



IP68-rated and roadworthy micro-tracker

Available in 2G, LTE-M1 and 3G, the BOLERO-40 series of rugged micro-trackers is especially designed to match the environmental, mechanical and electrical requirements of the vehicle tracking market.



**IP68
Waterproof
Dustproof**

Waterproof (immersion up to 1.2 meter for 60 minutes) and dustproof, it is the perfect tracking device for extreme conditions and activities

**“Indestructible”
power section**



Roadworthy 10.8 VDC ~ 42.0¹⁾ VDC
ISO 7637-2:2011 (TÜV)
ISO 21848:2005 (QuieTek)
Ideal for electric and recreational vehicles



**Dual
SIM**

Hosts two Mini SIM (aka 2FF) and switches between carriers

**Powerful
scripting
language**



PFAL monitors the vehicle environment and responds instantly to user-defined threshold conditions related to input, time, date, location, zone, motion and other event combinations



BOLERO-40 Series specifications

HARDWARE

Casing	Automotive graded, UV resistant, non-flammable fibreglass-reinforced IP68-certified casing
Dimensions	70 x 52.5 x 20.6 mm
Weight	118 g
Wire harness	1 m
Operating temperature range	Class A: -30°C ~ +70°C ¹⁾ Class B: -40°C ~ +85°C ¹⁾ Battery discharging temp.: -10°C ~ +60°C Battery charging: 0°C ~ +45°C
SDRAM	16 Mbit

TRACKING

GNSS	72-channel GNSS engine GPS/QZSS, GLONASS, BeiDou, Galileo SBAS: WAAS, EGNOS, MSAS
A-GPS	Online / offline / autonomos
Protocols	NMEA, FALCOM (binary)
Accuracy	Position: 2.5 m
Acquisition	Cold Start: 28 s Tracking: -164 dBm
Sensitivity	Cold start: -148 dBm
Limits	Velocity: 500 m/s (972 knots) Altitude: 50,000 m Update rate: 1 Hz

FIRMWARE FEATURES

- Embedded TCP/IP stack for client-server application
- Support SMS/USSD/TCP/IP/UDP/SMTP/HTTP
- FALCOM protocols: IOP, GSM, AREA, 3DP, BIN
- 20 programmable Timers, Triggers, Counters
- 3000 programmable geofences, 2000 waypoints
- Intelligent and flexible configuration settings
- Multi power-saving modes and wake-up conditions
- Report by distance, time, tilting and on demand
- Drivers Logbook / History / Trip management
- FALCOM PREMIUM features supported
- Local and remote firmware and configuration update
- Over-the air-access (OTA)

INTERFACES

SIM interface	2FF SIM 1.8 V / 3.0 V x 2 or factory-fitted MFF SIM x 2
Cellular and GNSS antennas	Internal
Internet	TCP / UDP / SMTP / HTTP
RS-232	V.24 level on 2 wires
I/Os	Two 'versatile', i.e. user-configurable as analogue/digital input or digital output
Analogue input	Maximum 32 VDC
Digital output	Open collector
Digital input	Ignition sensing
1-wire interface	3.3 VDC for temperature, humidity sensor or driver ID
Multi power saving mode	✓
Accelerometer	Internal 3-axis
LEDs	User-configurable (e.g. Cellular, GNSS, Power ... etc.)
Cloud Services	Embedded profile to connect to D2SPHERE™ remote management services

POWER

Main Source	Roadworthy 10.8 VDC ~ 42.0 ²⁾ VDC ISO 7637-2:2011 (TÜV) ISO 21848:2005 (Quietek)
Alternate source	Li-ion 3.15 Wh backup battery
Average power consumption	3G normal operation: 1.2 W

^{1) 2)} To be checked/tested

PRODUCT NAME	TERRITORIES / OPERATORS	CELLULAR TYPE	BANDS	FALL-BACK MODE	BANDS	PLANNED APPROVALS AND CERTIFICATIONS			C/A	ORDER CODE
						REGULATORY	INDUSTRY	OPERATOR		
BOLERO-41	EMEA and Asia excl. Japan and Korea	2G	3/8							BOLERO-41#02
BOLERO-41	World excl. Japan and Korea	2G	2/3/5/8			CE Marking e-mark	GCF		Q1 '17	BOLERO-41
BOLERO-43	Verizon Wireless	LTE-M1 (*)	13			FCC		Verizon Wireless	Q2 '17	BOLERO-43#D
BOLERO-43	AT&T Wireless, T-Mobile USA and Sprint	LTE-M1 (*)	2/4/12							BOLERO-43#24C
BOLERO-45	EMEA and Asia excl. Telstra and NTT docomo	3G (**)	1/8	2G	3/8					BOLERO-45#02
BOLERO-45	The Americas excl. Brazil	3G (**)	2/5							BOLERO-45#00#NFB
BOLERO-45	World	3G (**)	1/2/5/8	2G	2/3/5/8	CE Marking e-mark	GCF		Q1 '17	BOLERO-45

Please consult us regarding the models in grey

(*) 375 kbps down; 375 kbps up (**) 7.2 Mbps down; 5.76 Mbps up

FALCOM GmbH
Gewerbering 6
98704 Langewiesen
Germany

Tel.: +49 (0)3677 8042 0 (no support)
Fax: +49 (0)3677 8042 215
www.falcom.de
info1@falcom.de

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