the entire switch, with NETGEAR FlexPoE, you can just purchase the optional NETGEAR FlexPoE EPS130W Power Adapter, which will boost the PoE budget of your GS308PP and with the EPS200W Power Adapter, which will boost the PoE budget of your GS316P.

Highlights

- Auto-MDI/MDIX eliminates the need for crossover cables

- LED indicators for ease of use

- Energy-efficient technology for power savings

- Fanless design for silent operation

- Auto-negotiation for automatic connection at the highest common speed between switch and an end device

- Non-blocking switching architecture for maximum throughput at wire speed

- Plug-and-play; no setup required

- Durable and rugged metal case

- Desktop or wall-mountable (based on specific model)

- Ideal for small office and home networks

- Standards-based technology ensures interoperability with any standards-based devices in the existing network

- 802.3af and 802.3at Power Over Ethernet (PoE) for IP cameras, VoIP/Internet-based phones, wireless access points

Small Office/Home Office Network Diagram
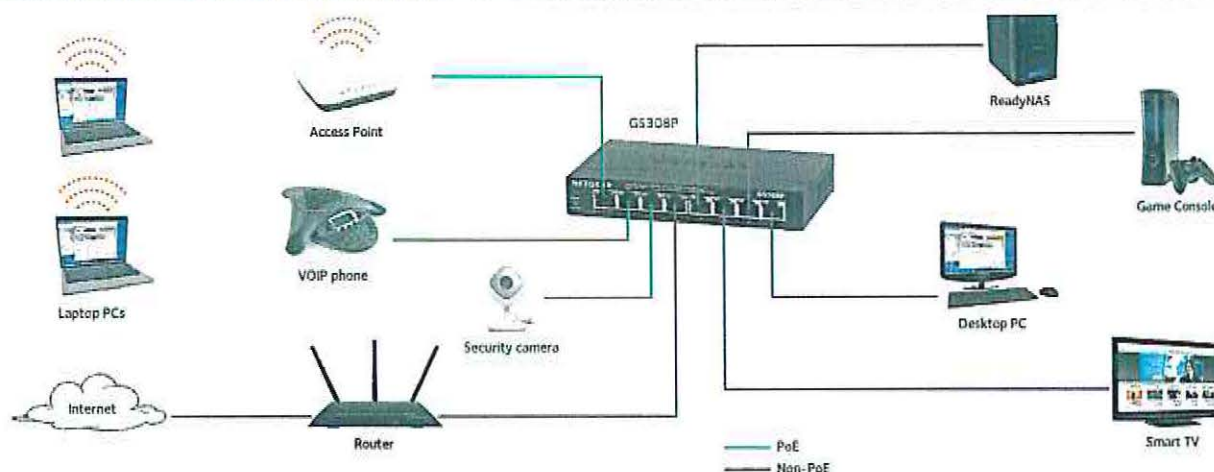
Expanding Wired Connectivity for SOHO Networks

Increase or decrease your PoE budget anytime by simply upgrading your switch Power Supply, without having to purchase a new switch. Future-proof your PoE budget with GS308PP or GS316P. And if you have power-hungry devices and directly need a high power PoE switch, buy G316PP. This unique combination from NETGEAR Business makes these switches the most adaptive in the market.

The following table describes the Accessory Power Adapters which are sold separately:

Switch Model	Power Adapter Model	Power Adapter Wattage	PoE+ Power Wattage
GS308PP (Comes w/90W PA)	EPS90W	90W	83W
	EPS130W	130W	123W
GS316P (Comes w/130W PA)	EPS90W	90W	76W
	EPS130W	130W	115W
	EPS200W	200W	183W
GS316PP (Comes w/200W PA)	EPS90W	90W	76W
	EPS130W	130W	115W
	EPS200W	200W	183W

Features	GS305P	GS305PP	GS308P	GS308PP	GS316P	GS316PP
10/100/1000Mbps Ports (Auto Uplink)	5	5	8	8	16	16
Enclosure	Metal	Metal	Metal	Metal	Metal	Metal
Connector Type	Metal	Metal	Metal	Metal	Metal	Metal
Form Factor	Desktop or wall-mountable			Desktop or wall-mountable		
Power On/Off Switch	No	No	No	No	No	No
Performance Specification						
Bandwidth (Non-Blocking)	10 Gbps	10 Gbps	16 Gbps	16 Gbps	32 Gbps	32 Gbps
Packet Buffer Memory (Dynamically shared across only used ports)	128 KB	128 KB	192 KB	192 KB	1MB	1MB
Jumbo Frame Support	9,216 bytes	9,216 bytes	9,720 bytes	9,216 bytes	9,216 bytes	9,216 bytes
Queue WRR (Weighted Round Robin) Ratio	1:3:5:7:8:10:12:15		1:2:4:8	1:3:5:7:8:10:12:15		
Forwarding Rate (using 64-byte packets) - 1000Mbps Port	1,448,000 pps	1,448,000 pps	1,448,000 pps	1,448,000 pps	1,448,000 pps	1,448,000 pps
Latency (using 64-byte packets) - 1000Mbps Port (average)	< 2.6 µsec	< 2.6 µsec	< 3.0 µsec	< 3.0 µsec	< 3.7 µsec	< 3.7 µsec
MAC Address Table Size	2K	2K	4K	4K	4K	4K
Auto MDI/MDI-X Cable Detection	Yes	Yes	Yes	Yes	Yes	Yes
Auto-sensing Half/Full Duplex Switched Ports	Yes	Yes	Yes	Yes	Yes	Yes
Mean Time Between Failures (MTBF) @ 25° C	3,222,482 hours	6,710,127 hours	2,244,211 hours	2,752,476 hours	2,362,192 hours	2,362,192 hours
LEDs						
Per port	Speed, Link/Activity (Left), Ports 1-4: PoE Power (Right)	Speed, Link/Activity (Left), Ports 1-4: PoE Power (Right)	Speed, Link/Activity (Left), Ports 1-4: PoE Power (Right)	Speed, Link/Activity (Left), PoE (Right)	Speed, Link/Activity (Left), PoE (Right)	Speed, Link/Activity (Left), PoE (Right)
Per device	Power, PoE Max	Power, PoE Max	Power, PoE Max	Power, PoE Max	Power, PoE Max	Power, PoE Max
Quality of Service (QOS)						
802.1P Based (CoS) Supported	Yes	Yes	Yes	Yes	Yes	Yes
Honors DSCP (DiffServ) Tags	No	No	No	Yes	Yes	Yes
POE Configuration						
802.3af PoE Ports	Ports 1-4	Ports 1-4	Ports 1-4	8	16	16
802.3at PoE+ Ports	None	Ports 1-4	None	8	16	16
PoE Max Power Per Port	Up to 15.4W	Up to 30W	Up to 15.4W	Up to 30W	Up to 30W	Up to 30W
Total PoE Power Budget**	Up to 55W	Up to 83W	Up to 53W	83W (with 90W PA) 123W (with 130W PA)	76W (with 90W PA) 115W (with 130W PA) 183W (with 200W PA)	76W (with 90W PA) 115W (with 130W PA) 183W (with 200W PA)
PoE auto-balance	Yes	Yes	No	Yes	Yes	Yes

Power Consumption	GS305P	GS305PP	GS308P	GS308PP	GS316P	GS316PP
DC Input/Power In	48V, 1.25A	54V, 1.66A	48V, 1.25A	54V, 1.66A (90W PA)	54V, 2.4A (130W PA)	54V, 3.7A (200W PA)
Power Consumption (Max and Standby)	60W/0.96W	88.89W/ 1.55W	60.0W/ 0.28W	87.9W/ 1.23W	127.9W/ 2.68W	195.9 W/ 2.67W
Heat Dissipation (Max and Standby) (BTU/Hr)	205.2 BTU / 3.28 BTU	304BTU/ 5.3BTU	205.20 BTU/ 0.96 BTU	300.6 BTU/ 3.69BTU	437.42 BTU/ 9.18BTU	669.9 BTU/ 9.14BTU
Energy Efficiency						
Energy Efficient Ethernet (EEE) IEEE 802.3az compliant	Yes	Yes	Yes	Yes	Yes	Yes
Auto Power Down	No	No	Yes	Yes	Yes	Yes
Short Cable Detection	Yes	Yes	Yes	Yes	Yes	Yes
Fan/Fanless	Fanless	Fanless	Fanless	Fanless	Fanless	Fanless
Physical Specifications						
Dimensions (W x D x H)	158 x 101 x 29 mm (6.2 x 4.0 x 1.1 in)	158 x 101 x 29 mm (6.2 x 4.0 x 1.1 in)	158 x 101 x 29 mm (6.2 x 4.0 x 1.1 in)	236 x 102 x 27 mm (9.3 x 4 x 1.1 in)	286 x 102 x 27 mm (11.3 x 4 x 1.1 in)	286 x 102 x 27 mm (11.3 x 4 x 1.1 in)
Weight	0.41 kg (0.90 lb)	0.41 kg (0.90 lb)	0.46 kg (1.02 lb)	0.6 kg (1.32 lb)	0.88 kg (1.94 lb)	0.88 kg (1.94 lb)
Environmental Specifications						
Operating						
Operating Temperature	0° to 40°C (32° to 104°F)					
Humidity	90% maximum relative humidity (RH), non-condensing					
Altitude	10,000 ft (3,000 m) maximum					
Storage						
Storage Temperature	–20° to 70°C (– 4° to 158°F)					
Humidity (relative)	95% maximum relative humidity (RH), non-condensing					
Electromagnetic Emissions and Immunity						
Certifications	CE Mark, FCC Part 15 Class B, IC Class B, RCM, VCCI	CE Mark, FCC Part 15 Class B, IC Class B, RCM, CCC, VCCI	CE Mark, FCC Part 15 Class A, IC Class A, RCM, CCC, VCCI, KC	CE Mark, FCC Part 15 Class A, IC Class A, RCM, VCCI, BSMI, KC	CE Mark, FCC Part 15 Class A, IC Class A, RCM, VCCI, BSMI, KC	CE Mark, FCC Part 15 Class A, IC Class A, RCM, VCCI, BSMI, KC
Bandwidth (Non-Blocking)						
Certifications	CB, CE LVD	CB, CE LVD, CCC	CB, CE LVD, CCC	CB, CE LVD	CB, CE LVD	CB, CE LVD

IEEE Network Protocols	GS305P	GS305PP	GS308P	GS308PP	GS316P	GS316PP

- IEEE 802.3ab 1000BASE-T Gigabit Ethernet
- IEEE 802.3u 100BASE-TX Fast Ethernet
- IEEE 802.3i 10BASE-T Ethernet

- IEEE 802.3x Flow Control
- IEEE 802.1p Priority QoS (all models)

- IEEE 802.3 CSMA/CD
- 802.3az Energy Efficient Ethernet

Warranty and Support *

All Except China			3-year Warranty			
China			1-year Warranty			
Technical Support (online, phone)			90 days free from date of purchase			
ProSUPPORT Category	Category S1	Category S2	Category S2	Category S2	Category S2	Category 1
ProSUPPORT OnCall 24x7 Service Plan	PMB0S11-10000S (1 yr) PMB0S31-10000S (3 yrs) PMB0S51-10000S (5 yrs)	PMB0S12-10000S (1 yr) PMB0S32-10000S (3 yrs) PMB0S52-10000S (5 yrs)	PMB0S12-10000S (1 yr) PMB0S32-10000S (3 yrs) PMB0S52-10000S (5 yrs)	PMB0S12-10000S (1 yr) PMB0S32-10000S (3 yrs) PMB0S52-10000S (5 yrs)	PMB0S12-10000S (1 yr) PMB0S32-10000S (3 yrs) PMB0S52-10000S (5 yrs)	PMB0S11-10000S (1 yr) PMB0S31-10000S (3 yrs) PMB0S51-10000S (5 yrs)

Package Contents

All Models	NETGEAR Gigabit Ethernet Unmanaged Switch Power adapter (localized to the country of sale) Rubber footpads for desktop installation Wall mount kit Installation Guide

Optional Modules and Accessories

EPS90W	90W External Power Adapter
EPS130W	130W External Power Adapter
EPS200W	200W External Power Adapter

Technical Specifications for Accessory Power Adapters	GS308PP	GS316P	GS316PP
Power Adapter Warranty		2-years	
Technical Support		90 days of free technical spoort	
ProSUPPORT Contract Option		No	
Auto-applied contracts		No	

Senior Center
Sullivan
CITY *of* TORRINGTON

April 29, 2021

Carol Anderson / Jon Draper
City Clerk
RE: City Council Agenda

Dear Carol & Jon:

Please include the following request on the Monday, May 3, 2021 agenda:

To award the Installation of a Surveillance Camera System RFP Bid # SCC-016-042121 at the Sullivan Senior Center to Setronics at the total cost of $11,769. Project funded in total by Donations. Sealed bids were opened on 4/21/ 2021 at 11:00am, bids were reviewed by G. Crowley, J Sekorski and discussed and review with P. Zucco.

I will be available Via ZOOM during the Meeting for any Questions

With appreciation,

Joel Sekorski, Director Service for the Elderly
Sullivan Senior Center
88 East Albert Street
Torrington, CT 06791

City of Torrington

Bid Name **Installation Surveillance Camera System** Bid Number **RFP* SCC- 016- 042121**

Date of Opening **04/21/2021** Time of Opening **11:00am**

VENDOR	BID BOND	NON-COLLUSION	BID AMOUNT		ADDENDUM
Setronics Executive Park Drive illerica, MA, 01862	✓	✓	opt1 $9,256 opt 2* $2,513	11769	✓
ationwide Security Corporation 5 North Brandford Road Suite 8 randford, CT, 06405	✓	✓	opt 1 $16,877 opt 2* $5,569	22446 1611.00	✓
invironmental Systems Corp. 18 Jansen Court West Hartford, CT 06110	✓	◯	opt 1 $16,251 opt 2* $2,075	18,326	✓
ITS Capital Drive Wallingford, CT, 06492	✓	✓	opt 1 $16,888 opt 2* $0	16,888	✓
lvanced Video Security LLC 245 moran street Waterbury, CT, 06704	Bank check $669.00. ✓	✓	opt 1 $9,790 opt 2* $2,770 3590	— 13,380	✓
mammoth Security Inc 1 Hartford Square New Britain, CT, 06052	✓	✓	opt 1 $11,815.08 opt 2* $2,984.02	14779	✓

City of Torrington

Bid Name **Installation Surveillance Camera System** Bid Number **RFP*SCC-016-042121**

Date of Opening **04/21/2021**   Time of Opening **11:00am**

VENDOR	BID BOND	NON-COLLUSION	BID AMOUNT	ADDENDUM
Soundworks + Security P.O. Box 23 Torrington, CT, 06790	Bank check $1,111.86	✓	Opt 1 $22,238.22 opt 2 $1,901.45 24/39	✓