JACQUES
Future Proof Communications

IP Industrial Communication System

Whitepaper and Project References

THE PROBLEM

Potential safety and security breaches are encountered daily by those working in an industrial work environment. From heavy-duty machinery, extreme temperatures, terrorism threats, vandalism or theft, the dangers that can arise are endless.

As defence forces serve a critical role in the security of entire nations, the defence work environment is at high risk from security threats such as terrorism, and espionage. The defence force not only protects against other foreign threats, but controls highly sought-after military, scientific, technical and commercial information. Therefore, lack of quality communications can undermine the security for an entire nation!

Miners risk their safety every day facing the dangers of harsh environments and heavy-duty machinery. A simple accident can rapidly become a critical emergency thus increasing the importance of access to immediate help.

Factories and industrial sites are confronted with a variety of safety and security concerns from internal and external sources. When securing factories and industrial sites it is crucial to provide protection against possible theft or loss of goods as well as the safety of employees and any suppliers or contractors who require access to these sites.

Potential safety and security breaches are encountered daily by those working in an industrial work environment.

THE SOLUTION

To ensure the safety of those working in such conditions it is essential to have a comprehensive and dependable communications and security system. Jacques offers an integrated IP intercom and public address system which provides reliable and flexible communication ensuring the safety of workers, visitors and contractors in any situation. A Jacques, dynamic IP communication system featuring intercom and public address have the capability of being integrated into third party CCTV and building/security management systems along with the advantage of durability and excellent voice quality suited for harsh conditions. From mining sites, to multisite defence locations, factories or distribution centres the Jacques' integrated IP audio and/or video intercom and public address system are effective and flexible in meeting specific requirements in order to ensure maximum safety and security for all individuals on site.

DEFENCE

Jacques integrated IP communication system suitable to defence applications, features IP audio and video entrance and bollard intercoms with call control facilitated by master stations and a comprehensive public address system.

Monitoring for any intruders and maintaining secured areas within the defence work environment is a vital aspect in insuring only permitted personnel are allowed on site. This can be facilitated with the use of access and bollard intercom devices located at personnel gates and access points. Access intercom terminals allow admittance to authorised persons to secured areas, gates, doors and social areas following communication via intercom to a control room, whereby access can be approved and granted.

Communicating to all on site regarding any announcements, emergencies or alarms is simple and user-friendly with Jacques public address system. The safety within the defence is further advanced with intercom and public address functionality being capable of full integration to access control, CCTV and building and security management systems. Defence security have the advantage of audio communication, the controlling access to secure areas, doors or gates while having visual monitoring through CCTV all from a central or remote location.

The Jacques IP Communications System supports distributed networks which can be located at different sites. This set up is ideal for defence which operates many sites often with great distances in between. The system has hot standby, redundant controllers at one site. Multiple transmission links provide for alternate routing of network traffic should any link fail. In addition, there is a local controller at each remote defence site. Should all transmission links fail then the local site can operate independently. Furthermore, if a master should fail or be unanswered at a remote site, calls can be routed to alternate sites on the wide area network (WAN).

A Jacques integrated IP intercom and public address system provides vital resources enabling defence forces to effectively serve and protect.

FACTORIES & DISTRIBUTION CENTRES

Ensuring the security of goods and machinery is made simple with vandal and weather resistant intercoms which provide protection against intruders and manage access to secure areas, gates or doors for authorised persons. The security for employees is further advanced with the opportunity to make announcements, emergency warnings or alerts to the entire facility through the IP public address system.

Audio communication integrated with CCTV cameras allows security to hear and see across sites ensuring the safety of personnel and stock. This is further enhanced as audio communication together with CCTV imagery can be captured and recorded and therefore provided to the authorities in the event of an intrusion or theft. In addition, integration of access control and building and security management systems make any after-hours activity hassle-free with control all from a central or remote location.

Industrial sites, factories and distribution centres can boost production knowing employees and property will be safe and secure with Jacques' integrated IP intercom and public address system.

On a mine site where a simple accident can easily become an emergency, safety is the number one priority.

MINE SITES

Safety is the number one priority on mine sites. A simple accident could easily become an emergency thus increasing the importance of access immediate help and assistance. With Jacques' IP communications system, mine site management can be assured access to communication is always close by. Entrance, bollard and explosion proof intercoms provide communications between individuals and central control while the public address system provides communication to the masses. With complete integration to many third party access control, CCTV and building and security management systems Jacques ensures a complete safety and security focused communications system tailored to the needs and environment of mine sites.

Easily control access to secured areas, gates or doors with the installation of video and/or audio entrance intercoms to maintain safety throughout the entire work site. Permitting authorised persons and protection against intruders is further advanced with bollard intercoms located at entry gates and boom gates. Whether the mine is located above ground, below ground, in extreme heat, cold, frost, humidity or whatever the context of the environment, the weather and vandal resistant intercoms provide reliable lines of communication. The integration of explosion proof intercoms into the Jacques system ensures reliable communication whilst denying any potential triggering of an explosion initiated by the device. There is no need to scream or shout into Jacques intercom devices, regardless of the background noise as the communications lines provide crystal clear voice quality with advanced background noise cancellation ensuring communication clarity.

Addressing all sites within the mine whether there is loud machinery operating underground or a quiet office above ground a Jacques IP intercom and public

address system provides reliable sound quality, alert signals, evacuation signals and verbal address. The public address system will ensure orderly evacuation and information notification to the entire site and as a result enhance the safety and confidence for those working in such temperamental conditions.

In addition, mine-site management can feel confident with the safety of every worker with integrated access control, CCTV and building and security management. Mine site security will have the advantage of receiving audio communication while visually monitoring the site through CCTV cameras and controlling access to doors, gates and secure areas from a central or remote location, all of which can be completely integrated into the mine's current management systems.

Jacques redundant controller solution is ideal for industrial applications such as mine sites, where continual, uncompromised communication and surveillance is critical. The primary purpose of redundancy is to reduce the risk of an entire system failure due the failure of the primary controller (software or hardware). An IP communication system featuring redundant controllers comprises of a primary and secondary controller, where the primary controller acts as the central point of contact, responsible for the entire network. In the case of a module, hardware or software failure, the secondary controller will automatically failover and connect with the endpoints to ensure continuous system operation. This ensures communication via intercom and public address is available 24/7 across mine sites ultimately ensuring the safety and security of all personnel.

Jacques' integrated intercom and public address systems provide advanced, user-friendly technology that assures that entire mine sites will be protected and safe.

A Digital IP audio intercom system that operates across standard Ethernet Local and Wide area networks.

GAS PLANT

Jacques IP communication system suited to gas plants include explosion proof emergency telephones, entrance and help point intercom units plus a comprehensive public address system.

Jacques intercom and public address systems operate across standard Ethernet Local and Wide area networks (LAN/WAN). Gas plant sites can include a mix of Jacques IP master stations, weather and vandal resistant IP intercom terminals with gate control relays and explosion-proof telephones.

The system provides the gate house and security control room personnel with the ability to communicate with intercom devices and control gate entry point access. Ultimate system flexibility and increased functionality can result from Jacques' system integration to building and security management systems allowing for events to be generated by the third party system when intercom calls are initiated. In addition to highly

intelligible voice communication, central control can initiate, answer and end calls and operate the remote door and gate release mechanisms via both the intercom and building/security management system. Additionally, camera pan/tilt presets can be activated via intercom address information provided across the bi-directional High Level Interface (HLI). This allows for the recording of video feed from CCTV cameras alongside audio from the intercom system, ultimately providing comprehensive site security.

To further ensure seamless operation and reliability, all audio communication between master stations and endpoints ensure excellent quality without background induced noise.

Jacques is diligent in maintaining its industry reputation as a reliable and robust IP communication system provider thus offering readily available technical support and system maintenance.

Jacques is proud to have completed many national and international industrial projects.

PROJECT REFERENCES

- BHP Mine Sites (various sites)
- Tindall RAAF Base (NT)
- Port Bonython Santos Refinery (SA)
- Australia Pacific LNG (various sites)
- West Angelas Power Station (WA)
- Cape Lambert (WA)
- Dawson Mine (QLD)
- Kwinana Power Plant (WA)
- Kararah Mine (WA)
- Karratha Gas Terminal (WA)
- Lemeridian AC Cooling Plant (UAE)
- Poitrel Mine (QLD)
- Mt Piper Power Station (NSW)
- Narrabri Mine (NSW)
- Gladstone Port (QLD)
- Origin Energy CSG (QLD)
- Millmerran Power Station (QLD)
- Mackay Port (QLD)

- Port of Portalnd (VIC)
- Fremantle Ports (WA)
- Port of Melbourne (VIC)
- Broome Port Authority (WA)
- ORICA Port Headland (WA)
- WA Southern Seawater Desalination Plant (WA)
- Musandam Gas Plant (OMN)
- Northern Water Treatment Plant (NSW)
- Boddington Mine (WA)
- Blackwater Coal Mine (WA)

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