

 ultimate™



# decades of innovation, delivering value and manufacturing excellence

Established in 1989 ISM is a great British brand. Operating from our extensive manufacturing and design facility in Sussex, our global client base encompasses many of the world's most prominent institutions including leading brands from the Banking and Finance, Critical Infrastructure, Police, Government, Custodial, Education, Local Authorities, Health and Commercial sectors. Our

## specialist

pioneering Ultimate audio exchange provides solutions for our clients requiring intercom, help point, disabled refuge, digital I/O and cell call systems. Ultimate can be configured as a simple single exchange serving one building or, multiple exchanges serving a network of buildings, controlled by management system software using our patented Genesys solution.

### The benefits of Ultimate at a glance...

- Unique design and functionality means that you only need one product to fulfil your needs whether your environment is a low or high security risk.
- A complete solution in one product for... audio intercom communications, telephone entry, general and personnel alarm monitoring, control of high security locking systems including air locks, access doors, motorised barriers and gates, I/O to monitor or control auxiliary hardware within a building environment and cell call.
- The design incorporates resilient and durable electronics which isolate audio devices including entrance panels and intercoms. Even if cables are vandalised the remainder of the system is unaffected.
- Modular construction of the system makes the system easy to maintain. With plug-in components it takes minutes to find faults thus ensuring repairs can be made swiftly.
- Full Digital duplex audio including VoIP for the larger systems when networking multiple exchanges over LAN or WAN networks.
- Digital audio produces exceptional

sound quality to handsets, intercoms and apartment stations. Tested by HOSDB.

- A robust and reliable product designed and manufactured by ISM in the United Kingdom.
- Simplicity of wiring makes the cost of installation much less than other systems.
- A tools programme enables the installer and the maintenance contractor to programme the exchange from their laptop or computer. This tool can also be used to identify faults.
- Competitively priced. You can budget knowing that Ultimate is a system that will last and that it will withstand the rigors of the toughest environments.
- From one intercom to thousands all on the one system.
- One size does not have to fit all. Ultimate can be made-to-measure when required.
- Easy to understand and operate.
- Full telephone and field service support available 8/5 or optional 24/7 support when required.
- Installer and user training available at our facility in Crawley.

### Pioneering technology is standard with Ultimate

- Full Digital audio using 4 wire (twisted pairs cat5e, Belden 8723 or CW1308) to intercoms and MIO cards, which includes VoIP with multiple speech paths when the systems are networked via Ethernet (LAN or WAN) or fibre infrastructures.
- The Ultimate exchange includes highly valued unique features including electronically isolated channels/intercoms. In the event of vandalism or system failure, the remainder of the system is completely unaffected.
- Ultimate is fully compliant to CE, low voltage directive and DDA requirements.

ultimate™



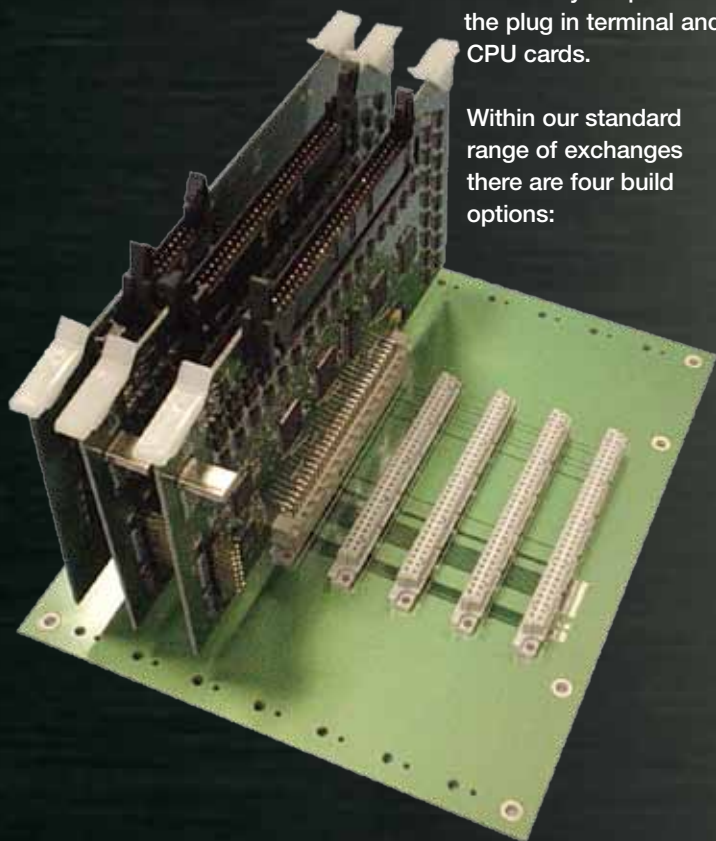
# main equipment exchanges

All exchanges have the following functionality:

- 3 or 6 amp power supply.
- Electronically isolated instrument connections for intercoms, handsets and I/O cards – in the event of an instrument being vandalised, damaged, cable fault or faulty component the remainder of the system will not be affected.
- RS232 port for programming the system including feature phone display or extension numbers, and for diagnostics.
- Includes tools programme, installation and service manuals on CD.
- Standard 2 year warranty which can be increased to 5 years.
- Status LED's on front panel.

Our exchanges all work on the same principal in that each exchange can accept up to six 3000/16DC cards and each of these cards can connect to sixteen instruments (handset, intercom panel, disabled refuge unit, digital I/O card etc.) thereby having the ability to connect up to 96 instruments per exchange. The exchanges can be connected together over an Ethernet network to build larger systems. Terminal cards are provided for each 3000/16DC making maintenance very simple with the plug in terminal and CPU cards.

Within our standard range of exchanges there are four build options:



1. Built within an IP66 polycarbonate cabinet.
2. Built within IP54 steel cabinets.
3. Rack mounted exchange.
4. Rack mount exchange with RJ45 rear connectors.

## 1 – 3000/CPU/16

This compact exchange includes:

- Power supply.
- 16 channel encoder card (3000/16DC).
- CPU and termination card.



All enclosed in an IP66 polycarbonate lockable cabinet. This is a complete package for smaller sites with up to 16 instruments, 14 if using VoIP network card, is expandable to 32 for intercoms, disabled refuge, feature phones or intercom telephone handsets and MIO cards. The exchange includes every one of the features listed in the 3000/CPU range. There is also the ability to add a network card for communication over Ethernet.

## 2 – 3000/CPU

This exchange is mounted within a steel lockable IP54 cabinet that includes a power supply, CPU card and backplane to accommodate up to two 3000/16DC cards or the 3000/CPU2 that can accommodate the full six 3000/16DC cards. The main cabinet can accommodate the termination of 48 instruments. An additional cabinet is required for 49-96 instruments.



## 3 – 3000/CPU/R

4U rack mounted exchange 600mm depth (requires 800mm deep 19" rack) and space for up to 48 instruments to be terminated. A 3000/ER expansion rack is required for 49-96 instruments. Includes a power supply, CPU card and backplane to accommodate up to six 3000/16DC cards.



#### 4 – 3000/CPU/RC

4U rack mounted exchange 600mm depth (requires 800mm deep 19" rack) with RJ45 sockets in rear plate and space for up to 64 instruments to be plugged in. A 3000/ERC expansion rack is required for 65-96 instruments. Includes a power supply, CPU card and backplane to accommodate up to six 3000/16DRJ cards.



#### Optional expansion cards

##### 3000/NET NETWORK CARD

Network cards enable Ethernet connection between exchanges either locally or remotely utilising LAN or WAN networks. These connections can be hard wired, WiFi, fibre or part of the client's network infrastructure. When hard wired, Ethernet extenders can be used for distances exceeding 100 meters. Each network card includes one audio channel. Adding additional cards enables multiple speech paths between exchanges and network redundancy.



##### 3000/MIO INPUT/OUTPUT CARD

The 3000/MIO is a multiple input output board allowing up to 8 voltage free inputs and 4 outputs to be monitored and controlled. This card can be used to monitor and control items such as basic alarms, panic alarms, doors, barriers, lighting control etc. It allows for the control and monitoring to be displayed on a Feature Phone or indicator panel and for greater functionality monitoring and/or control from a ISM's Genesys security management software platform.



The 8 inputs can be normally open, normally closed and incorporate end of line monitoring. There are four outputs, two 1 amp voltage free relay and two reed relay outputs rated at 100mA.

3000/MIO cards can be mounted within the exchanges, separate racks, local or remote enclosures or within cabinets depending on the system build.

##### 3000/TEL TELEPHONE INTERFACE CARD

Telephone interface card enables the Ultimate exchange to be connected to a PBX exchange. This allows telephone calls to be made/answered by the Feature Phone and transferred to intercoms or cell call units (requires 1 channel allocated for each PBX line required).



##### 3000/AD ANALOGUE TO DIGITAL CONVERTER

The 3000/AD card enables Ultimate to provide analogue output(s) at 600Ω to auxiliary systems such as audio recording and Public Address. There is an additional option card 3000/AD/V this card has an audio voice annunciation input.



#### 3000/U programming tools

The Ultimate System is an intelligent solution enabling each exchange to be programmed individually to the specific requirements of the building. The exchange is supplied with a default data base, these numbers can then be edited if required for buildings with numbers that are not within this sequence using the tools programme. For multiple exchanges and buildings that may be standalone or on networks the installer can configure the systems from a Laptop or PC. ISM also offers a service for programming system hardware in our factory or alternatively we can configure databases and forward them by CD or Email which then can be downloaded to the site hardware using the tools programme. This facility is available at an additional cost for each building.

# 3000/dh feature phone handset

- Manufactured in tough UPVC with LCD display.
- Fully functional telephone keyboard.
- Hands free and conventional handset for audio communication.
- Calls from intercoms panels can be placed on hold and/or transferred to another feature phone.
- Bluetooth headset option.
- Choice of simplex (push to talk release to listen), duplex audio facility or hands free.
- Auxiliary lock/gate/barrier control button.
- Programmable ID text for each exchange line (32 character LCD display, 16 configurable).
- Patch PBX line to chosen intercom extension.
- 4 status indicators for the following functionality:
  - » Call in queue.
  - » PBX exchange line in queue.
  - » Call on hold.
  - » Feature phone in use.
- Optional connection to PBX exchange via 3000/TEL telephone exchange card. The feature handset becomes an extension to the building telephone exchange enabling calls from an extension or from the national network to be received. These calls can also be transferred to the other audio instruments.

## 3000/DM heavy duty desk mount feature phone

This has the same features as the 3000/DH but enclosed within a stainless steel or powder coated steel enclosure either surface or flush mounting.

- Desk or wall mounting.
- Video monitor module available to view intercom cameras.



*"The system has been designed for maximum reliability. It provides long-term durability in those environments where heavy use and acts of vandalism are the norm. This makes it ideally suited for housing associations, prisons and environments not to mention areas such as shopping centres where it is important to have a number of public access points. Because vandal proofing comes as standard with Ultimate the repair bills are virtually non-existent."*

**John Waite,**  
Business Development Director ISM

*"Ultimate is a stable, functional, expandable, robust and reliable product. It has been engineered for ease of installation and maintenance and for maximum durability."*

**David Jenkins**  
Managing Director ISM



# intercoms

The Ultimate intercom call panel has been designed to a high standard of durability which means that it can withstand the harshest of environments and at the same time it is easy to use. The installation wiring is again a simple 4 wire (twisted pairs Cat5e or CW1308). The intercom panels are laser cut and constructed in BS 316 Marine grade stainless steel. It has 22mm (outside diameter) flush illuminated stainless steel call button which will illuminate when call is generated and flash rapidly on door release.

Intercom panels are available as audio only or video and audio, they are available as internal units (3000/IP or 3000/IPV), external under shelter units with bezel edge (3000/IPB or 3000/IPBV) or complete with stainless steel rain hood for exposed locations (3000/IP/WPS or 3000IP/WPS).

If access control readers are required these can be built into the panel facia – details available on request. Optional braille instructions can be incorporated into the faceplate. ISM use RNIB standard braille rivets for clear and concise reading. We can manufacture the intercom panels in different materials and non-standard sizing. Please contact us for full details.

Calls can be answered on a Feature Phone or 3000/IH intercom handsets and a separate video display can be easily added to allow the user to view the visitor.

Our intercoms have been used within a wide variety of projects from help points at universities to hospital lock down systems. Please contact us for the full range of our products.



3000/IP



3000/IPB



3000/IPBV

## Options

- 2-6 Button panels available to call 3000/IH handsets.
- Braille.
- External surface call panels.
- Rain hoods available for external call panels.
- Single or dual height intercom posts.
- Purpose made help points.
- Special size call panels available (at additional cost).
- Lift intercoms.
- Car park pay point and barrier intercoms.
- Component elements available for inclusion in kiosks, lifts, barriers etc.



3000/IH



3000/VM



Help point



# disabled refuge

## One pioneering system is all it takes

Because Ultimate is a fully addressable emergency voice communication system, it enables disabled refuge, fire, telephone, toilet alarm, intercoms and remote systems to be connected to one system using the Ultimate audio and data alarm exchanges.

The disabled refuge facilities have been designed and developed to BS 5588 and BS 5839 standards. We have developed the disabled refuge facilities alongside our full range of intercom telephone entry, alarm and cell call products. This means that just the one system can be considered for all applications using audio and alarm communications.

## Benefits of the disabled refuge emergency voice communication system

- The hands free duplex indicator panel is available in flush or surface mounted stainless steel. It is robust, durable and easy to use including those with impaired hand function and movement.
- Full Digital duplex hands-free audio.
- Extremely low power consumption. Because it uses digital technology battery standby requirements are reduced by up to 400%.
- Call request ringtone.
- Call queue 4 line LCD text display including scroll functionality.
- Disabled intercoms available in red or green powder coating or brushed stainless steel.
- Emergency call button with halo that illuminates on call.
- System voltage 27VDV, CPU current 30mA.
- 4 inputs and 2 outputs via on-board IO within the encoder card.
- Various mounting options and finishes.

The disabled refuge call panels, fire telephone handsets and master display panels are connected to the main equipment exchange (please refer to this section for full details).

The master disabled refuge audio/display control panel has an intelligent master feature phone (s) or hands free audio indicator panel (s). Both of these include call queue programmable text LCD graphical display.



3000/IPB/DR



3000/IPB/DRP



3000/CH/DR



3000/BE/DRI



3000/IPS/DRS

# Cell Call

## Leading the way with the Ultimate in Cell Call technology

Within Ultimate a client can use the one product that will fulfil all of their custodial requirements for their custody suites, prisons, youth detention centres and more. You can trust Ultimate because it was designed, developed and manufactured in close collaboration with a number of leading prison and police authorities over a four-year period. Because of this close partnership Ultimate includes many benefits you would be hard pushed to find in other systems. For example:

- It helps officers and management with administration, audit trails and reports, Home Office safer detention recommendations and guard attendance logging using the Genesys security management software platform.
- It can transfer public network telephone calls directly to an audio cell call intercom.
- The tag readers on the guard indicator unit enable officers to verify attendance.
- When an inmate/client calls for assistance and when a scheduled guard watch attendance has been made the tag readers can be used by officers to reset the call.

Crucially, Ultimate can retain a database for each inmate/client and can be integrated with the authority's own database via the Genesys PSIM cell call module (subject to third party protocol compatibility).

### Guard units

The guard units are available with numerous options for each client's requirements. The units are all manufactured in BS316 stainless steel with plain-grained front plates or with bezel edge back boxes both in flush or surface mount. The bezel edge back box enables the unit including the front plate to be flush mounted into the structure of the walls as well as for those new builds when pre-cast prefabrication is specifically required. The bezel box has been designed to comply to the Safer Cells policy

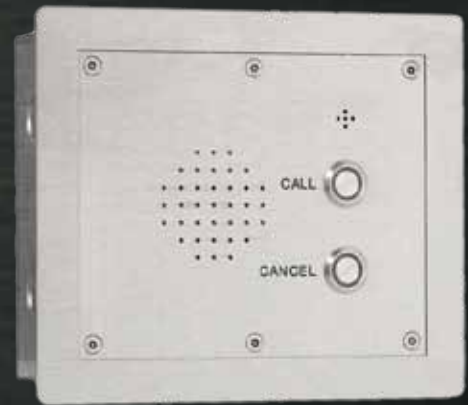
- Flush mounted plain grain stainless steel guard unit include Ultimate tag reader or reset button, indicator lamp, and encoder card with duplex audio for cell unit with 2 x I/O .
- The guard unit includes a 24mm round flame resistant lexan red LED indicator for durability and maximum visual recognition.
  - » Optionally the LED can be mounted separately over the cell door.
- The guard units can have a standard reset button or alternatively our Ultimate attendance/reset tag reader.
- Available options include low or mains voltage lighting switches for cell and night-lights etc.
- The Ultimate tag option offers unique officer ID, when the token is presented to the reader to reset a call or confirm attendance of a cell watch, the time and date and officer details are automatically logged on the Genesys cell call logs, enabling the management to audit activity for each cell.
- All guard units are available in standard or special sizes to suit customer's requirements. The majority of the guard units contain all electronics and serviceable components to substantially reduce the need to access the cells/rooms.

*"The design and functionality that Ultimate has become acclaimed for is the result of our team building a detailed understanding of what clients in the custodial sector were looking for. There are no shortcuts when developing systems that really do meet a client's needs"*

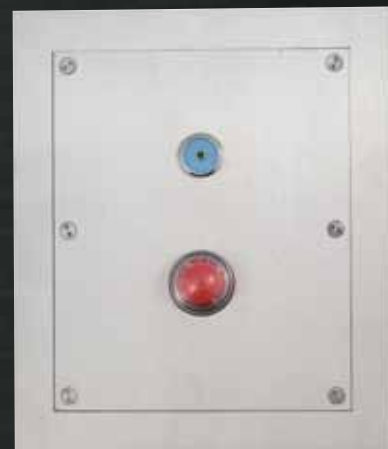
David Jenkins

## Cell call units

- All cell call units are constructed in BS316 stainless steel with or without bezel back boxes. The bezel edge back box enables the unit to be flush mounted into the structure of the walls and is ideal for new builds when pre-cast prefabrication is specifically required. The bezel box has also been designed to comply to the safer cells policy so that ligature points are substantially reduced.
- The cell units are available with hands free duplex audio or a simple call button non-audio.
- Depending on the client's requirements the cell call units are available with various options including; emergency, call/audio, call, in cell entertainment control and cell lighting control. All buttons are manufactured in stainless steel for durability with illuminated options (call/audio and emergency buttons include illumination as standard).
- The cell call buttons can be programmed to become an emergency/panic attack button, e.g. prior to the officer entering the cell they present their tag to the guard unit. This will change the functionality of the call button to an emergency button. In the event of an officer operating the button whilst in the cell the guard unit indicator will change from constant on to pulsing, and an alarm will be raised on the Genesys control room management system platform.
- The enter cell alarm will automatically be generated if the officer attends the cell, tags in but does not tag out after a preset period of time.
- Priority call to escalate calls that have not been answered after a period of time.



3000/CU04 Cell Call



3000/GU01/A Guard Reset Unit

Both cell and guard units are available in varying formats and include optional controls such as:

- Lighting control.
- Night light.
- In cell entertainment control.
- Button reset.
- Auxiliary inputs.
- Auxiliary output.
- Indicator light options.
- The back boxes can be supplied with or without bezel edge and can have flush or surface mounting options.



## Genesys™® Intergrated Software

The Ultimate cell call system can be managed by the Genesys integrated security management software which enables cell call, intercoms, panic alarms, life support monitoring systems and alarm management functionality (via 3000/MIO) to be monitored and controlled from one system. Genesys enables the client to have access to full integration, which includes CCTV, digital recording, fire, intruder alarms, paging etc. The Genesys software offers full IP networking capabilities of the Ultimate audio and data hardware thereby providing an extremely unique and flexible solution for those clients that wish to control their building security either locally or via their central control suite over a LAN or WAN.

- The Ultimate cell call module has all of the functionality of the feature handset via touch screen control panel, graphical site location of buildings/cells and active animated icons denoting the cell call status. Text screens displaying call queues, includes details of location and on screen video for those systems also utilising cameras in and/or outside cells.
- The cell call module includes a database for the cell occupants, staff and watch/tour facilities. Text and graphical map display with location and cell occupant details. Active icons representing the type of call received from the individual cells e.g. audio/emergency calls, automated life signs monitoring (if integrated to Genesys) the ability to remotely control cell lights, isolate utilities (hot and cold water and toilet flush).
- A database to record activity including guard/watch profiles, which can be programmed for each individual cell. A configurable database for the cell occupants which includes photo ID, health and work status, personal belongings, medical records/medication requirements and personal data. The Genesys database has the capability to be interfaced with other custodial database.
- There is an officer database within Genesys to link officer activity with the Ultimate selective logging technology as well as to programme the Ultimate cell reset tags for each member of staff.
- Ability to patch through public network telephone calls to cell occupants via a PBX exchange.
- An Ultimate feature handset is provided at each workstation allowing the operator to communicate with visitors and the security staff as well as the cells. The handset can also be used as a self-contained system for the smaller sites without the need for the software based solution.

## Wing display units

Manufactured in stainless steel (available - flush or surface mount) this unit has the majority of the features detailed in the intelligent feature handset. The panel includes a heavy duty stainless steel vandal resistant 4 x 4 matrix keypad, 4 line LCD text display, which enables the calls from the cells to be held in a queue and viewed sequentially via the LCD display.

The wing unit has the option to cancel/acknowledge the calls as well the ability to call back using the handsfree digital audio.

Wing display units are available with the option to display alarms such as affray strips, panic buttons and disabled toilet devices.

## Options

- Over door indicators with 24mm LED, flame retardant and vandal resistant lens mounted on a BS316 grade stainless steel plate.
- Room engaged options.
- Follow me light system.
- Wing and level LED indicators.
- Request to enter interview room systems.



*"Competitive pricing, high quality and durability aside, clients choose Ultimate over other systems because of its straightforward layout and structure. For example, you network have up to 96 devices within an exchange built in units of 16. You can put multiple exchanges together to build large systems. This makes it straightforward in its architecture. Installers appreciate the fact that the software programme is written in English, it uses a programmable database spread sheet that makes it easy for them to configure for their client's needs. Installers tell us this is a huge benefit and one they're hard pushed to find with other systems."*

**Stephen Smith**

Sales and marketing director ISM

# guard tour

Guard tour is a timed event allowing you to set a route for guards to travel around the facility. Within the facility will be guard tour points. Each point can be a push button communicating with a or ideally a tag reader point set at strategic locations around the facility.

Once a tour has been set up a member of the security team must be in attendance at certain points at certain times when patrolling the building. Genesys allows you to configure the routes and times. A normal scenario would be a tour starting at ten o'clock in the evening, continuing at 10-20 minute intervals throughout the night.

A guard would have to be at point A on the hour, plus or minus two minutes to the typical configuration and then at the next point at twenty minutes past the hour, plus or minus two minutes. LED's can be fitted to those reader/button locations to indicate to a member of staff when the tour is due and when it's becoming overdue. Overdue alarms will report to Genesys in an alarm format so that the control room staff can take the appropriate action to safeguard the member of staff on site.

- Guard tour points in BS316 stainless steel.
- Push button or tag reset.
- LED indication when tour is due or overdue.
- Automated print out of events at end at programmable time.
- Multiple routes can run at the same time in different buildings.



**Please get in touch with us to discuss your requirements.  
If you would like to arrange a demonstration of  
Ultimate or simply require further information,  
our experienced team is here to help you.**



**INTERGRATED SECURITY MANUFACTURING LTD**

25-29 The Bell Centre | Newton Road | Crawley | West Sussex RH10 9FZ

**TEL** +44(0) 1293 529990 **FAX** +44(0) 1293 528023 **E-MAIL** [info@ism-uk.com](mailto:info@ism-uk.com) **WEB** [www.ism-uk.com](http://www.ism-uk.com)