

## AT241 GPRS / LPWA / GNSS / BLE Tracking Device



Low power consumption



Internal 510mAh battery



IP67 waterproof



up to 65V operation



microSIM



LTE Cat M1 + 2G / GPRS



MEMS accelerometer



Internal antennas



CANBus



BLE 4.2



GPS, GALILEO, GLONASS & BeiDou



SDK available



5 year warranty



6 digital inputs



5 digital outputs



Dallas 1-wire

## Technical Specifications

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### GSM/GPRS Communication

Communications Module:	Quectel BG600L-M3
GSM EGPRS Frequency Bands:	850/900/1800/1900 MHz
LTE Cat M1 Frequency Bands:	B1/B2/B3/B4/B5/B8/B12/B13/B14/B18/B19/B20/B25/B26/B27/B28/B66/B85
Cat NB2 Frequency Bands:	LTE-FDD: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B28/B66/B71/B85
GSM Antenna:	Internal PIFA PCB trace

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### GNSS Location

GNSS Antenna:	Internal 25 x 25 x 4mm ceramic patch
GNSS Receiver:	Quectel LG77L
GNSS Chipset:	Mediatek MT3333
L1/B1 Receiver:	GPS L1 C/A: 1574.397–1576.443 MHz GLONASS L1: 1597.781–1605.656 MHz BeiDou B1 C/A: 1559.052–1563.144 MHz
Position Accuracy:	< 2.5m CEP @ -130dBm
Receiver Sensitivity:	-162dBm (GPS + GLONASS, tracking & navigation)
TTF: Cold start	< 15 sec (average) @ -130 dBm
Hot start	< 1 sec (average) @ -130 dBm

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### BLE 4.2 (option)

BLE Module:	Silicon Labs BGM123
TX Power:	+3dBm
Sensitivity:	-90dBm
Bluetooth Compliance:	4.2 and earlier

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### Power

External Voltage Source:	5 – 60 VDC (65V absolute maximum)
Internal Battery:	3.7V, 510mAh
Battery Life:	9 hours continuous operation 12 days operation in low-power mode @ hourly update 20 days operation in low-power mode @ daily update
Current Consumption, max:	400mA @ 13.8 VDC (battery charging at max. rate)
Current consumption, average:	35mA @ 13.8 VDC 25mA @ 27.6 VDC
Current consumption, sleep:	< 100uA

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### Features

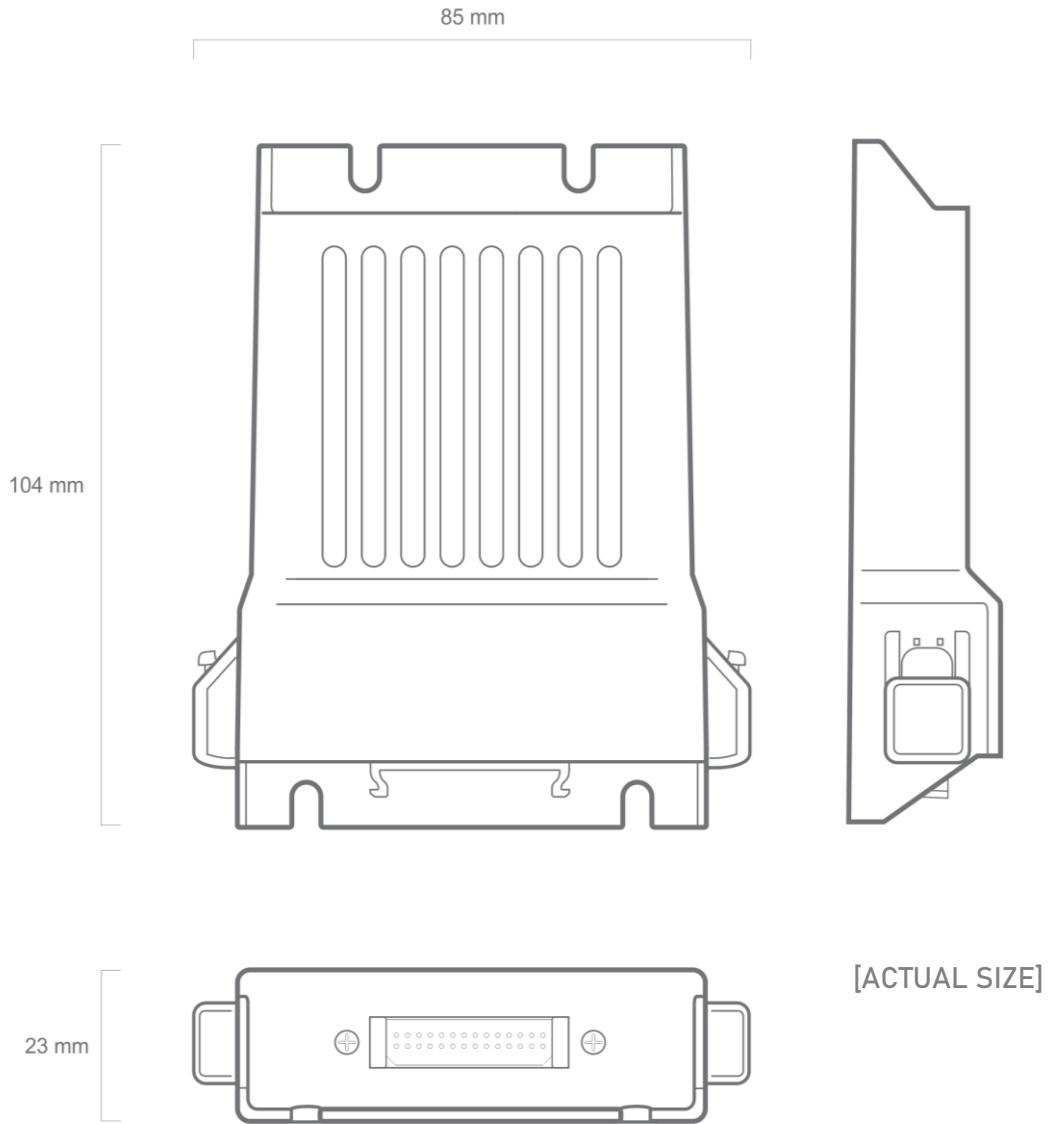
Configuration:	Astra Generic Configuration commands over SMS / TCP
Firmware update:	Supports Firmware Update Over-The-Air (FOTA)
Memory:	Total 1024k on-board non-volatile flash memory
Report storage:	6000 reports
Communication Protocol:	Astra Telematics Modular Protocol X over TCP socket

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### Interconnections

	4 x digital pull-up inputs 2 x digital pull-down inputs 5 x digital outputs, 60V, 0.5A Maximum (MOSFET open drain) 1-wire (dallas) CANBus / FMS 2.0 / OBD2 2 x RS232 serial port 2 x ADC inputs (0–5V and 0–15V) 3.3V Auxiliary Output (for accessories) 4.5V Auxiliary Output (for accessories)
SIM:	micro SIM (3FF), push-push style
POWER & DATA:	Samtec RC5, 30 way

Weight	100
Dimensions	104 x 85 x 23 mm
Ingress Protection	IP67



## ENVIRONMENTAL

Temperature:	
Operating	-20 to +85°C (note: battery charging is suspended at higher temps)
Storage	-30 to +85°C

Product Approvals:	EU Directive 2014/53/EU "Radio Equipment Directive" E11*10R05/01*10245*00 FCC ID XPYICGM5NNN
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Note: Specifications may change without notice.