



### CHALLENGE

*Create an integrated telephony and video surveillance system to link 4 worldwide office facilities under one common network for efficient, seamless, and cost-effective communicating*

### SOLUTION

*Installation of IP PBXs linked together by MikroTik RouterBoards, and SIP endpoints including Grandstream's GXV3662\_HD and GXV3651\_FHD IP cameras, and GXV3175 IP Multimedia Phones*

### VALUE CREATED

*Adoption of VoIP reduced telecom infrastructure and monthly recurring costs*

*Improved productivity and enhanced customer service with unified voice and visual communications*

*Integration of SIP-based technology ensures ease of installation and scalability for adding future applications and technologies*

*Addition of video surveillance protects human and physical assets*

## Global Expansion Brings New IP Network with Voice and Video Applications for Tabbara

### BEIRUT, LEBANON

For over three decades, Tabbara General Company has designed and implemented customer networks focused on security, communications, fiber optic and solar photovoltaic (PV) solutions. Its reputation has been built upon the ability to execute turnkey projects in the Gulf and the Middle East region while providing customer solutions with the best equipment and engineering services. As success ensued, Tabbara seized the opportunity to reach a wider business market base for network design services and opened additional offices globally. The company has expanded outside of Beirut into the Middle East and North America, opening offices globally, including Abu Dhabi, Dubai, United Arab Emirates, and Montreal, Canada.

### CHALLENGE

*Implement a cost-effective, scalable worldwide network that improves business communications and incorporates video surveillance technology.*

Tabbara needed to consider the business, operational and financial impact on its communications network as a result of the global expansion plan. Tabbara outlined several goals for the new network including:

- Seamless connection of each office communications equipment into one easily managed network,
- Ensure highest level of business productivity among its employees,
- Minimize the financial outlay of capital purchases of new network hardware,

- Reduce monthly recurring communications costs,
- Allow for easy unified voice communications and video conferencing, and
- Incorporate new visual surveillance and communications applications to remotely monitor activity at each facility.

With these directives in hand, Tabarra began to design a new single, unified communications network for all their voice, video and video surveillance applications.



GXV3175 IP Multimedia Phone

*"The cutover of new IP applications for our new worldwide network has been extremely beneficial. The network provides us with the unity we sought for our communication infrastructure and also keeps our growing, dispersed worldwide staff connected by phone and video conferencing.*

*Grandstream solutions are incredibly straightforward to install and a great choice for anyone looking for IP devices. We are especially pleased with the new video surveillance capability that offers us peace-of-mind through real-time surveillance recording and monitoring. Standardizing our internal business operations across our office locations has had an immeasurable effect on the efficiency and communication among employees."*

**Lama Tabbara**

*Operations and Client Support Manager  
Tabbara Electronics LLC*

## SOLUTION

*Single, worldwide IP network for unified voice communications, video conferencing and video surveillance applications*

To connect communications and business operations of four worldwide office locations, Tabbara reviewed multiple IP telephony manufacturer options before selecting to deploy a suite of VoIP products from Grandstream Networks. Tabbara chose Grandstream IP PBX and IP endpoints for the affordability, broad array of features and because it was impressed with Grandstream's product breadth, which they noted as a distinguishing marketplace advantage.

Anchoring the new network is Grandstream's GXE5028 IP PBX for voice communications, voicemail, email and e-fax applications. A GXE5028

at each location allows each office to maximize usage of SIP accounts while still being connected to the same internal network. Each Grandstream GXE5028 is used as a server to support IP telephones and extensions as well as IP video surveillance cameras. The IP PBX is also connected through the Internet to a SIP trunk in a central location for VoIP service. MikroTik RouterBOARDs link the IP PBXs to the Virtual Private Network (VPN).

For SIP endpoints, Tabbara chose Grandstream's GXV3175 IP Multimedia Phones, GXV3662\_HD IP Dome cameras and GXV3651\_FHD cameras.

## BUSINESS RESULTS

### Improved Productivity and Resource Savings

With employees located worldwide, executives wanted to ensure that regardless of the distance, employees would be able to hear (voice communications) and see (visual communications) each other like they were located in the same facility. Tabbara installed GXV3175 IP Multimedia Phones in each office. Using one phone system gives employees access to all the same features such as voicemail, email and e-fax. Dialing someone at another location requires only dialing an extension, which eliminates costly long distance toll charges. Customer service is improved with no missed calls using the 'Follow Me' feature that forward calls to mobile phone or other programmed extensions.

Visual communications, or video conferencing, is also used as a means to have employees at different facilities to stay connected. The GXV3175 IP

Multimedia Phone with IP VideoTalk free calling service gives employees the ability to conduct free video calls as easy as it is making a voice call. The multimedia phone offers a sleek tablet-like design with a 7" touch screen color LCD with integrated WiFi and tiltable 1.3 megapixel CMOS camera for advanced video compression standards H.264/H.263/H.263+. Aside from making HD audio calls, free video calls, and accessing the Internet with a built-in web browser, Tabbara employees use the GXV3175 to dial into video surveillance cameras located at each facility for on-site and remote facility monitoring (see *Real-Time Protection of Physical Assets*).

### Real-time Protection of Physical Assets

Tabbara owners wanted to maximize IP's cost-effectiveness and ability to merge multiple networks into one by adding video surveillance to the VoIP voice/data network. Using



*GXV3651\_FHD IP Camera*



*GXV3662\_HD IP Camera*

Grandstream IP video surveillance cameras and IP Multimedia Phones, all Tabbara office locations are equipped with 24x7, 365 days-a-year real-time, on-site and remote surveillance imaging and monitoring. Video surveillance protects Tabbara's human assets (employees) while working at each facility and deters theft of equipment and product inventory during and after work hours.

The camera used at each facility entrance is the GXV3662\_HD IP camera. The GXV3662\_HD camera provides day/night HD video with a vandal-resistant, tamper-proof and weatherproof casing. The camera features multi-rate H.264 and MJPEG real-time video compression (up to 720p HD video) and a 1.2 megapixel CMOS sensor. Inside each location, GXV3651\_FHD cameras with full HD (1080p) recording and a 5 megapixel CMOS sensor are in service. Additionally, Grandstream's video surveillance cameras are set as extensions on the IP telephony network, allowing for video calls from the IP multimedia phones to the IP cameras for viewing of live feeds. The cameras are also set-up to monitor the cameras on-site as well as remotely monitor cameras located at other facilities. Tabbara's application is also enhanced with the unique ability of Grandstream cameras to offer bi-directional (2-way) SIP/VoIP audio and video streaming to mobile and videophones.

Two-way audio allows employees to talk through the cameras using the speaker located on each camera. For example, if someone is at the entrance door waiting to be let in the facility, the visitor can speak through

the camera to someone in the facility or remotely at another facility to gain access. Employees inside or executives from anywhere in the world can use their GXV3175 IP Multimedia Phone to communicate back to the visitor. Customer service is enhanced for the visitor and added security is present for employees and owners knowing there is real-time monitoring at all times. A central monitoring station is located in Tabbara's Abu Dhabi office using GSurf, Grandstream's free video management software that can monitor up to 36 cameras at once. Tabbara easily set-up GSurf to send alert notifications to mobile phones, analog phones, and IP phones.

In summary, Tabbara's new integrated communication network provides a higher level of operating efficiency and quality of work. Using VoIP and combining all 4 offices together results in cost savings by eliminating long-distance calls, improving productivity through unified and visual communications applications. Now, an employee in Montreal, for example, can make an IP phone or video call to the Abu Dhabi office as easily and cost-effectively as if he were calling within the same facility. For video surveillance, the Beirut headquarters facility can monitor and record IP video surveillance cameras at all other offices as if activity was happening in the same building.



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