

# City Safety First: A Priority for Councils and Governments

Public safety across cities is an important priority to councils and state governments. Convenient, reliable access to emergency communications allows for the access to help and assistance should it be required in the case of an emergency. Similarly, emergency mass communication systems are required by security and infrastructure operators in the case of an emergency, threat or danger that may impact on the safety of residents and visitors as well as the public spaces, infrastructure, and transport networks they occupy.

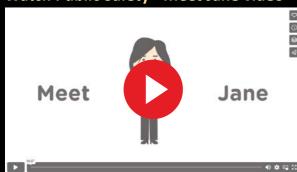
## The solution

Jacques Smart Safe City solution provides **INTELLIGENT IP COMMUNICATION** to ensure the public remains safe and informed. Advanced Public Address, intercom & help point unit stations and **INTEGRATION** to CCTV and other security systems, ensures a smart approach to community safety.

Highly visible, robust & user-friendly IP intercom and help point units enable individuals to connect directly to central control for immediate assistance when they need it. Users can also access location, transport, or tourism services through the intercom station's information calling button. The IP Public Address System allowing the broadcast of live or pre-recorded verbal announcements, warning alarms, or tones across single, multiple or all PA zones.

A Jacques IP communication system can be customised to meet the specific needs of any public space.

## Watch Public Safety - Meet Jane video



vimeo.com/350228639



## **System features**

#### **True IP communication**

Full IP communication from server to endpoint devices. The system operates on an IEEE 802TCP/IP network, with all devices supporting IEEE PoE allowing for power, data, and voice communications to be transmitted via a single CAT5/6 cable.

## **Supported integration**

Integration via High Level Interface to many leading CCTV, access control, and security and building management systems ensures a complete security solution.

## **Unparalleled reliability**

Redundant and distributed server frameworks that limit single points of failure, ensuring system robustness and site-wide reliability.

## **Investment longevity**

Continuous expandability ensures longevity. Digital communication operates over new or existing Ethernet networks allowing for additional intercom or public address endpoints to be added easily. System configuration options are virtually endless to achieve the functionality required.

## Flexible architecture

From small to large systems. An unlimited number of intercoms, help point or public address endpoints to be connected, integrated and managed. Call hierarchy and system topology ensures complete control over system design.

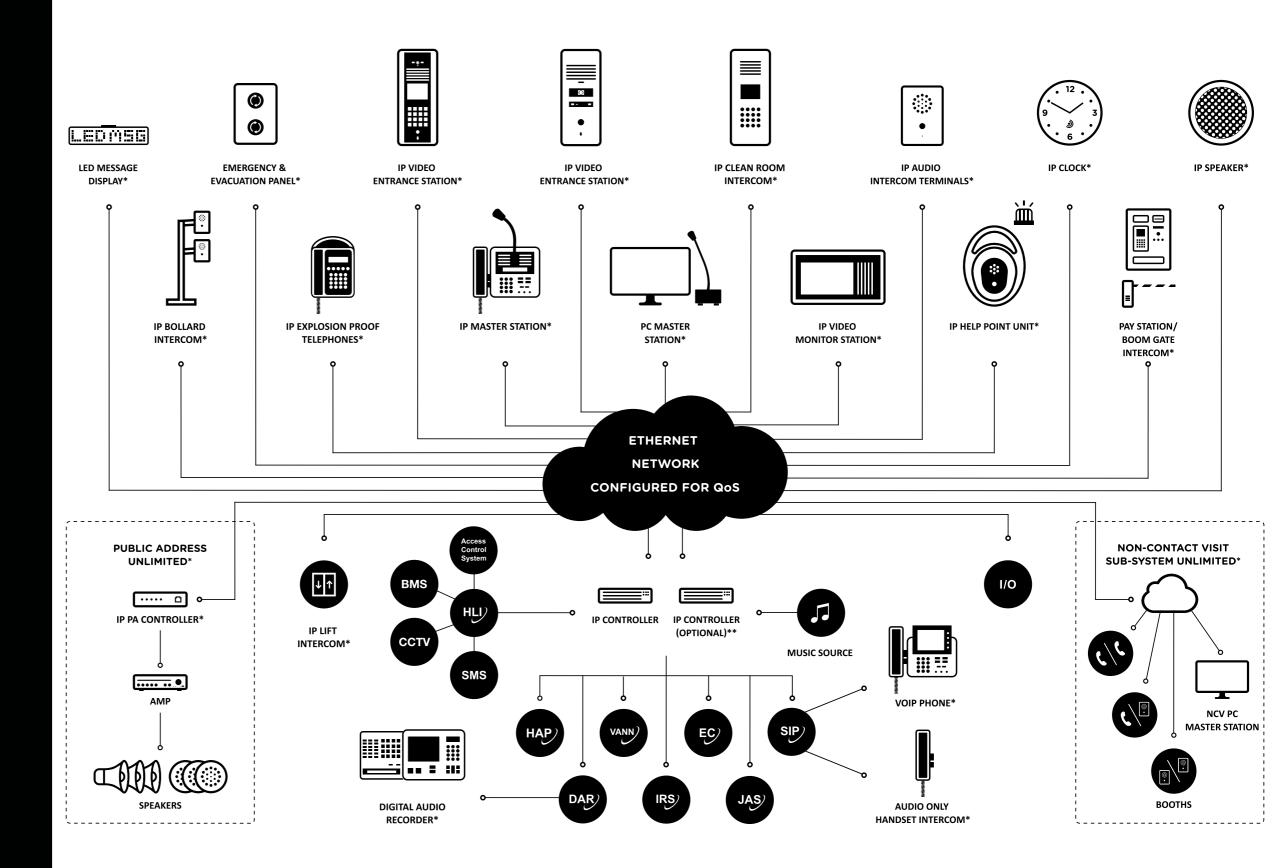
#### Simple installation

Our IP intercom & public address devices connect directly to any port on a standard Ethernet network. Our IP devices support Power over Ethernet (PoE) ensuring power can also be supplied via the network. This allows for a simple plug & play installation.

## **Environmental specific features**

Intercom terminals are robust, water protected, and vandal resistant. Built to withstand harsh public environments and continuous, high volume usage. They perform continuous tamper detection, integrity, and diagnostic testing. To further enhance reliability of the call button, intercom terminals & help point units can be equipped with self-testing buttons whereby the system automatically tests terminal buttons, guaranteeing their reliability.

## System diagram



<sup>\*</sup>Virtually unlimited. Dependent on server configuration and network bandwidth \*\*Multiple controllers available for redundancy or distributed options

## **IP COMMUNICATION SYSTEM**

## One system, endless possibilities

The Jacques IP Communication System (650 Series) is built tough for critical, security communication in the public safety market, yet flexible and scalable to suit any market requirement where communication is vital. Featuring audio and video intercom, public address and help point units, communication with an individual or the masses is effortless. With the scope to achieve systems with an unlimited number of endpoints, and with virtually unlimited configuration options; the possibilities are endless.

## **Core system features**

## **Central and control monitoring**

Specialised call handling to and from multiple control rooms via hierarchical and/or peer to peer predefined call routing structures.

## **Diagnostics and reporting**

System-wide, continuous device diagnostics and reporting including call button testing, acoustic performance, tamper detection, and data communication reliability.

#### **Audio recording**

Redundant integrated call audio recording at a central location. Unlimited number of channels available for audio recording.

#### **Full duplex**

Full duplex audio communication with advanced audio capabilities ensuring a clear, two-way communication.

## **Digital Signal Processor**

The use of a digital signal processor allows total user control of the PA system. Users have the flexibility to broadcast background music to any number of selected PA zones, while making an audio announcement to other individual or selected zones simultaneously. Multiple simultaneous streams of background music can be distributed throughout the system at each zone.

## **Unlimited Multi Zone**

Features dynamic grouping of PA zones, with no limit on the number of groups or the number of zones within a group ensuring complete system scalability.

#### **CCTV Associations**

CCTV associations allow for a camera to point to an intercom or help point unit when the call button is pressed. The allows for audio & CCTV to be monitored together.







## Advanced system features

## Acoustic echo cancellation (AEC)

An acoustic echo cancellation (AEC) engine when used in full duplex mode - significantly reduces unwanted interference from acoustic reflections and feedback - ensuring clarity of audio.

## Threshold monitoring

The system provides threshold monitoring whereby a call is automatically connected or an alarm notification is activated, should a predetermined ambient noise level be exceeded at any configured intercom endpoint.

## **Call prioritisation**

Priority queuing of calls allows the system to identify and prioritise calls from predetermined important, high risk or danger areas ensuring communication lines from caller to central control are handled with precedence. 256 call priority levels are available.

#### Automate intercom button test

The Jacques Self-Test Button (STB) — a call button that allows for remote testing of the push button mechanism, acoustics and data communications whereby diagnostic tests are logged and recorded on the system controller. Any tests reporting a test fail triggers an alarm within the system.

## Reporting and logging

Jacques systems provide complete event logging of all call activity and fault conditions for incident reporting or maintenance. The results from intercom self-acoustic testing of the speaker and microphone is recorded. The reporting of tamper alarms, activated if an intercom device has been damaged, pulled from the wall or impacted upon allows for a timely response from the maintenance team.

## Configurable event triggers

The system can be configured to allow for the triggering of events in conjunction with an action performed in the intercom/help point unit/public address system. Event triggers include (but are not limited to) CCTV switching, light on/off switching, door/gate/boom gate release, pre-recorded message announcements, sms or email notifications, night switching (call diversion relating to hierarchy, based on time of day), and bell or warning alarm scheduling.

#### SIP interface

Jacques SIP software module allows for integration of the Jacques communication system with compatible digital telephony systems such as Avaya IP Office 500, Cisco Call manager, Asterisk and others. The SIP trunk allows for an unlimited number of concurrent calls between the phone system and the Jacques system. SIP gateway ensures calls are always answered, even after hours, by transferring calls to an external telephone system.

# High level interface (HLI)

Jacques boasts a number of HLI to industry leading third party systems, enabling our systems to integrate with numerous access control, CCTV, security and building management systems. Integration allows full intercom master functionality to the client applications which includes receiving endpoint status changes.

#### **Features**

INTERCOM FUNCTIONS Make/receive calls, terminate, forward, call hold, music streaming control

PA FUNCTIONS Select PA zones for broadcast, group calling, push-to-talk for intercom and PA system

**RELAYS & EVENTS** Trigger alarms, events, activate CCTV, door/gate relay

**DIAGNOSTICS AND REPORTING** Event logging, monitor endpoint status (online/offline/alarm)

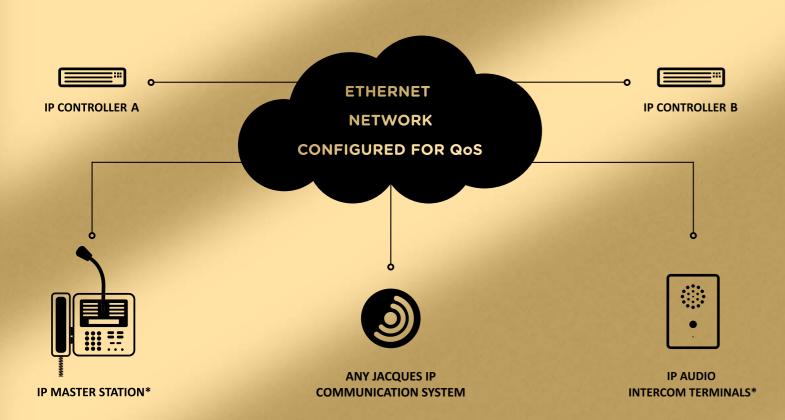
GRAPHICAL MAPS Display Jacques intercoms on maps, display of intercom based on status, control of intercoms

**ALARM MANAGEMENT** Automatic intercom control

**RECORDING** Records third party CCTV in conjunction with intercom audio

## **Redundant controllers**

System redundancy can be achieved in several ways, with both virtual and hardware-based system controllers operating as a pair. High availability configuration eliminates single points of system failure and ensures that no current call or queued call is lost during failover, guaranteeing system robustness and the continued reliability.













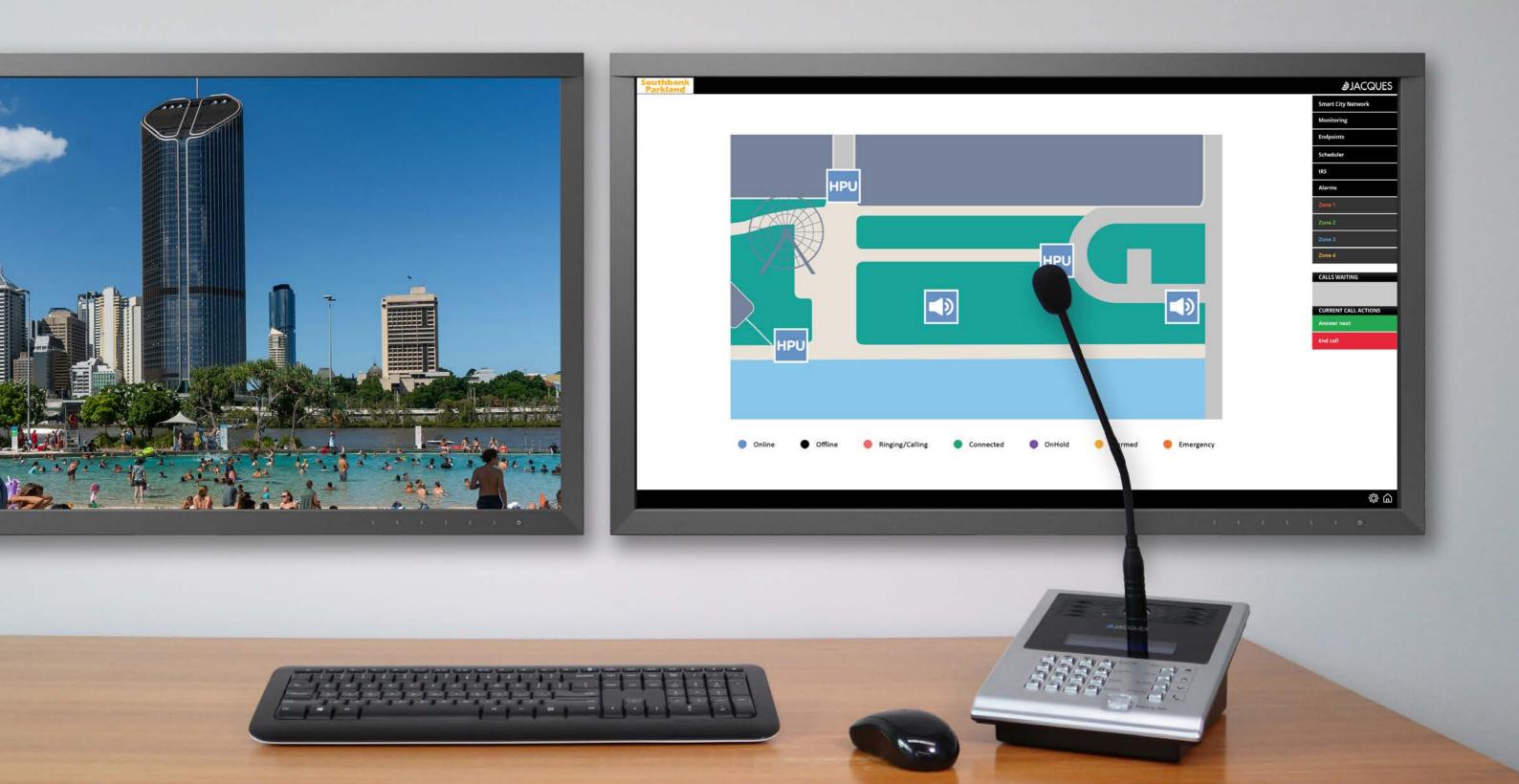






Ultimate control. Customise the GUI to suit any public safety solution

- Complete intercom call handling functions
- Complete Public Address functionality
- Intercom & CCTV camera intergration
- Diagnostics and reporting
- Visualisation via map, grid, list view





The Intercom Report Server (IRS) software module is instrumental in the detailed and accurate logging and reporting of live system activities including system operation, network management via traffic monitoring, alarms, and device state. The IRS is accessed via a web interface and provides a dynamic view of live events to monitor the system in real time while automatic or scheduled report generation and document creation ensure simplified information dissemination.

# Report detail can be configured by four defined filters depending on reporting requirements:

**DEFAULT** Creates reports containing tag, status (online or offline), resets, number of answered/held/connected calls, failed calls, total ringing/calling/connected time and elapsed triggered alarm duration

**CALL ACTIVITY** Creates reports containing tag, call timestamp, intercom descriptors, and call handling information

**FAULTS** Creates reports containing tag, fault timestamp, and fault description

**SYSTEM DIAGNOSTIC FUNCTIONALITY (SDF)** Creates reports containing tag, acoustic test, status test, and button test information

**MASTER/INTERCOM USAGE** Create reports & graphs based on endpoint usage to optimize workflows





## **Brisbane City Council City Safe**

The Queen Street and Fortitude Valley Malls are some Brisbane's busiest public venues, attracting diverse crowds day and night, 7 days a week. With over 26 million people visiting the malls every year, steps have been taken to further enhance the safety of individuals and the security of property in these two locations.

Jacques Public Address system was installed in Queen Street Mall and Fortitude Valley in October, 2013 and has been expanded as the city grows. This system aims to provide immediate information dissemination to the public to ensure a quick response time to any situation from security personnel at central control.

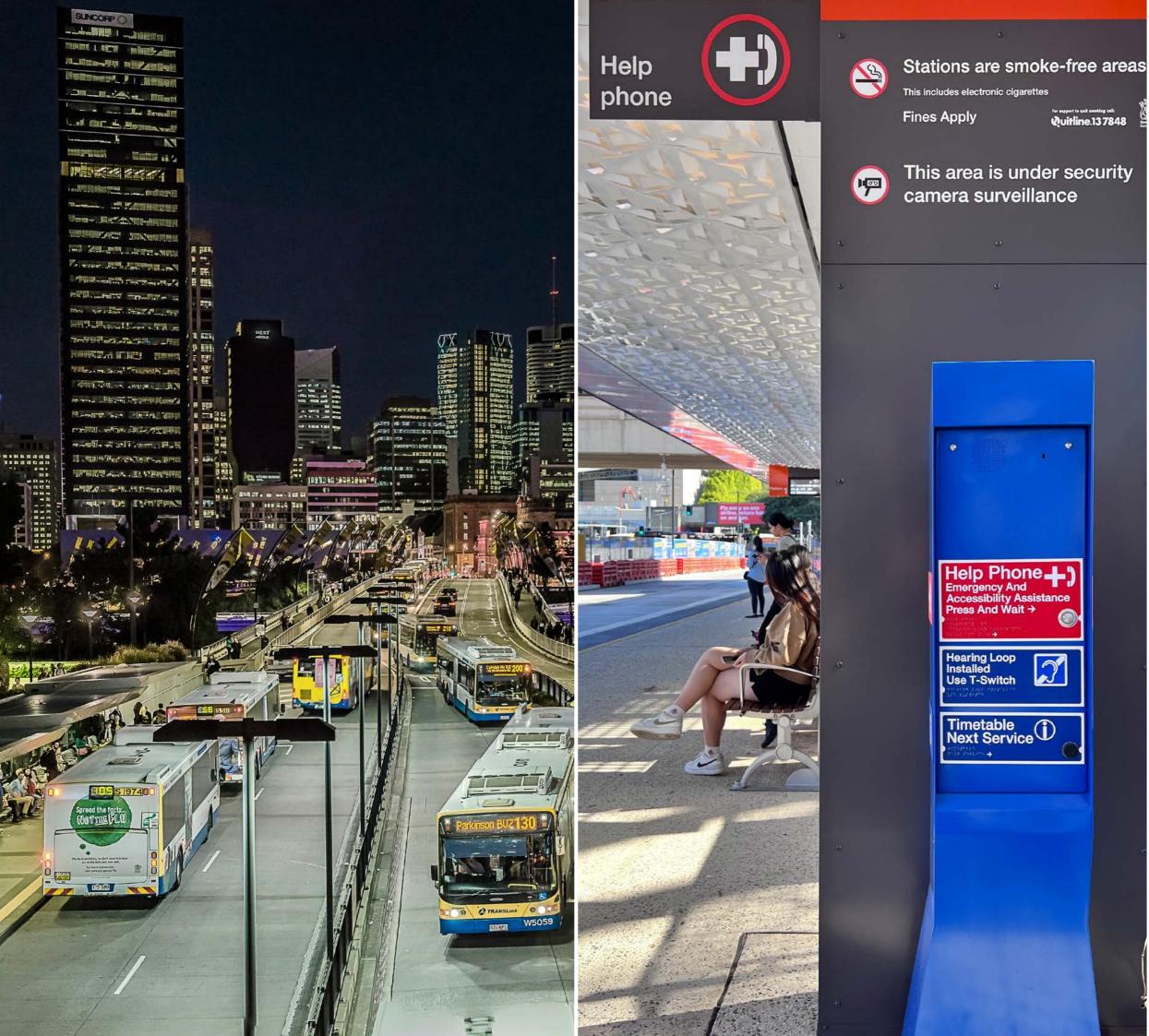
Key features of this system include the ability to make live public address announcements and to broadcast pre-recorded and time scheduled announcements to one, selected or all public address zones across the sites. The public address system which operates across these separate locations operate on the same network and are managed centrally. This enables security personnel to engage with persons in all or select locations. Integration of the public address system with the sites CCTV system allows verbal warnings to be broadcast to potential troublemakers that the police have or will be called. The system ensures persons are aware 'someone is watching' and may deter troublemakers from further action. A series of pre-recorded messages initiated by an operator using the City Safe Graphical User Interface, in conjunction with associated camera footage can broadcast public service and warning announcements easily. The initial message; 'Warning! You are under surveillance by Brisbane City Council City Safe Cameras', can be followed by a further two messages advising that the police have been advised of the situation and the police will be attending. The public address system also broadcasts messages relating to behaviour and law. The smoking message: 'Please be aware that smoking in the Queen Street Mall is prohibited under the Smoke Free Places local law. Please cease smoking in the mall immediately,' again advises the public their behaviour is being monitored and is unsatisfactory.

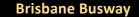
## **Ipswich City Council Safe City**

Ipswich City Council operates one of the largest public safety facilities in Australia. The Safe City program aims to create a safe environment within the city for people to live, work, socialise and play while addressing unacceptable levels of crime and violence. Over the past 15 years, Ipswich City Council has installed Jacques IP Help Point Units in several parks and public areas spread across a 30km area. Help point units offer simplified, one-button calling to the Safe City Monitoring Facility should a person require assistance. The monitoring facility, situated within the CBD, is operated by 24 security officers, 7 days a week, 24 hours a day. The facility monitors over 580 CCTV cameras across 156 screens, additionally the 20 help point units provide help, support and assistance to the public in the event of an emergency or should someone feel unsafe. If the call button is pressed on a help point unit, the nearby CCTV camera is activated, and the security officer can view the camera stream while communicating verbally with the caller.

The Safe City facility has been recognised as the benchmark for a fully integrated crime prevention program that is not solely reliant on cameras and utilises a co-ordinated approach of all agencies in Ipswich.







During peak hour at Brisbane Busways busiest interchange, approximately one bus passes through every 12 seconds, totalling 294 buses every hour. The Brisbane Busway network is a monitored, high capacity, and well-connected system of bus-only corridors – providing a modernised, efficient and cost-effective transport system.

Jacques began working with Brisbane Busways (TransLink) in 2006, installing a state-of-the-art Help Point and Public Address (PA) System for the Southeast Busway. As Brisbane city developed, the bus network grew and therefore Jacques IP communication system expanded. Several years later, Brisbane Busways now encompasses the Southeast, Southern and Northern busway networks all operating the Jacques IP Communication System. In 2023, with the development of Brisbane Metro, Jacques have provided customised, DDA compliant help phone pedestal bollards with detailed & braille signage. These bollards provide travellers with onbutton calling for assistance.

For public safety the busways feature:

- Jacques Help Point Units located on the platforms and in transit car parks. Help points are connected to several operation centres and can be diverted when any of these centres are closed. For peak hour traffic management, more centres are in operation, while in quieter times fewer centres are operational.
- Jacques Public Address System allowing for announcements or emergency messages to be broadcast across the system. Public address messages can be live or pre-recorded and time scheduled with the flexibility to broadcast to one, selected or all public address zones across the network.
- Jacques lift intercom devices within bus station lifts allow for calling to the operation centre in case of an in-lift emergency.
- 24 hour monitored CCTV security cameras located throughout the busway network allow for security personnel at the operations centre to switch to an intercom associated camera ensuring complete audio and video monitoring. The Northern Busway includes a 15km tunnel that initially presented public address audio clarity concerns. As a result, Jacques specifically designed and developed a public address system that ensures consistently clear audio using advanced DSP echo reduction technology.

The busways intercom, public address and help point unit system is managed at central control by a customised Graphical User Interface (GUI). The GUI features multiple station maps and sub-maps, customised branding and pre-recorded message buttons allowing operators to make, answer and terminate intercom and PA calls.

#### Southbank Parklands, Brisbane

South Bank Parklands is part of Brisbane's cultural precinct located along Brisbane river. This 17-hectare parkland precinct comprises 20 landscaped areas, the iconic man-made Streets Beach, and The Grand Arbour – a kilometre long walkway covered in pink flowering bougainvillea. The area also offers free community experiences such as rainforest walks, water features, picnic and barbeque areas along with a riverfront promenade utilised for walking, running, and cycling.

The solution offered for this project was an integrated communication system with emergency help point units, audio intercoms, and public address – all monitored from a central control location. Jacques have successfully installed over 40 Emergency Help Point Units (HPU) across the precinct. Positioned throughout the parklands, these devices allow patrons direct communication with the security office to report incidents or call for emergency assistance. Jacques HPU offers two-way communication between the call point and security office with handsfree calling once a call is established. A CCTV video feed of the caller will display at the security office for areas where HPU's have associated CCTV cameras installed. These highly visible emergency call points can be seen while strolling through the arbour, the rainforest walks, or riverfront promenade. With 24/7 monitoring, patrons can relax and take advantage of this public space knowing help and assistance is available at the touch of a button.

Prioritising public safety is important in large spaces where community gatherings occur. Besides emergency call points, Jacques have installed an integrated PA system to disperse emergency messages in 7 areas across this site. This is particularly useful for large events that are hosted at this location, welcoming hundreds of families as patrons. The project also includes approximately 40 audio intercom terminals for emergency calling directly to the security office.

## Roma Street Parklands, Brisbane, QLD

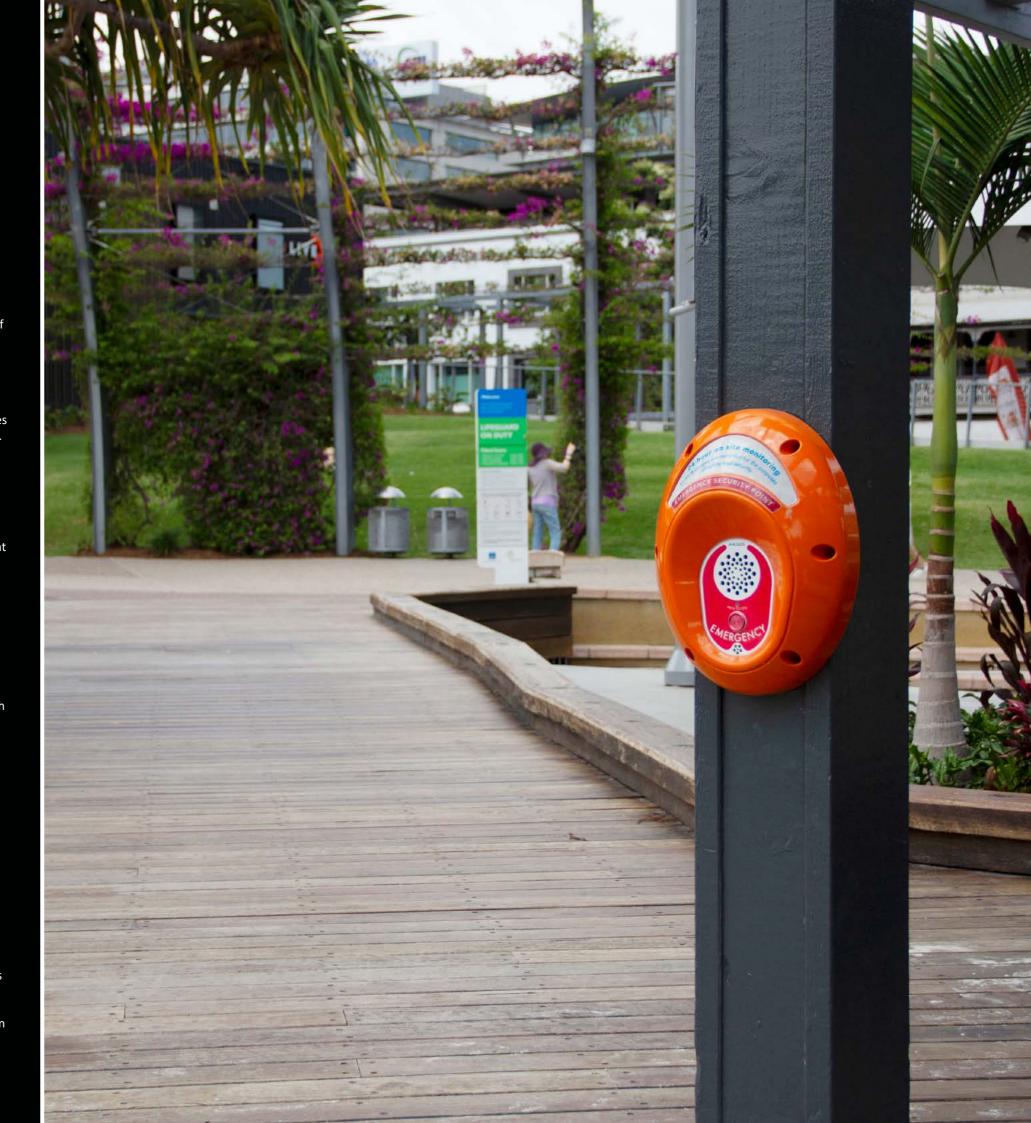
One of Jacques most recent projects was completed in one of the world's largest subtropical gardens situated within walking distance to Brisbane's city center. To maintain aquatic and plant life as well as aesthetics of the garden, the parklands' water management strategies need to ensure the irrigation systems and agricultural pumps operate at the highest standard and are regularly monitored by staff. As this park encompasses 11 million liters of water, numerous pump rooms and specialised staff, it is vital to ensure the safety of staff while they conduct regular maintenance of the agricultural pumps.

Following the implementation of numerous intercom Help Point Units, Jacques latest installation into the parklands is a manually operated timer which is activated by pressing a button on the intercom panel within the pump room. The purpose of this timer is to alert the main operations office if a park staff member has occupied the pump room for an unsafe length of time as well as to ensure communication between central control and the pump room.

Upon entering the pump room, the staff member will press the button on the intercom panel to alert central control that they have entered the room. This will also initiate the countdown of the pre-determined length of time for staff maintenance within the pump room. A warning tone will then initiate 60 seconds before the length of time expires, unless the 'timer' button is pressed to de-activate the alarm. The alarm can only be de-activated from within the pump room to confirm safety of the individual occupying it or to ensure the room is physically checked by another staff member in response to the alarm.

This unique, custom designed product was achieved though combining the Jacques intercom panel with the voice annunciator and event controller software. As the team at Jacques are dedicated to fulfilling our customers' project requirements, the flexible and scalable Jacques IP Communication System can be adapted to meet virtually any industry applications.

The horticultural and water features of this, ideally located, lush landscape is what continually attracts over half a million visitors each year. The comprehensive water management strategies which are put into practice daily by park staff are vital to sustaining the park's agriculture and aesthetic setting. The Jacques system has been tactically implemented into the regular park upkeep processes in order to help safeguard the parklands' staff- the most critical connection in keeping all aspects of the parklands preserved.





## Parramatta City Council, Car Park Upgrade

Parramatta City Council offers several multi-level car parks across the 84 square kilometres spanning across suburbs in Greater Western Sydney. As part of a recent upgrade to security across many parking facilities, council recognised the requirement for parking vending machine communications to be managed at a central control centre. Prior to the upgrade, parking kiosk intercom units were localised and not able to communicate back to a central control location. Jacques boxed intercom modules (JIB) allow simple retrofitting of kiosks, lift panels, or help phone bollards. JIB modules allow existing microphone, speaker & buttons (from an outdated product) be utilised converting outdated technology to an IP-based intercom communications solution. Upgrading legacy intercom technology to IP allows for many enhanced security improvements including device status notification, monitoring, inclusion within a PA broadcast group or integration with a CCTV system.

Parking kiosks at Parramatta City Council carpark have been retrofitted with the JIB-type intercom module which connects to the legacy speaker & microphone, offering an affordable, upgradeable & expandable solution that facilitates the multi-site communication capability. Additionally, Jacques Help Point units have been installed within carparks offering help & assistance calling to patrons at the touch of a button. Configuration options allow the security officer the detail of the calling location as calls are received.

Further expansion across the city carparks is simplified given the upgrade to a Jacques IP communication solution. Adding additional intercom or public address endpoints to an IP system is plug & play. As additional carparks are added or retrofitted, the management of all calls from the central city control room offers efficiency of council recourses & greater security to the community.

#### Orion Lagoon, Springfield

The perfect place to cool off on a hot Ipswich day, Orion Lagoon at Springfield (QLD) offers a huge water playground, free to the public. The Orion Lagoon encompassing a 3.6km area features a 600mm deep sculpture pool, a 50m lap swimming area and beach entry with toddler play area. Maintaining park-goers safety is a priority for the operators, Ipswich City Council. The water park features Jacques IP help point units offering assistance calling at the press of a button. Calls initiated within the facility are directed to the lifeguard hut onsite for answering, if the lifeguards are onsite and unavailable to answer, the call is automatically forwarded to the Ipswich City Council Safe City Monitoring Facility for answering.

As with all other areas across the Safe City, CCTV monitoring associated with help point unit calls are made available to security officers. The park features a Jacques IP public address system to broadcast background music and public safety and warning announcements to park-goers. Additionally, lifeguard towers are fitted with Jacques intercom terminals featuring a detachable microphone allowing for public address calls to be made at the lifeguard on-duty station.



## **Product proposal**

1

## **CONTROLLER**



## **Jacques System Controller**

The JSC-5L **System Controller** manages the key functionality of the system such as communication, reporting and diagnostics between intercom system endpoints. Additionally, sophisticated software modules achieve advanced system functionality including third party system integration, and monitoring.

A fully redundant setup for each tower is offered for this project as per the site requirement. The JSC-5L controller is connected to the LAN (TCP/IP) network. HLI software allows for the integration to leading CCTV systems for a complete security solution. System controllers provide advanced diagnostic and health checking capabilities ensuring the system runs optimally.

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2

## **SOFTWARE**



## **Event Controller**

Simplifying integration with external systems, this software enables configurable event triggers, simultaneous event handling, and alarms. **Event Controller** is a powerful "if-this-then-that" logic allowing for the configuration of highly configurable rules to match system events and triggers to produce user-defined & site-specific outcomes.

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#### DAR

**DAR** is a multi-functional software module responsible for handling recording, interfacing with third-party recording devices, streaming background music through intercom & pubic address endpoints, echo cancellation for full duplex communication, Visual Audio Monitoring (VAM) (in conjunction with J650UI application) and threshold alarm monitoring & display. Multiple instances of DAR can be utilised in a system to achieve the capacity and functionality requirements of this powerful module.

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## HIGH AVAILABILITY PACKAGE (HAP)

Ensuring system redundancy, this package, in conjunction with multiple controllers, facilitates seamless failover safeguarding against the complete loss of one of the system controllers. Operating in an active/standby configuration, the primary system controller hosts all services while the backup server remains idle under normal conditions. If the primary system controller fails, the High Availability software package ensures the backup system controller takes over all services. The backup system controller remains active until a switchover or failover occurs. This allows the primary controller to be inspected and any faults diagnosed with minimum disruption to services. Additionally, the software module ensures the primary and backup controllers monitor each other's state.

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## Reporting software (IRS)

**IRS** is a reporting software module that generates detailed reports on system operation, fault events, and call activity, aiding fault diagnosis, network management, and system maintenance. Detailed reporting of system operation and traffic aids in accurate and efficient fault diagnosis, preventative system maintenance, network management via traffic monitoring and automatic report generation, document creation and report distribution.

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## **Announcement scheduler (JAS)**

Advanced audio scheduling interface for public address. **JAS** allows users to easily upload audio files such as tones, bells, chimes, songs, and pre-recorded audio to create detailed announcements for seamless broadcast throughout the Jacques IP Communications System. The scheduling functionality of JAS allows users to create timetables for broadcasting audio files at specific times across all zones or selected zones. Schedules can be assigned to daily, weekly, or monthly intervals based on the audio broadcast requirements of the site. Managing the system on a daily basis is made convenient through the calendar interface, where users can easily assign, view, and remove schedules for a particular day or date range. Qbuttons (Quick Buttons) allows for the fast broadcast of a predefined audio announcement (eg. Lockdown tone) across a PA system at the touch of a button.

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## Jacques J650UI

A powerful & versatile security & communication application for ultimate control. Customisable to suit any security-critical solution – prisons, bus & rail networks, universities, public spaces, schools. Control desk functions at your fingertips. Real-time, visualisation of your site. See what's happening via interactive icons, CCTV integration, configurations for jump-on action screens and alarms.

RESPOND INSTANTLY TO EMERGENCY SITUATIONS OR ACTIVELY CONTROL YOUR PREMISES.

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## **Product proposal**

3

## HIGH LEVEL INTEGRATION

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Jacques boasts a number of **High-Level Interfaces** (HLI) to industry leading, third-party systems, enabling the functions of our system to integrate with numerous building and security management, telephony, CCTV and access control systems.

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4



## PC MASTER STATION

## **Master Station**

Jacques **PC Master Station** (PCC-650WTS) provides complete intercom call handling functions, public address functionality and detailed diagnostics and reporting available on a visual, customised graphical user interface with touchscreen capabilities. The PC Master Station allows for easy monitoring of the entire system from the one interface. The user can easily identify alarm notifications including device state and tamper as well as monitor intercom system usage.

#### **Features**

- Complete intercom call handling functions
- · Call queue display
- Call notification display
- Call originate
- Call monitoring
- Central control location for duress calls
- · Additional public address functionality
- Visual display of PA zones (unlimited number of zones depending on controller)
- View CCTV footage from 3rd party camera
- Diagnostics and reporting
- Alarm notifications including device state & tamper
- Touchscreen compatible interface
- Map, grid and database views
- Upload multiple site maps to suit application/site
- Customisable layout/functions to suit application requirements

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## **Product proposal**

5



## **Emergency Help Point Unit**

Jacques range of **Help Point Units** (HPUs) are user-friendly, reliable, robust IP call points, specifically designed for environments where public safety is important. Help Point Units can easily be integrated into existing, shared or dedicated networks and connect directly into any Ethernet port. Units can automatically dial any master station on the network or be directed to a SIP enabled device/telephone system.

#### **FEATURES**

- Standard PoE powered (IEEE 802.3af)
- Highly visible, solid, vandal resistant unit, designed with public safety in mind
- Simple 1 or 2 button operation, emergency or emergency & information
- Environmentally sealed
- One-touch operation with hands-free communication, once call is established
- Tamper detection and attempted device removal notification
- Automated testing of speaker and microphone
- Vandal and water resistant piezo electric call button(s)
- Anti-graffiti coating to protect against vandalism
- Two configurable relays

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## **PA Zone Controller**

Dynamic grouping and static grouping of PA zones, with no limit on the number of groups or the number of zones within the group.

#### **FEATURES**

- Single PA channel/zone device
- Produce audio signals to transmit to PA amplifiers
- Balanced and unbalanced audio outputs
- Allow for the connection and operation of industry standard, commercial PA amplifiers & analogue speakers (ie horn speakers) within the system
- Relay contacts that can turn on amplifiers (if they are compatible with the relay contacts) and/or signal a normal PA call within a EWIS speaker system

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## **ACCESSORIES & MOUNTING**



## **Bollard**

- Suitable for 4, 5, and 6 series Jacques intercoms
- Single and dual heights available (car and truck window)
- Material galvanised steel tube
- Zincshield 2 zinc powder primer and polyester powder coat
- Also available in black

## Rainhood

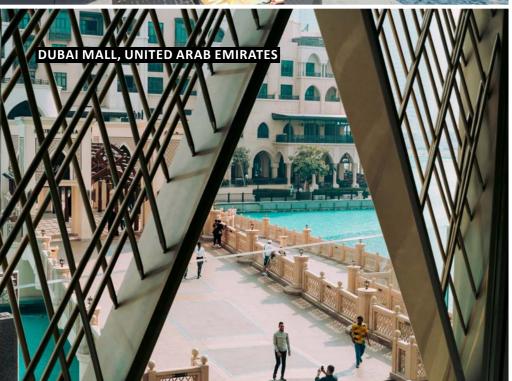
- Suitable for 4, 5, and 6 series Jacques intercom devices
- Suitable for wall and floor mount bollards
- Material zincanneal steel with aluminium mounting frame
- Polyester powder coated in yellow or black

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## **Project References**

- Adelaide Shopping Centre (AU)
- BCC Community Gardens (AU)
- Blacktown City Council (AU)
- Brisbane City Council (AU)
- Burj Khalifa (UAE)
- Bukit Bingtang City Centre (MY)
- Bus Rapid Transit (BRT) Sunway (MY)
- Casey Central Shopping Centre (AU)
- City Safe, Queen Street Mall (AU)
- Coles Head Office (AU)
- Dubai Mall (UAE)
- East Ledang (MY)
- Frankston Aquatic Centre (AU)
- Funan Mall (SG)
- Goodwill Bridge (AU)
- IKEA Johor Bahru (MY)
- IKEA Mytown Kuala Lumpur (MY)
- Ipswich City Council (AU)
- Kawana Shopping Centre (AU)
- Kings Park (AU)
- Kuala Lumpur City Centre Park (MY)
- Kurilpa Bridge Brisbane (AU)
- Liverpool Catholic Club (AU)
- Mall of Oman (OM)
- National Gallery of Victoria (AU)
- Pacific Fair Shopping Centre (AU)
- Parramatta Council (AU)
- Riverwalk (AU)
- Robelle Domain (AU)
- Robina Town Centre (AU)
- Roma Street Parklands (AU)
- Southbank Parklands (AU)
- Taronga Zoo (AU)
- Wellington City Council (NZ)

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## **IP 650 System specifications**

## SYSTEM CAPACITY

Intercom stations	Unlimited*
Master stations	Unlimited*
Stored announcements	Unlimited*
Call queue size	Unlimited*
Groups	Unlimited*
Simultaneous conversations	Unlimited*
Audio communication between any endpoint	yes +
Auxiliary channels	16 (typically up to 4 live captured sources)

## **AUDIO CHARACTERISTICS**

Frequency response	200Hz - 7 kHz ± 3 dB	
Transmission format	Real-time transport protocol (RTP) streaming	
Digital audio format - voice	A-law compressed PCM 16 kHz sampling rate	
Audio streaming bandwidth	128 kb/s one way, 256 kh/s full duplex	
Acoustic echo cancellation	Yes	

## **VIDEO CHARACTERISTICS**

Multi-standard video codec	MPEG-4 part 2, siple profile; H.264 baseline profile; H.263 part 3
Video streaming bandwidth	500 kb/s - 6 Mb/s

## **CALL HANDLING**

Call topologies	Intercom/hierarchical/peer/public address/zoned
Call priorities	256 priority levels
Call features (basic)	Auto-answer, hold, forward, diversion, directory, group call, caller-ID, bridged call appearance
Call features (specialised)	Isolate nuisance callers, covert monitor, dynamic group call, stored announcements, master call, remote mode, priority queuing, selective answer of call waiting

## **NETWORK**

Addressing	TCP/IP IPV4, static or dynamic (DHCP)
Interface media	IEEE 802.3 10/100 Mb/s Ethernet
Standards	IEEE802.1P LAN Layer 2 prioritisation
	IEEE802.1Q Virtual LAN
	RTP - Real-Time Transport Protocol (RFC3550/3551)
	TOS - IPV4 Type of Service (RFC791)
	DTMF - RTP payload for DTMF digits (RFC2833)
	Multicast - IP Multicasting (RFC1112)
	Diffserv - Differentiated Services (RFC2474/2475)
	NTP - Network Time Protocol (RFC1305)
	IGMPv2 - Internet Group Management Protocol v2 (RFC2236)
	DHCP - Dynamic Host Configuration Protocol (RFC1531)

## **CABLING**

Power input/ethernet	4 pair UTP CAT-5/5e/6, multi-strand, 24 AWG -100m (328 ft) max.
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<sup>\*</sup>Dependent on server configuration and network bandwidth

<sup>+</sup>Dependent on system configuration and permissions granted