

MOBILE COMMUNICATIONS

WAM-GSX

Autonomous LTE, UMTS, GSM and GSM-R mobile call station for safety-critical environments

AT A GLANCE

Model	**WAM-GSX**
Type	**Mobile call station device**
Dimensions	**160 x 100 x 21 mm**
Weight	**120 g**
Power	**8 to 45 VDC, solar plus battery**
Connectivity	**LTE (VoLTE), UMTS, GSM, GSM-R, dual SIM**

Overview

The WAM-GSX is a reliable LTE (VoLTE), UMTS, GSM and GSM-R call station device for autonomous deployments. It implements all the functions of a wireless call station and connects to the central infrastructure over the public mobile network or the GSM-R network, enabling communication with the Telematix NIS-R or other dispatcher systems.

Intelligent power management allows fully autonomous operation from a solar panel with backup battery, removing the need for a cable connection to central infrastructure. The call station electronics integrate seamlessly into the Modula, Secura and NTA housing designs from Telematix, as well as customer-specific housings, with remote control, configuration and diagnostics handled by SMS.

Key benefits

01

Dual-network resilience

Two SIM cards allow operation across two provider networks as a fallback level, keeping the call station reachable where single-network coverage is unreliable.

02

Fully autonomous deployment

Solar power with backup battery and intelligent power management allow the unit to run with no cable connection to central infrastructure, simplifying installation at remote and off-grid sites.

03

Remote management by SMS

Configuration, control, status reporting and alarms are handled remotely by text message, with automatic self and remote diagnostics across the deployed estate.

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Features

- Voice calls via LTE (VoLTE), UMTS, GSM or GSM-R
- Two SIM cards for dual-network fallback
- Hands-free or handset operation
- Up to four destination keys
- Built-in voice memory for assistance and reassurance messages
- Two relay outputs
- Automatic self and remote diagnostics
- Tamper alarm with SMS alerting

Specifications

GENERAL

Model	WAM-GSX
Type	Mobile call station device for safety-critical environments
Dimensions	160 x 100 x 21 mm
Weight	120 g
MTBF	180,000 hours
Service interface	USB

POWER

Input	8 to 45 VDC
Battery	6 or 12 V lead-gel battery
Consumption	Energy saving below 1 mA, standby below 10 mA, active 85 mA

ENVIRONMENTAL

Operating temperature	-35°C to +70°C
Storage temperature	-35°C to +85°C
Humidity	10 to 90% non-condensing

INPUTS / OUTPUTS

Destination keys	Up to four destination keys
Relay outputs	2 relay outputs

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COMMUNICATION

Voice networks	LTE (VoLTE), UMTS, GSM, GSM-R
SIM	Dual SIM, two provider networks as fallback
SMS messaging	SMS alarms and regular status messages
SMS remote control	Remote control and configuration via text message
Call setup notification	Informs central office by SMS if call setup fails
Diagnostics	Automatic self and remote diagnostics
Tamper	Tamper alarm

FREQUENCY BANDS

GSM (2G)	3 (1800), 8 (900)
UMTS (3G)	1 (2100), 3 (1800), 8 (900)
LTE (4G)	1 (2100), 3 (1800), 7 (2600), 8 (900), 20 (800), 28A (700)

GSM-R MODEM

Bands	GSM-R / EGSM 900, GSM 1800. 900 MHz power class 4 (2W), 1800 MHz power class 1 (1W)
ASCII features	Voice group call, voice broadcast, eMLPP
EIRENE features	Functional number, railway emergency call

INTERFACES

Antenna	U.FL or SMA connector
Data connection	USB

AUDIO

Speaker	1 W (Class-D), second output for handset
Microphone	Electret, second input for handset microphone
Line-in	External audio source, configurable
Line-out	Additional output, configurable

BUTTONS

Number	1 to 4 buttons
Phone numbers	Up to 4 phone numbers per button
Function modes	Emergency call (high priority), hook to accept calls, call termination, push-to-talk, illuminated buttons with dedicated LEDs
Status indicator	LED for signalling operating status

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PART NUMBERS

WAM-GSX 4G	218507-31200
WAM-GSX GSM-R	218507-30003
Antenna	218507-32010
4G module	218507-33200

Applications

Rail stations	Level crossings	Motorway / roadside	Airports	Ports and harbours
Construction sites	Taxi management	Ticket machines (DDA)	Waterways	Public buildings

Compliance

EMC: EN 55024, EN 55032, EN 61000-6-2 / 6-4, EN 301 489-1 / 489-7	Railway EMC: EN 50121-4	Safety: EN 60950-1	CE: 2014/35/EU, 2001/95/EG, 2014/30/EU

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