



Will your
school
pass the
A+ test?

Securing Our Schools

A Simple Guide to
SECURITY BEST PRACTICES

Presented by



introduction

The need for **heightened school security** has never been more evident. This Guide to School Security Practices provides the simple, no-nonsense information school districts and security decision makers need to put protective measures in place - measures that will secure their schools and safeguard their students and staff.

This Guide outlines the various security precautions and systems that schools can adopt, and reflects the commitment that **A+ Technology & Security Solutions** has in helping establish and maintain a safe environment for our school children and faculty.





A Simple Guide to
SECURITY BEST PRACTICES

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our promise

A+ Technology & Security Solutions has been serving the educational marketplace since its beginnings in 1989. The company is a leading provider of state-of-the-art technology solutions, and has successfully addressed and met the physical security challenges and objectives of schools for over 25 years.

Leading the way with expertise in technology convergence, A+ has earned a perfect score as one of the largest providers of IP-based security solutions to schools in the greater New York area.



Our Advanced IT offerings are comprehensive, **cost-effective and upgradeable/expandable** as needed. They include: Routers; Switches & Network Design; Servers/Desktops/Laptops; Storage Area Networks; Server Virtualization; Unified Communications; Network Security; Structured cabling & Wire; and Wireless.

Don't be intimidated - we simplify the security lingo in the pages of this Guide! From protection spanning IP video surveillance, license plate recognition, thermal imaging, access control measures, visitor management, video intercom systems and duress and panic buttons, to guidance with school security assessments and audits, we stand ready to help schools achieve their security needs and goals - efficiently, cost-effectively, and painlessly.

David Antar, President

"As experts in school safety and security solutions, we partner with schools to help provide the experience and resources necessary to help maintain a safe school environment."

Schools are first and foremost a place of learning and should always be a safe haven for students and faculty. While most schools throughout the country are safe institutions, some are now, quite sadly, the target of random acts of violence. Too often, we are hearing of tragic events taking place in schools across the country that are claiming innocent lives. Hardening physical security is becoming a priority that, until recent years, was hardly a thought for school administrators and district personnel.

Because these are uncharted waters for many, the process of choosing and implementing security solutions can be intimidating. **A+ Technology is committed to simplifying the process** and helping schools choose the security

technologies and processes that are best suited to their individual needs. No two schools are alike and there is no single security plan that will work ideally for all schools. Although heightening security will not mitigate all risk, one approach that is being sought more and more is the installation of security technologies and products in our schools.

Surveillance cameras, sensors, access control systems, panic buttons and so forth can be **excellent tools and deterrents** if applied appropriately. They can provide school administrators and law enforcement with vital information and evidence that wouldn't otherwise be available.



There are many reasons to implement security technologies in our schools. They can dramatically reduce crime and violence, provide early detection, and provide forensic tools to identify and prosecute perpetrators. By identifying a school's particular security risks, concerns and vulnerabilities, a security plan can be put in place and result in the right solutions being implemented.

Because the concept of hardening school security is still relatively new for many districts, there is bound to be some debate as to how much security is necessary and appropriate.

ARGUMENT AGAINST:

We've never done it that way before.

This is a knee-jerk reaction.

Students' rights may be infringed upon.

Our school will look like a prison.

People will think we have a dangerous school.

We may be sued.

COUNTER-ARGUMENTS:

We need to evolve our security strategies to keep up with the changing times.

This solution will address the immediate threat as longer-term programs are put in place.

Students have a right to a safe and secure school environment.

Our school will look like it is well controlled.

We will gain a reputation for controlling our security concerns.

We may be sued if we don't take this action.



To determine the best possible security strategy, schools need to evaluate their safety programs, assess any and all possible threats to students and staff, and pinpoint any vulnerabilities that exist. These School Security Assessments and Audits should be conducted by qualified professionals. Ideally,

these consultants have experience with both tactical security, such as law enforcements, and day-to-day school administration. This expertise is key to performing an effective school security assessment and designing and implementing a safety and security plan.

% of Public Schools That Use Selected Safety & Security Measures by School Level: 2009-10

SELECTED SAFETY AND SECURITY MEASURES	SCHOOL LEVEL			
	Combined	Primary	Middle	High School
Controlled access during school hours				
Buildings (e.g., locked or monitored doors)	91.7	93.8	94.4	85.9
Grounds (e.g., locked or monitored gates)	46.0	50.8	41.9	42.8
Required to wear badges or picture IDs				
Students	6.9	2.4	11.9	19.0
Faculty and staff	62.9	67.6	62.8	58.3
Metal detector checks on students				
Random checks	5.2	1.9	9.4	12.0
Required to pass through daily	1.4	2	1.59	4.8
Sweeps and technology				
Random dog sniffs to check for drugs	22.9	4.0	43.3	60.1
Random sweeps for contraband	12.1	3.8	20.1	28.7
Electronic notification system for school-wide emergency	63.1	61.1	70.9	66.6
Structured, anonymous threat reporting system	35.9	30.1	47.7	45.6
Use of security cameras to monitor school	61.1	50.6	73.4	84.3
Limited access to social networking websites from school computers	90.9	92.6	97.1	80.2
Require students to wear uniforms	18.9	21.5	19.3	9.7



Defining Threats

Assessments usually begin with observing the area that the school is located in and performing a thorough inspection of the school structure itself. Other considerations are arrival and dismissal practices and the inspection of existing physical security equipment.

Appropriate school administrators and security personnel are typically interviewed to define the scope of the current security profile at the school, and the school's profile within the community. Previous or existing security related problems should also be

considered, as well as any potential threat situations.

If appropriate, recommendations for improvements to the existing security profile at the school will be developed. The goal of these recommendations is to decrease the vulnerability of the assets at the school and to increase the level of protection for these assets. The goal of such recommendations is to provide a more effective level of protection for the assets that might be at risk, while maintaining an open confident learning environment in a reasonable, cost-effective manner.

your school's personality profile

Every school is different and each one has its own unique personality and circumstances. To get a true pulse on the strategies that would be most beneficial, some other key considerations should be put into the equation. Among the questions to ask are:

Are there any existing threats your school faces?

Are there any gangs/rivalries?

Any fighting issues between students?

Are drugs and alcohol abuse a problem at the school?

How safe are the parking lots?

Is there an issue with cars being broken into or vandalized?

Has the school itself ever been broken into or vandalized?

What are the constraints of the facility? Is the school old or new?

Are the windows and doorways particularly vulnerable?

Is there a visitor policy in place? Is there a main entrance check-in point or are other areas of the school also accessible from the outside?

Do former employees still have access to the building?

Are the school grounds open and accessible to anyone or do fences or gates restrict access?

Is there easy access to the roof?

Is the student population small enough that most of the staff would recognize them by face?

Are students or faculty allowed to access the school at night?

What is the nighttime lighting in the school?

What are conditions like in the surrounding community?

Is there a high crime rate?

Where are expelled or suspended students sent? (ie. home, to alternative school or remain on site)

How many incidents of violence or security breaches have taken place at the school over the past four years?

The answers to these questions will help assess the school's threats and vulnerabilities and more clearly define the types of physical security measures that should be put in place.

Securing Your School

IP VIDEO SURVEILLANCE

ACCESS CONTROL

VIDEO INTERCOM SYSTEMS

VISITOR MANAGEMENT SYSTEMS

PROTECTIVE VESTIBULES

DURESS ALARMS & PANIC BUTTONS

THERMAL IMAGING

LICENSE PLATE RECOGNITION



IP video surveillance

More and more schools, colleges and universities are turning to IP video surveillance to help meet their security needs and challenges. Unlike traditional analog systems, IP solutions leverage network infrastructure to capture and record images in very high-definition video quality. And, [they can manage multiple surveillance systems from an easy-to-use interface.](#)

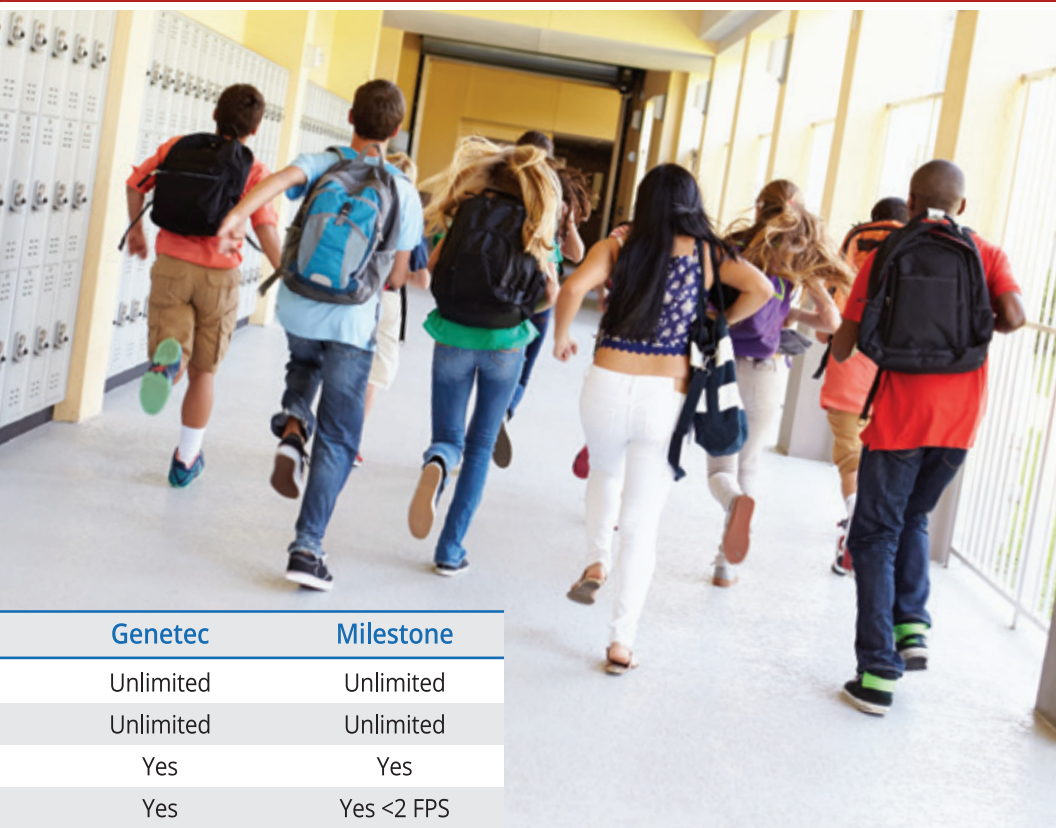
Because of their high image quality, megapixel IP cameras allow users to better track and identify intruders and suspicious individuals as they enter and exit facilities. They also monitor parking lots, sidewalks, hallways and critical entrances with greater clarity and efficiency. If footage isn't being viewed in real-time, IP video can be recorded on a variety of digital media for review at a later time.

VMS comparison

IPVideo Corporation, Avigilon, eXacqVision, Genetec, Milestone

	IPVideo Corp SentryVMS	Avigilon	eXacqVision
Servers	Unlimited	100	Unlimited
# of Cameras	Unlimited	128	Unlimited
Archive to NAS/SAN	Yes	No	Yes
Mobile/Web Access	Yes	\$\$\$	Yes
Map Based Navigation	Yes	Yes	Yes
Synchronized Playback	9 Cameras	Yes	Yes
Remote Video Wall	Yes	Yes	Yes
Screen Manager	Yes	No	No
Purpose Built Hardware Platform	Yes	Yes	Yes
iOs as IP camera	Yes	No	No
Health Monitoring	Yes	Limited	\$\$\$
360 Dewarp Support	Yes	IMMERVISION	Yes
Automated Failover	Yes	Yes	Yes
Real-time connection stats	Yes	Yes	Yes
64-bit Architecture	Yes	Yes	No
Base License	\$0	\$0	\$0
Server License	\$0	\$\$\$	\$\$\$
Camera License	\$0*	\$0*	\$\$\$

* License included with company branded cameras.



Genetec	Milestone
Unlimited	Unlimited
Unlimited	Unlimited
Yes	Yes
Yes	Yes <2 FPS
Yes	Yes
Multiple	Yes
Yes	Optional
No	Optional
Yes	Yes
No	No
Yes	Yes
No	Yes
Yes	Yes
No	No
No	No
\$\$\$	\$\$\$
\$\$\$	\$0
\$\$\$	\$\$\$

As of January 2015

The beauty of network video is that it captures real-time events as they are happening and stores them on a computer hard drive.

Since they are digital, IP camera images can be easily exported for law enforcement review without compromising image quality. A watermark within the digital framework of each image confirms its authenticity, which is particularly important when video images are used as evidence in a court of law.

video management system

Open platform Video Management Systems (VMS) run on network servers and provide the ability to add and configure basic camera settings, resolution, frame-rate and compression formats. The easy-to-use interface allows schools to easily monitor and manage video, and, in many cases, can also be used to monitor integrated access control and intrusion systems.

- Stable data & video storage on purpose-built servers
- Allows for integration with other security software solutions
- Supports network cameras and hardware from many manufacturers
- Fully scalable
- Easy to integrate with other systems such as building management

Internet protocol (IP) cameras output a digitally encoded video signal that can be transmitted across an IP network. These cameras can provide images in high definition.

- Available in a range of megapixel resolutions, IP cameras provide clearer images than analog cameras
- Better identification of subjects
- Require fewer cameras to cover a given area
- Superior wide dynamic range allows for better visibility in backlit settings, such as identifying individuals in doorways
- Flexible frame rate compression for better video storage



VMS Solutions can also be deployed and accessed from mobile devices, providing situational awareness and real-time response from virtually anywhere. A VMS system can also be accessed through a secure web browser with no additional software or plug-ins needed.



thermal imaging



All objects, both natural and man-made, emit infrared energy as heat. By detecting very subtle temperature differences of everything in view, infrared - also known as thermal imaging technology - reveals what would otherwise be invisible to the naked eye. **Thermal imaging allows the users to actually see the unseen, even in complete darkness and bad weather conditions.**

For schools, thermal imaging allows them to effectively monitor large areas of the perimeter in adverse conditions such as darkness, rain or fog, as well as detect temperature fluctuations that may result from a hazardous material or object entering the perimeter of the school.

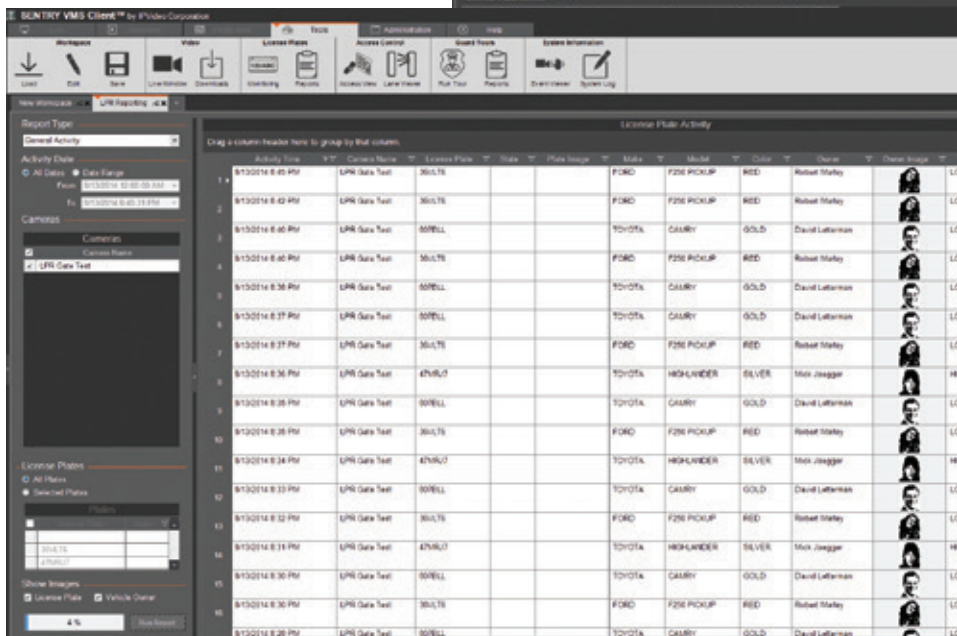
Thermal imaging was first developed for military applications but has since been adopted by law enforcement, fire and rescue teams, security professionals, maintenance operations, and more. It can also be used to detect approaching people or vehicles, to track the footsteps of a fugitive, and to learn why a fire is not extinguishing.

For security and surveillance systems, thermal imaging cameras complement surveillance cameras to provide comprehensive threat detection and integrate seamlessly with larger networks.

license plate recognition

License Plate Recognition (LPR) technology is a perfect perimeter protector for schools. It allows them to use specific cameras with built-in optical character recognition analytics that not only record the images of a license plate, but also read the actual characters of the plate. These can, in turn, be run against DMV databases. Schools can also tap into other software features of their [Video Management Systems](#) to read license plates and maintain a database of vehicles entering and exiting school properties. Early LPR systems often suffered from low recognition rates caused by external effects such as sunlight, headlights, and wide number plates. The

problem was compounded by the limited level of recognition software and vision hardware available then. Recent improvements in the software and hardware, however, have made LPR systems much more reliable and widely adopted.





Access control is a key component of any security system. Whether it is a card, code-based, or biometric system, controlling access to a facility is the first line of defense in keeping unwanted or unknown individuals out.

IP-based access control systems allow control from mobile devices, making it possible for administrators and security personnel to grant access to locked doors from smartphones and tablets. Plus, in emergency situations, school-wide lockdowns or lockouts can be initiated using those same devices.

video intercom systems

Video intercoms are an integral part of many schools' security strategy. And with good reason. A video intercom can be integrated into a school's security system and enables personnel to see the visitor and speak with him/her, assess their demeanor and identity them before opening the door and letting them enter the school. Access can be granted with the push of a button.

This technology gives schools the ability to lock school entrances during school hours while easily allowing pre-screened visitors unham-

pered access. Some even take this a step further and use their video intercom system in conjunction with a locked vestibule, or man-trap, so as to add an additional layer of security to protect students and staff from potentially dangerous intruders.

Modern technology also allows video intercoms to be integrated with the Video Management System, enabling security personnel to record the video streams from the video intercom system for review at a later time.



visitor management systems

An ideal add-on in any school setting, a visitor management system provides an additional layer of security in controlling who enters the building. Rather than someone physically checking an ID at the entrance or designating the office as the sign-in center when someone has already entered the building, a visitor management system will grant or deny access based on credentials before an individual is inside the building.

Basic visitor management systems use a computer network to monitor and record visitor information, and

schools can determine and set the level of scrutiny necessary for clearance. For example, identification such as a driver's license or passport can be quickly checked against national and local databases, as well as in-house databases for security clearance. Photo ID cards can be custom printed for one-time or continuing use, and [swipe cards for authorized users speed the security screening process.](#)

Schools can also create their own "black-list" that will deny certain visitors access when they present their ID.



protective vestibules

Many schools are installing protective vestibules at their main entrances to enable school staff to safely screen visitors before granting them access inside the school. Also termed “mantraps,” these protective vestibules are simply a small room with an entry door on one wall and an exit door on the opposite wall. One door cannot be unlocked and opened until the opposite door has been shut and

locked. Protective vestibules serve to separate non-secure areas from secure ones and prevent unauthorized access.

Bullet-proof glass is used in most protective vestibules as it allows personnel to safely see the visitor and identify any signs of suspicious behavior before allowing them inside the school.





EMPOWER TEACHERS *to Signal for Help*

Video surveillance and access control are typically the backbone of most school security systems. But, equipping faculty with their own mobile panic alarms gives them added security, especially in areas that may not be protected with surveillance cameras, such as classrooms, lavatories, locker rooms, etc. **These panic buttons allow teachers to quickly and discreetly call for help** when faced with a threatening situation. Even if there is already a fixed panic button installed somewhere in a room, a mobile panic alarm can make a huge difference during an emergency situation when the fixed button may be out of reach. As soon as a teacher presses their personal, mobile alarm, their name, photo and **real-time location** is shared with appropriate security responders, all via Wi-Fi technology.

There are many strong motivators for considering mobile panic alarms for staff. They help address incidents before they escalate so responders can arrive quickly to assist. They also complement video management systems, because they expand coverage areas. If a school integrates video and mobile panic alarm solutions, video monitors can be re-focused to the alarm location to identify the threat and coordinate a response. **Mobile alerts can be single purpose devices or apps used from smartphones.**



How Does Your School Security Program Look?

POINTS

1. Do you currently have a working safety and security plan?
Yes = 15 points No = 0 points _____
2. Have you had a school safety and security assessment in the past 12 months by a qualified professional?
Yes = 15 points No = 0 points _____
3. Do you currently have IP-based video surveillance?
(Not analog cameras and/or DVR system)
Yes = 15 points No = 0 points _____
4. Do you have remote access to your video surveillance?
Yes = 10 points No = 0 points _____
5. Do you utilize any License Plate Recognition or Thermal Imaging security in protecting your school perimeters?
Yes = 5 points No = 0 points _____
6. Do you currently use a Video Intercom System?
Yes = 10 points No = 0 points _____
7. Do you currently use a Visitor Management System?
Yes = 10 points No = 0 points _____
8. Do you have electronic access control for exterior doors?
Yes = 15 points No = 0 points _____
9. Do you have electronic access control for interior doors?
Yes = 15 points No = 0 points _____
10. Does your faculty have a wireless panic button system?
Yes = 10 points No = 0 points _____
11. Is your security monitored by retired law enforcement and/or military professionals?
Yes = 5 points No = 0 points _____

PLEASE ADD UP YOUR SCORE.

TOTAL SCORE: _____

YOUR TOTAL SCORES WARRANT THE FOLLOWING GRADING:

- | | | |
|------------|----|---|
| 125 | A+ | (Your school is in excellent shape) |
| 110-120 | A | (Very good, now how can you improve to get to "A+") |
| 95-105 | B | (Not bad, but there are strong areas for improvement) |
| 80-90 | C | (Seriously consider reassessing your security program) |
| 75 or less | D | (Please contact us immediately for a free consultation) |

IP Security & Surveillance + Access Control

Visitor Management + Video Conferencing

Interactive Whiteboards + Data Storage

Printers & Print Assessments

Audience Response System + E-Mail Continuity

Video on Demand + Mobile Science Lab

Wireless + Projectors & Presentation Monitors + Pro-Audio



A+ Technology & Security Solutions

provides innovative software and hardware combinations with a

PROVEN TRACK RECORD

of delivering measurable results in

Security

•

Audio/Visual

•

& Advanced IT



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