

# eBox MCPTT

## Develop and Demonstrate, Quickly and Easily, Mission Critical Solutions

**eBox MCPTT** is a compact and portable platform, used by device makers, safety agencies, application developers and research institutions worldwide to build, test, validate and demonstrate PS-LTE solutions - quickly - saving time and resources.

It is a feature rich MCPTT server with exhaustive QoS support, pre-integrated with MCVideo and MCDData capabilities and a fully functional LTE network enhanced with the power of eMBMS.

### Why is it important?

Regulatory bodies and public safety agencies are now mandating the use of PS-LTE - mission critical communications over broadband cell networks with modern smartphones. First responders can finally avoid congestions and coordinate their efforts with other agencies through secure, dedicated and reliable LTE networks.

Building PS-LTE solutions and enabling rugged devices for MCPTT, MCVideo and MCDData is a complex and costly procedure. It involves integrating multiple technologies, developing specific functionality, testing several components together and conducting different field validations.

Expway and Nemergent have combined their best-of-breed products to create eBox MCPTT. eBox MCPTT helps reduce the cost of building, validating and demonstrating PS-LTE solutions and speed up their time-to-market.

With eBox MCPTT, you can start by testing MCPTT in LTE unicast, then add multicast, MCVideo and MCDData when you're ready.

### Key Features

- Feature rich MCPTT server
- Fully functional LTE Network
- eMBMS capable
- Full QoS support
- Carrier-grade components
- Administrative interface
- Reports and analytics

### Key Benefits

- Portable and compact
- Easily configurable
- 3GPP Rel'13 (and above) compliant
- Reduces building, testing and validation costs
- Great for demos
- Shortens time-to-market

### Key Technologies



**Nemergent**  
Solutions

**EXPWAY**



## Included Components

eBox MCPTT comes in a small form factor computer that includes all the necessary pre-integrated components to run a complete MCPTT solution over LTE, with MCVideo and MCDData capabilities. It includes an MCPTT Application Server and management servers from Nemergent, a BMSC and MBMS-GW server from Expway, a RAN (eNodeB and MCE), an EPC (MME, P/S-Gateway), and an administration console. The components are 3GPP compliant and carrier-grade - having been deployed and proven by tier-one mobile network operators and device makers in large commercial uses.

## Possible Configurations

In addition to the above components, eBox MCPTT comes with the following possible additions:

- LTE (unicast only) MCPTT client. For device makers and system integrators.
- Unicast and multicast MCPTT client, with eMBMS middleware for device makers.
- eMBMS middleware. For client developers.
- Unicast and multicast MCPTT client, with eMBMS ready rugged devices. For systems integrators and security agencies.
- Additional RF heads can be added.

## Technical Details

- MCPTT Application server compliant
  - 3GPP Rel. 13 (v13.3.0 and above).
  - MCPTT authentication and authorization procedures.
  - On-network private and group calls with affiliation / de-affiliation procedures.
  - MCPTT call with floor control and without floor control (full duplex).
  - MCPTT automatic and manual commencement modes.
  - MCPTT pre-established and on-demand call establishment modes.
  - Unicast and multicast signalling and media planes.
  - eMBMS and QoS signalling to the integrated LTE network.
  - MCPTT emergency mode and calling.
  - MCPTT location configuration and retrieval.
  - Reference interfaces exposed: MCPTT-1/4/7/8/9.
- MCPTT Management Servers
  - MCPTT IdMS, CMS and GMS.
  - Reference interfaces exposed: CSC-1/2/4.
- LTE Network EPC
  - Compact core network including MME/S-GW/P-GW/HSS/PCRF.
  - Rx interface between MCPTT AS and PCRF.
- Carrier-grade BMSC/MBMS-GW servers compliant with 3GPP Rel. 13.
  - MB2 interface between MCPTT AS and BMSC.
- LTE eNB
  - Support of all FDD and TDD bands including custom frequencies.
  - Access to MCPTT system through two APNs:
    - General purpose APN,
    - MCPTT specific APN with default MCPTT signalling bearer.
  - LTE bearers with MCPTT QCl.
  - LTE bearers with MCPTT eMBMS.
- Server Hardware
  - One server (Barebone Mini-PC)
  - One RRH with coax/antenna

## Contact Us

- [www.expway.com](http://www.expway.com)
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