MiX **Essential Plus** (FMC130)

OVERVIEW

MiX Essential Plus is a tracking device with GNSS and GSM connectivity, which is able to collect device coordinates and transfer them via GSM network to a server.

This device is perfectly suitable for applications, which require the location acquirement of light vehicles or similar assets.

PART NUMBER	OFFICIAL PRODUCT NAME	DESCRIPTION
U0184MT	FMC130 LTE/GNNS/GSM/BLE Terminal EU/MEA	Small and smart tracker with internal backup battery
U0185MT	FMC130 LTE/GNNS/GSM/BLE Terminal APAC/LATAM	Small and smart tracker with internal backup battery

GENERAL **INFORMATION**

MODULE

Name	FMC130-ME3: MeiG SLM320-E2 with Teltonika TM2500 (EU/MEA) FMC130-MCIB0: MeiG SLM320-LA with Teltonika TM2500 (APAC/LATAM)
Technology	LTE(CaT1)/2G(GSM/GPRS)/GNSS/BLUETOOTH

GNSS

GNSS	GPS, GLONASS, GALILEO, BEIDOU, QZSS, AGPS
Receiver	33 channel
Tracking sensitivity	-165 dBM
Position Accuracy	< 2.5 m CEP
Velocity Accuracy	< 0.1 m/s (within +/- 15% error)
Hot start	< 1 s

Warm start	< 25 s
Cold start	< 35 s

CELLULAR

Technology	LTE Cat 1, GSM
2G bands	FMC130-ME1:GSM: B2/B3/B5/B8 FMC130-ME3:GSM: B2/B3/B5/B8 FMC130-MCIB0:GSM: B2/B3/B5/B8
3G bands	EC21-AU: WCDMA: B1/B2/B5/B8 EC21-EC: WCDMA: B1/B8
4G LTE Cat 1 bands	FMC130-ME1: LTE FDD: B1/B3/B5/B7/B8/B20 LTE-TDD:B38/B40/B41 FMC130-ME3: LTE FDD: B1/B3/B7/B8/B20/B28 LTE-TDD:B38/B40/B41 FMC130-MCIB0: LTE FDD: B1/B2/B3/B4/B5/B7/B8/B20/B28 LTE-TDD:B40
Data transfer	LTE:LTE FDD: Max 10Mbps (DL)/Max 5Mbps (UL) LTE TDD: Max 8Mbps (DL)/Max 2Mbps (UL) GSM:GPRS: Max 85.6Kbps (DL)/Max 85.6Kbps (UL)
Data support	SMS (text/data)

POWER

Input voltage range	10–30 V DC with overvoltage and reverse polarity protection
Internal Back-up battery	170 mAh Li-Ion battery, 3.7 V (0.63 Wh)
Internal fuse	3A, 125V
Power consumption	At 12V < 3 mA (Ultra Deep Sleep) At 12V < 5 mA (Deep Sleep) At 12V < 16 mA (Online Deep Sleep) At 12V < 18 mA (GPS Sleep) At 12V < 33 mA (nominal with no load) At 12V < 2A Max. (with full Load / Peak)

BLUETOOTH

Specification	4.0 + LE

PHYSICAL SPECIFICATION

Dimensions	65 x 56,6 x 20,6 mm (L x W x H)

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Weight	61 g

OPERATING ENVIRONMENT

Operating temperature (without battery)	-20 °C to +85 °C
Storage temperature (without battery)	-20 °C to +85 °C
Operating temperature (with battery)	-20 °C to +40 °C
Storage temperature (with battery)	-20 °C to +45 °C
Operating humidity	5% to 95% non-condensing
Ingress Protection Rating	IP41
Battery charge temperature	0 °C to +45 °C
Battery discharge temperature	-20 °C to +60 °C
Battery storage temperature	-20 °C to +45 °C for 1 month -20 °C to +35 °C for 6 months

INTERFACE

Analog Inputs	2
CAN Adapter Inputs	1
1-Wire	1
GNSS antenna	Internal High Gain
Cellular antenna	Internal High Gain
USB	2.0 Micro-USB
LED indication	2 status LED lights
SIM	Micro-SIM
Memory	128MB internal flash memory

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FEATURES

Sensors	Accelerometer
Scenarios	Over Speeding detection, Excessive Idling detection, Immobilizer, iButton Read Notification, Unplug detection, Towing detection, Crash detection, Trip, Jamming* ** Jamming detection feature supported only on hardware with SLM320-E and SLM320-LA*
Sleep modes	GPS Sleep, Online Deep Sleep, Deep Sleep, Ultra Deep Sleep
Configuration and firmware update	FOTA WEB, FOTA, Teltonika Configurator (USB, Bluetooth)
SMS	Configuration, Events, DOUT control, Debug
GPRS commands	Configuration, DOUT control, Debug
Time Synchronization	GNSS, NITZ, NTP
Ignition detection	Digital Input 1, Accelerometer, External Power Voltage, Engine RPM (CAN Adapters, OBDII dongle)

CERTIFICATION & APPROVALS

Regulatory	CE/RED, E-Mark, EAC, RoHS, REACH, CITC, RCM, IMDA, Anatel, JATE, TELEC, SIRIM QAS, SDPPI POSTEL, KC, ICASA

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