

Multifono® M800IP®

// The M800IP® MULTIFONO® Voice Communication System (VCS) is SITTI state of the art, top level, most integrated Voice Over IP (VoIP) VCS system. It fully meets Air Traffic Control and Operations Rooms requirements by integrating the most advanced IP features and technologies, coupled with user-friendliness at operator, configuration and maintenance levels.

Interfaces, protocols and user requirements have been increasingly more demanding over time. The M800IP® system integrates them smoothly and seamlessly to the end user, who can fully exploit its power and flexibility to fulfil his requirements and to support multiple functional roles and operational scenarios.

...wherever secure, reliable and controlled VoIP communication is required

Realibility and Integration

Today's applications require different communication technologies to be integrated into one solution to meet operational requirements for mission and safety critical applications. MULTIFONO® M800IP® is the result of the extensive experience and expertise acquired by SITTI through a long term presence on the market and its active contribution to international standardisation committees and working groups, including WG67, the EUROCAE working group that issued the ED137 document for the standardization of VoIP in the Air Traffic Control field.

M800IP® is fully VoIP ED137 compliant, as testified by many successful interoperability tests and the large number of in-service installations around the globe. VoIP, digital, analogue and legacy non-IP interfaces are natively integrated, thus providing the end user with an all-in-one communication system, seamlessly capable of dealing with many different interfaces and protocols.

The overall system open architecture design ensures a high level of modularity, scalability and process distribution, thus offering an unparalleled reliability ratio of 99.9999%.

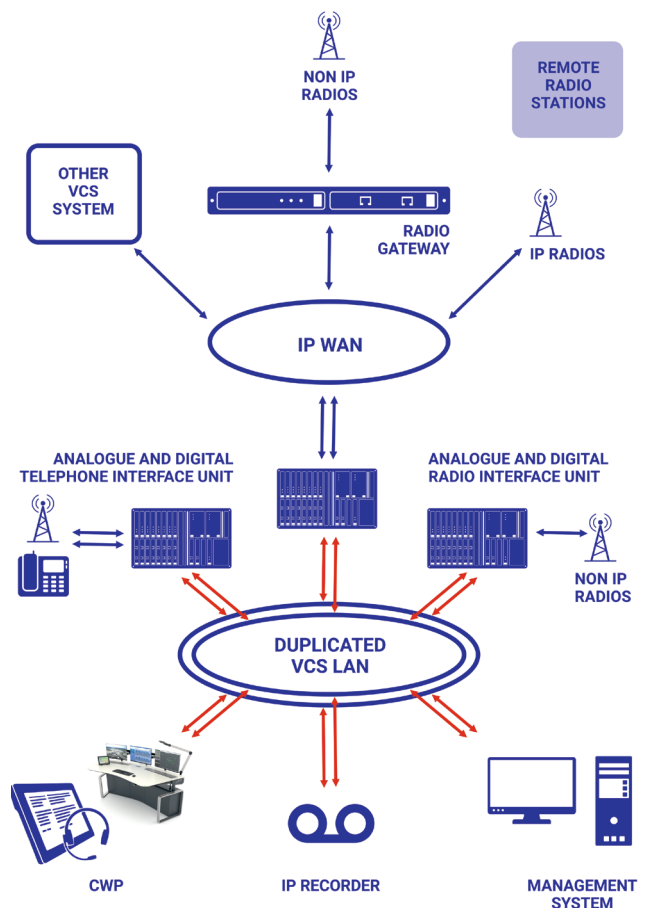
Uninterrupted service without any single-point-of-failure is guaranteed thanks to duplicated and parallel processor operations, star architecture and distributed subunits, thus ensuring fault tolerant operations. These features make M800IP® MULTIFONO® VCS the best choice for strategic Civil and Military mission and safety critical communication applications.

System Architecture

Customers currently utilizing other technologies and now wanting to take advantage of VoIP, can continue using their current devices by simply introducing GVS Gateway interfaces, specifically developed by SITTI. Such units allow legacy Radio equipment and Telephone connections to be smoothly interfaced to M800IP®.

Operational seamless expandability and full configurability through local and remote supervision facilities provide the flexibility to cope with the needs of the smallest Airfield control tower as well as fullscale Air Traffic Control centres around the globe, with hundreds of Controller Working Positions, radios and telephone lines, without sacrificing system performance. All this grants the customer an optimal level of flexibility to meet changing requirements and needs for an enviable investment return.

// SITTI M800IP MULTIFONO VoIP Distributed Architecture & Devices



// M800IP® Technical Information

Basic Characteristics

VOIP Digital Technology
EUROCAE ED137 full standard compliance
Duplicated, Independent, Parallel operations
Star configured VoIP links towards CWP's
No single point of failure
Very high reliability (99.9999%)
Open Architecture, In-Operation Expandability

Telephone Digital Interfaces

VOIP according to EUROCAE ED137 standard
QSIG, ATS-QSIG
ISDN Primary + Basic Rate
MFC
E1, nx64

Telephone Analogue Interfaces

2/4 wires in-band + E&M
Local Battery (LB)
Central Battery (CB)
PABX / PSTN / PBX
MFC R2 + no.5 (analogue)
DTMF
Satellite

Radio Management

Best Signal Selection (BSS)
Multi-Site Voting
Delay compensation
Echo suppression
Automatic new radio search in case of failure
Legacy protocols from different radio manufacturers
SNMP radio management

Radio Interfaces

VOIP according to EUROCAE ED137
4 wires standard E&M analogue links
E1, Nx64, ATS-QSIG digital links
In Band Signalling (IBS)
Phantom Signalling

Recording

Analogue, digital and VOIP recording
Synchronous playback

// M800IP® Architecture

24/7 Operational Service, 365 days a year

Non-Blocking, Very High System Performance

Open Architecture, Highest Level of Modularity

Duplicated, independent, parallel operations

VoIP linked CWP's in "star" configuration

Fault tolerant operations
No Single Point of Failure (SPOF)

Reliability 99.9999%

Gateways for legacy non-IP links

CWP access to Telephone lines and Radio frequencies through analogue, digital and VoIP interfaces

Embedded Intercom facilities between local and remote CWP's

Support of standard and legacy protocols

Controlled Resource Sharing
Access to radios, telephones and CWP's belonging to remote VCS systems via VoIP / digital links or analogue interfaces

Voice distributing within the system using RTP protocol

Parallel routing of voice packets on duplicated LANs

Software upgrade by direct upload, without manual intervention and without affecting operations of other parts of the system

HMI Multifunctional touch screen terminals with user-friendly interface and ancillary ATC applications

"Black" and "Red" Military applications

Scalability from small Air Field Control Towers to large ACC Centres and Operational Control Rooms

Seamless expandability without affecting ongoing operations

