Epoka University Uses Grandstream to Create Integrated Solution that Combines IP Telephony and IP Video Surveillance

EPOKA University
IP Telephony and Video Surveillance

Epoka University is a private University located in Tirana, Albania. The school has a 2013 enrollment of 1430 students (1100 undergraduates, 330 graduate students) and offers degree programs in architecture, civil engineering, computer engineering, economics, political science, international relations, and business administration. The school is ranked by Webometrics as the top university in Albania.

Existing Communications Platform

Epoka University was using an outdated analog PBX system that offered only very basic voice features, no video or data support, and required expensive fees just to add new users. The system also was unable to support devices that may need to be installed in new sites going forward as the University expanded to new locations or added remote employees. Epoka was missing many important telephony features that are now essential for colleges and universities, such as IVRs and call queues to route incoming calls and to handle periods of high-call volume, and had no video capability whatsoever. In order to make video calls and add video surveillance under their existing platform, Epoka would have had to install a second and a third network – all with separate service agreements. In order to add important communication features and to add video support, the most sensible option was to create one network that could converge voice, video, data, and video surveillance on one network.

Deployment Goal

Epoka University needed a modern communications platform that offered advanced voice calling features, comprehensive data tools such as CDR and call-recording, easy-to-use phones, and THE integration of video to support video calling and video surveillance. This new platform had to be flexible, easily expandable,

and needed to converge the required voice, video, and data tools onto one common network for easy central management. In addition to adding state-of-the-art voice features, adding video surveillance to the network was essential to Epoka University to allow them to ensure the safety of their students and employees. The school needed to be able to monitor this video surveillance system from multiple locations on campus.

It was clear to Synapse ATS, a System Integrator company in Albania, that Epoka University needed an IP based network. An IP network would allow Epoka to integrate voice and video onto one network that would allow the voice and video endpoints to uniquely interact with each other to add functionality to the solution. An IP based network would also allow the integration of video surveillance with other voice, video calling, and data features. Epoka also needed to be able to manage all features and endpoints on the network from one location, using one piece of software that could be remotely accessed by installers or system integrators if needed.

The New Solution

At Synapse's suggestion, Epoka University chose an IP-based network delivered by hundreds of Grandstream's IP phones, including IP Video phones and IP DECT Wireless phones, and hundreds of Grandstream's IP Video surveillance cameras, being managed by GSurf Pro Video Management software. An Asterisk-based IP PBX anchored the entire network

CASE STUDY

and various switches were deployed throughout campus to deliver connectivity to the devices.

State-of-the-Art IP Phones from Grandstream

109 Grandstream IP phones were installed on employee desks throughout Epoka University. Grandstream IP phones offer state-of-the-art telephony features to allow Epoka University to get the most out of their new voice, video, and data network. Grandstream IP phones can be easily mass deployed through a number of different provisioning options, including TR-069 and Grandstream's Automatic Provisioning Service (GAPS), and they allow Epoka University to utilize IVRs, call-queues, call-recordings, and advanced voicemail funcctionality set up on their new network. Features offered by Grandstream IP phones, such as HD audio, PoE support, various amounts of soft keys and BLF keys, broad SIP interoperability, and large contact books allow Epoka University to communicate as efficiently and productively as ever before.

GXP1165

100 GXP1165s were installed on employee desks throughout campus. The GXP1165 is a comprehensive 1-line IP phone with integrated PoE and Electronic Hook Switch (EHS) support for Plantronics headsets to allow employees to use headsets so that they can make hands-free call and answer calls away from their desk. The GXP1165, like all Grandstream IP phones, offers Epoka University state-of-the-art VoIP security through TLS and SRTP encryption to protect calls and account information. The GXP1165 is a great employee desk phone as it has a small, streamlined footprint while offering an LCD screen and all the telephony features needed to be efficient and productive.

GXP2100

4 GXP2100s were deployed on administrator's desks throughout campus. The GXP2100 is a 4-line IP phone with HD audio support, integrated PoE, 4-way conferencing, and 7 BLF/extension keys. This Enterprise IP phone is a great administrator or receptionist's phone as it allows users to handle higher call volumes and to easily call or transfer calls to up to 7 other people through the BLF/extension keys. The GXP2100 offers the same encryption security as all other Grandstream IP phones in order to protect calls and accounts.

GXP2200 and GXV3140

These IP Multimedia phones were installed on the desk of department directors. The GXP2200 is one of the most innovative IP phones in the world as it runs an open version of the Android operating system, which allows users to download any of the hundreds of thousands of apps in the Google Play Store, including communication and productivity apps such as Skype. The 6-line GXP2200 is compatible with the GXP2200 Extension Module, which makes the phone great for receptionists or users that handle high call volume or for users who need to monitor the statuses of other extensions on the network to make or transfer calls. The GXP2200 includes integrated Bluetooth for use of headsets and data exchange as well as dual Gigabit ports to ensure the fastest possible connection speeds. The GXV3140 is a Skype-certified 3-line IP phone with a built-in camera and a 4.3" full color LCD.

Both the GXP2200 and GXV3140 can make and receive video calls to and from IP video surveillance cameras. This allows any IP video surveillance camera on the network to make a video call to these phones whenever an alert is triggered or motion is detected – making them a great addition to any video surveillance solution as well.

DP715/DP710

Synapse deployed the DP715/DP710 DECT Cordless IP Phone in strategic places around the Epoka University campus. The DP715 (base unit) and DP710 are great phones to deploy on the desk of workers who are away from their desk often throughout the day, or for placement in busy working areas to make sure calls are always answerd. These DECT Cordless IP phones offer an

indoor range of 50 meters from the base station (and outdoor range of 300 meters) to allow Epoka University employees to take a call while they are walking to a meeting, or any similar example. The DP715 and DP710 also feature ring group and hunt group options which allows Epoka to have multiple DECT phones ring when a call is received to ensure every call is answered (ring group) or to set a pre-determined order in which a group of DECT phones will ring to ensure every call is answered.

Integrating Grandstream IP Video Surveillance

One of the most important aspects of Epoka University's new network was the inclusion of video surveillance. The school needed to ensure the safety and security of all students and faculty across the entire campus at all times, and needed to do so in an easy-to-use fashion that integrates with the rest of the network to allow for central management. Synapse installed over 150 Grandstream IP video surveillance cameras across the Epoka University campus, which are monitored and recorded using Grandstream's FREE GSurf Pro Video Management Software. Cameras were installed in every classroom on campus, hallways and lobbies, as well as outdoor locations and parking lots.

All Grandstream cameras are SIP devices, which allows them to be installed on the same IP network as voice and video telephony, and allows the cameras to interact with the telephony network to create a complete solution. Synapse setup the Grandstream cameras and registered them to the IP PBX, allowing each camera to function as an extension on the IP PBX. This allows Epoka University to set the cameras to make calls to IP video phones whenever an alarm is triggered or motion is detected in order to ensure that every security threat is noticed and dealt with. Because Grandstream's cameras are SIP devices, Epoka can also view the live feeds of any camera simply through a web browser. All Grandstream cameras feature easy installation, comprehensive motion detection and alert/alarm settings, built-in PoE, HD video recording/streaming, and much more.

GXV3611_HD

Synapse installed 102 GXV3611_HDs throughout Epoka University's campus. The GXV3611_HD is an indoor dome IP camera that features a 2.8mm lens – which makes it ideal for monitoring wide-angles (115 degrees) at close proximity (5-20 feet from the camera). This made the GXV3611_HD the ideal camera for Synapse to deploy in all indoor areas on campus, including classrooms,

hallways, and building lobbies. The camera features 720p video recording, which is monitored and recorded using GSurf Pro in the school's central security office, and can also be tapped into using the GXP2200 and GXV3140. What makes the GXV3611_HD even more effective for Epoka University is that it has a built-in microphone and speaker – which allows Epoka security officers, employees, administrators, and faculty to speak through the camera to anyone near the camera using a web browser of by making a call to the camera itself. This allows Epoka University to communicate to those in possibly affected areas quickly and easily simply by calling the GXV3611_HD near the affected area.

GXV3662

28 of this vandal-proof, weather-proof and tamper-proof GXV3662 were installed by Synapse throughout key outdoor areas of Epoka University's campus. The GXV3662 is an IP-66 certified weatherproof camera allowing it to function in nearly any outdoor condition, and thick casing allows the camera to be vandal-proof and tamper-proof. This makes the GXV3662 ideal for outdoor areas where tampering could be of possible concern. The GXV3662 includes a manually adjusted variable focal lens to allow Epoka University to adjust the lens from 3.3 meters (wide angle monitoring of areas in close proximity to the camera) to 12mm (30 degree monitoring of areas in the distance), and anything in between, which allows the GXV3362 to be used in small outdoor corridors as well as parking lots on campus – both of which require a different lens angle.

GXV3672_FHD

22 units of the GXV3672_FHD were installed by Synapse at Epoka University in locations where cameras needed to be able to monitor areas in the distance. The GXV3672_FHD features an 8mm lens, which it makes it ideal for monitoring areas in the distance, such as parking lots and other large, open outdoor areas. The GXV3672 series, as well as the GXV3662 series, is built with a weatherproof casing allowing it to be used outdoors in nearly any weather condition. What makes

the GXV3672_HD even more ideal for outdoor monitoring is that it features infrared sensors to allow Epoka to continue to clearly monitor and record in low-light or dark conditions. Every night when the sun goes down, Epoka University does not have to worry about losing security protection thanks to the GXV3672_FHD.

GXV3651_FHD

This full-HD indoor camera was installed in a key indoor area on campus. The GXV3651_FHD contains a manually adjustable variable focal lens to allow Epoka to adjust the area being monitored by the camera, from 3.3mm to 10mm. By including an integrated IR_CUT and light sensor, the GXV3651_FHD can achieve tremendous recording/monitoring quality in low light and night conditions – making it a great camera for monitoring important indoor areas, such as the schools financial office, in any light condition. The GXV3651_FHD uniquely contains an SD card slot. This allows Synapse to deploy the camera in an area of campus where a network connection may not be available, and have all recordings simply saved to the SD card of the camera.

GSurf Pro Video Management Software

All 153 Grandstream cameras deployed by Synapse at Epoka University are monitored and recorded using Grandstream GSurf Pro Video Management Software – which comes free with all Grandstream's cameras. GSurf Pro was installed in the central control room. In order to monitor and record all 153 installed cameras on campus, Synapse installed 5 servers in the control room, each running GSurf Pro. A virtualization-based setup allows Synapse to build a system that could monitor 153 cameras using these 5 servers, since each version of GSurf Pro is built to control up to 36 cameras. This virtualization also allows Epoka to run GSurf Pro as a client on any computer on the network. The school is easily able to adjust recording schedules, set alerts, view live feeds, and set motion detection for all cameras using GSurf Pro.

Result

☑ **High-quality Voice, Video, & Data**

☑ **State-of-the-art Voice Features**

☑ **Advanced Surveillance Protection**

☑ **One, Integrated Network**

Epoka University now has a state-of-the-art network that integrates voice, video, video surveillance, and data onto the same network for easy and central management. This new IP-based network allows Epoka to create a powerful telephony and data network using Grandstream's IP phones, which feature a comprehensive set of telephony features and advanced security protection. The Grandstream SIP phones allow Epoka to use their IP PBX to record calls, create IVRs and auto-attendants, to access voicemails through email, to track calling habits (CDR), and more. The network also allowed Epoka to easily add a video surveillance solution that monitors and records all areas of the campus to ensure student and faculty safety.

This converged network resulted in a drastically lower total cost of ownership and much lower maintenance and operational costs for Epoka University. The integrated solution that Synapse installed for Epoka University is easily expandable in terms of adding additional technologies and adding additional users in the future. Simply put, this new advanced communication systems allows University faculty and students to be more productive, to communicate easier, and to keep the campus safe and connected.

About Synapse ATS

Synapse ATS is a fast growing and innovative ICT Service and Solutions provider company with a wide technology expertise, which ensures organizations to build sustainable physical network infrastructure, connect its employees, remote offices and its partners, provide unified communication and collaboration tools in order to boost productivity and efficiency, ensures that information is secured, protect peoples and assets, and assist to put in place server rooms or data centers. All these capabilities are supported by a range of full life cycle services starting from consultancy, implementation, support and operation.

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About Grandstream

Founded in 2002, Grandstream Networks is the leading manufacturer of IP voice/video telephony and video surveillance solutions. Grandstream serves the SMB and consumer markets with innovative products that lower communication costs, increase security protection and enhance productivity. Their open standard SIP-based products offer broad interoperability, unrivaled features, flexibility, and price-performance competitiveness.