

FTe datasheet / technical specs



Connectivity	
LTE Cat M1/NB-IoT option	<p>Modem 1*: Quectel BG95</p> <p>Antenna: Internal</p> <p>Frequency bands @ 2G (GSM): 850/900/1800/1900 MHz (GPRS multi-slot class 33)</p> <p>Bands @ 4G (LTE Cat M1): B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B27/B28/B66/B85</p> <p>Modem 2*: Quectel BG96</p> <p>Antenna: Internal</p> <p>Frequency bands @ 2G (GSM): 850/900/1800/1900 MHz (GPRS multi-slot class 33)</p> <p>* - depends on component availability</p>
GNSS module	<p>Module: 72-channel U-blox EVA-M8M</p> <p>Antenna: Internal and external (available as an additional accessory)</p> <p>Positioning systems: GPS, GLONASS, Galileo</p> <p>Augmentation systems: QZSS, SBAS (WAAS, GAGAN, EGNOS, MSAS)</p> <p>Aided start services: AssistNow Online (A-GPS)</p> <p>Tracking sensitivity: -154 to -164 dBm</p> <p>Reacquisition sensitivity: -152 to -160 dBm</p> <p>Cold start duration: < 30 s Aided start: As low as 3</p>
Bluetooth module	<p>Module: NRF52832</p> <p>Bluetooth version: 5.1 Low energy</p>
Interfaces	
4 x Digital inputs	<p>Voltage range: 0 - 30 V DC</p>

	Voltage threshold: 4 V DC Voltage threshold when inverted: 250 mV DC
4 x Analog inputs	Voltage range: 0 - 30 V DC Resolution: 12 bit
4 x Digital outputs	Maximum voltage: 32 V DC Maximum current: 1 A @ 25 °C
2 x CAN interfaces	FMS, HCV CAN, LCV CAN, OBD (including proprietary manufacturer data) and tachograph data reading
K-Line interface	Tachograph data reading
1-Wire interface	Power output: 300 mA @ 4.7 V DC RFID Reader/Button, up to 4x DS18B20 temperature sensors
User interfaces	Micro USB interface 3 x Indication LEDs
Connections	16 PIN and 14 PIN Molex

Features

Internal storage	8 MB (max. 39000 records)
Additional storage	MicroSD card up to 32GB (max. 250M records)
Accelerometer	Built-in 3-axis (auto-calibrating, motion sensing, tilt detection, g-force up to 4 g, driving behaviour)

Certifications and ratings

Certifications & ratings	E-mark, CE, FCC, IC, RoHS, WEEE, EAC, PTCRB
Certifications location	https://bit.ly/3BOOxuj

Environment

Operating temperature	-20° to +45°C (-40° to +85°C without battery)
Storage temperature	-20° to +45°C (-40° to +85°C without battery)
Relative humidity	5% to 95% Non-condensing

Electrical specification

Power supply range	9 – 32 V DC
Internal battery	LiPo 3.7 V 1050 mAh
Protections	Battery and a 1-Wire power line short circuit protection Reverse polarity protection Electrostatic discharge protection on USB, SIM card slot and 1-Wire data line Overcurrent protection on a 1-Wire power line and digital outputs

	<p>Overvoltage protection on analogue inputs</p> <p>Charging protection</p> <p>2A fuse on the power line</p>																																				
Average power consumption @ 12 V DC																																					
Operating (battery charging)	<p>Normal operation (data sending interval ~15 s): ~160 mA</p> <p>Normal operation (constant link enabled): ~155 mA</p> <p>Peak value: ~260 mA</p>																																				
Sleep mode (without battery charging)	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 10%;"></th> <th style="width: 10%; text-align: center;">@12V</th> <th style="width: 10%; text-align: center;">@24V</th> </tr> </thead> <tbody> <tr> <td>GPS ON / modem ON / const.link ON/</td> <td>1w ON</td> <td style="text-align: center;">38.5-40.0</td> <td style="text-align: center;">23.3-23.8</td> </tr> <tr> <td>GPS ON / modem OFF /</td> <td>1w OFF</td> <td style="text-align: center;">23.6-24.4</td> <td style="text-align: center;">15.5-16.3</td> </tr> <tr> <td>GPS OFF / modem ON / const.link ON/</td> <td>1w ON</td> <td style="text-align: center;">21.5-22.2</td> <td style="text-align: center;">14.4-14.9</td> </tr> <tr> <td>GPS OFF / modem ON / const.link ON/</td> <td>1w OFF</td> <td style="text-align: center;">14.1-14.9</td> <td style="text-align: center;">10.0-10.4</td> </tr> <tr> <td>GPS OFF / modem ON / const.link OFF/</td> <td>1w ON</td> <td style="text-align: center;">21.4-22.2</td> <td style="text-align: center;">14.4-14.9</td> </tr> <tr> <td>GPS OFF / modem sleep /</td> <td>1w ON</td> <td style="text-align: center;">15.5-16.8</td> <td style="text-align: center;">11.0-11.8</td> </tr> <tr> <td>GPS OFF / modem OFF /</td> <td>1w ON</td> <td style="text-align: center;">14.9-15.6</td> <td style="text-align: center;">10.7-10.8</td> </tr> <tr> <td>all OFF</td> <td></td> <td style="text-align: center;">7.5-7.7</td> <td style="text-align: center;">5.7-5.8</td> </tr> </tbody> </table>			@12V	@24V	GPS ON / modem ON / const.link ON/	1w ON	38.5-40.0	23.3-23.8	GPS ON / modem OFF /	1w OFF	23.6-24.4	15.5-16.3	GPS OFF / modem ON / const.link ON/	1w ON	21.5-22.2	14.4-14.9	GPS OFF / modem ON / const.link ON/	1w OFF	14.1-14.9	10.0-10.4	GPS OFF / modem ON / const.link OFF/	1w ON	21.4-22.2	14.4-14.9	GPS OFF / modem sleep /	1w ON	15.5-16.8	11.0-11.8	GPS OFF / modem OFF /	1w ON	14.9-15.6	10.7-10.8	all OFF		7.5-7.7	5.7-5.8
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Physical properties																																					
Dimensions	101 x 74 x 23 mm																																				
Weight	128 ± 1 g																																				
Housing	Plastic																																				
Assembly	Cable ties / double-sided adhesive tape																																				