



# Mobile Asset Control System

## Providing comprehensive control of mobile assets

- Unified communicator
- Dynamic screen
- Cross platform integration
- Resilient architecture
- Web based technology
- Deploy anywhere



Are  
you ESN  
ready?

The Cyfas Mobile Asset Control System (MACS) is a solution for small to medium sized organisations where a control room is used to manage a mobile workforce equipped with various communications devices.

The MACS is a fully digital, VoIP, distributed touch screen system. Operators can be deployed simply and quickly as connection and logon to MACS is all achieved via a suitable web browser.

It is both simple to use and elegant in its design.

The MACS is about making contact with people and teams using the concept of named individuals and groups, regardless of the method used.

By considering the user first and their devices as secondary, the system can manage multiple devices of mixed technology and so give interoperability.

The MACS manages all communications and provides the operator with situation awareness through a unified voice, messaging and tracking solution.

Messaging can include text, status and location, not only from workforce devices but also from news and social media feeds.

macs

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# Why choose MACS?

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## 1. Operators

The MACS provides operators with voice and text communications by means of a touch screen computing device. The MACS simplifies operation by hiding technology specifics, enabling users to communicate easily with groups and individuals. All communications, such as telephony and radio, are presented together on a sleek interface using easily identified buttons with user-friendly names. This ensures that communications are always easy and efficient.

## 4. Phones

The MACS controls telephony from a number of different sources including the PSTN and PABX in digital, analogue and VoIP formats. It does this by means of telephony gateway devices. For telephone circuits which are not natively SIP, converter gateways are used. These are standard devices available from a range of third party manufacturers. They may be simple analogue telephone adaptors (ATAs), or more complex, session border controllers (SBCs).

## 7. Architectures

The MACS is a scalable solution based on the latest web architecture, with the ability to distribute its software across multiple computers. The core software elements can be placed on any Windows pc /server platform. All software may be installed on one platform for cost effective small systems or distributed across multiple hardware solutions for resilience, performance, and high availability, including the ability to use cloud storage and hosted computing. The same software (with different licensed capacity) is used for MACS installations of any size.

## 2. Function

The MACS is designed to handle traditional radio systems, and a range of digital radio systems like DMR and TETRA. Control of telephony and messaging is catered for, as are information feeds including status and alarms. To do all this a traditional system would have a large number of different controls, buttons or screens, thus taking time to learn and making for a busy display.

The MACS has rationalised this into a simple system of unified common controls that are designed to make and respond to calls simply and quickly. Everyday operators are presented with the usual options whilst the advanced users can access more settings if their user profile permits.

## 5. Radio

The MACS uses gateways to connect to real world physical systems. Distributed modular radio gateways provide a resilient, scalable and reliable means of remotely controlling radio base stations or fixed mobiles. A gateway capacity is limited only by the physical connections possible on a given platform. Use of more than one gateway platform may be employed due to capacity, location, or for resilience.

The gateway provides operators with access to an array of different manufacturers of HF, VHF and UHF radios, with access to all standard features such as duplex and half duplex calls, open channel, private and group calls, and trunked or direct mode operation. For landline ground based network access, a separate TETRA gateway is provided for connection to Motorola Dimetra (UK Airwave), presenting features available via CCI, Vortex and DCS ports, with CADI and SDR services.

## 3. Tracking

The MACS has built in asset tracking and mapping. Mobile and Handset GPS tracking by the MACS system is able to take advantage of an array of GPS enabled radios. The MACS allows operators to monitor workforce location and gives map-based dispatching, providing operators with touch to talk call control directly from the map display. Built-in location history playback allows operators to review asset mobility from a specific time and date, and includes Fast-Forward & Rewind to aid review. MACS provides a full, but cost-effective, asset tracking solution.

## 6. Integration

The MACS makes use of information from, and supplies information to, external systems and devices. By using an industry standard XML based interface the MACS can, for instance, make use of the Caller Line Identity Display (CLID) and the Enhanced Information Service (EISEC) for Emergency Calls, to extract telephone caller data and share this with other systems. It can accept requests from other systems to make calls, and sends messages to its workforce via its gateways.

With radio systems, asset status and location are collected and can be shared with other systems. Other systems can also request that the MACS messages radios or changes radio parameters, such as requesting a location update or setting the talkgroup using DGNA. The MACS also interfaces with telemetry and alarm units, CCTV and external recording systems.

It is the above "integration" aspect of the the MACS that enables it to exist as the core element of a total control room solution.

MACS is a forward thinking communicator engineered for the next generation of control rooms.

It has a resilient architecture and an intuitive interface, whilst boasting a modular scalable solution that can be deployed anywhere, at any time.

MACS will incorporate social media channels, CCTV, radio, telephone, asset tracking and mapping, all whilst improving efficiency and productivity: meeting the challenges of the new generation control room.

As we begin our transition into the Emergency Services Network (ESN) Cyfas is committed to ensure compatibility and compliance.

Web  
Driven

Uniquely  
Flexible

## Specification

### System Hosts:

**Core:** At least one Windows 8 or later 64 bit, Intel i3 processor platform, Microsoft IIS web server.

**Operators:** Compatible browser on device with integrated audio.

### Radio Gateway:

Windows 8 or later 64 bit, Intel i3 processor platform, plus Cyfas CMRG interface hardware Telephone gateway, SIP compliant media gateway

### Telephony

|                   |                   |
|-------------------|-------------------|
| Monitor           | Whisper           |
| Answer            | Intrude           |
| Clear             | Mute              |
| Caller ID Display | Patch             |
| Hold              | Directory         |
| Transfer          | Call data records |
| Conference        | EISEC Lookup      |

### Radio:

Monitor / Mute facility  
Reduced level monitor  
Select  
Multi Select  
Group calls  
Private calls  
Rx call indications  
Interrupt / Priority Calls  
Emergency Alarms / Calls

ANI / caller display  
Ambient Listening  
Radio Checks  
Radio Inhibit (stun)  
DGNA  
Repeater Control  
Patch (radio-radio & radio- telephone)  
Frequency / talkgroup change

### Operator

Log on/password  
User profiles  
Alerts  
Speaker volume  
Headset levels  
Loudspeakers on/off

Audio level display  
Recording  
Replay  
Announcements  
Text message

Collaborate

Capture

Control

Communicate

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## Get in touch

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