

Ruggedized eCall Demonstrator

# 5G NGeCall Test and Validation



## Overview

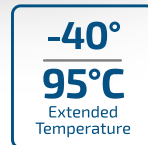
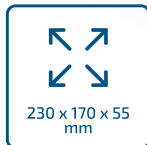
- › eCall demonstrator
- › For testing/validation purposes only
- › Qualcomm SA525M chipset
- › 5G 3GPP Rel. 16
- › Support 4G/5G carrier aggregation
- › 4x4 DL MIMO
- › Integrated GNSS
- › Thermal management
- › Embedded processing based on Linux

## Hardware Features

- › USB, external power 12V
- › 4 Buttons / 2+2 Status LEDs
- › 2x opt decoupled GPIOs
- › Analog / digital audio of integrated 5G NAD supported
- › SIM slot to connect 2FF SIM
- › Micro / Speaker, 3,5mm, Stereo
- › SMA Adapter GNSS / 2x Cellular
- › Molex Jack, 10 pin multi-purpose connector
- › USB, application terminal

## Software

- › Embedded application
- › Automatic & manual eCall / Test eCall
- › NG eCall
- › panEU eCall
- › eCall only / dormant mode support
- › eCall stress test (loops)



# 5G NGeCall Test and Validation

## Ruggedized eCall Demonstrator

### eCALL / NGeCALL FEATURES

- › panEU eCall in 2G/3G/4G mobile networks
- › NGeCall in 4G and 4G/5G (NSA) mobile networks  
5G stand alone not supported / not indented
- › Hybrid IVS compatible NG- / panEU eCall  
(starting with NG, fallback to panEU)
- › MSD-Versions 1,2 and 3 (with optional data set)
- › Automatic or manual calls

### CALL Operation MODES

- › IVS compatible emergency NGeCall (hybrid)
- › IVS compatible test NGeCall (hybrid) to custom number or URN in SDN-Phonebook
- › Pure test panEU eCall
- › Pure test NG-compatible eCall (TPS over IMS)
- › Voice call

### TEST / VALIDATION SUPPORT

- › Log file for each session
- › Live GNSS location data in log files
- › Audio headset to verify audio
- › Call trigger by 2 buttons(no need of external PC)
- › Call trigger by ADB shell command supporting automatic testing environment
- › Call trigger via 2x opto-decoupled GPIO for external HW connection
- › Loop mode for stress/duration testing, triggers eCalls for a specific number of times or endlessly

### MSD-Data HANDLING MODES

- › MSD-Version 1, 2 and 3
- › GNSS: N-0 live data, N-1/N-2 supported
- › Full Optional Data Set supported
- › Static mode: all MSD-data pre-configured, no need for GNSS-Antenna
- › Dynamic mode: Live GNSS- and time-data used
- › Mixed mode: GNSS data static, time-data live

### USE CASES

- › Training of rescue and PSAP personnel
- › Validation of network equipment (NGeCall via SIP-protocol)
- › Validation of PSAP equipment
- › Validation and Demonstration of conformance test equipment
- › Validation and Demonstration for IVS/ Automotive vendors

### Special eCALL MODES

- › eCall-Only-Mode (by default deregistered)
- › Configurable Redialing for call drop and call failures
- › Support of SDN/SDN-URI fields for specific SIM-cards

