



IP68-rated and roadworthy micro-tracker

Available in 2G, NB-IoT, 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 metre during 60 minutes) and dustproof, it is the perfect tracking device for extreme conditions and activities

**“Indestructible”
power section**



Roadworthy 9 VDC ~ 60 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



D2SPHERE™

D2SPHERE™ device management services let you monitor, diagnose, control and update your FALCOM devices. Information such as signal strength, geographic location, battery state, temperature, device firmware and software versions can be remotely monitored, stored and presented to help you maintain connectivity, manage quality of service and prevent downtime.

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	100 g
Wire harness	1 m
Operating temperature range	Class A: -30°C ~ +70°C Class B: -40°C ~ +85°C Battery discharging temp.: -20°C ~ +60°C Battery charging: 0°C ~ +45°C

TRACKING

GNSS	72-channel u-blox8 GNSS engine GPS/QZSS L1 C/A, GLONASS L1 FDMA, SBAS: WAAS, EGNOS, MSAS
A-GPS	✓
Protocols	NMEA
Accuracy	Position: 2.5 m GPS / 4.0 m GLONASS
Acquisition	Cold Start: 30 s GPS / 33 s GLONASS Tracking: -164 dBm GPS / -163 dBm GLONASS
Sensitivity	Cold start: -147 dBm (GPS) / -145 dBm (GLONASS)
Limits	Velocity: 500 m/s (972 knots) Altitude: 50,000 m Update rate: 1 Hz

FIRMWARE

- 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, nvCounters
- 3000 programmable geofences, 32 areas, 2000 waypoints
- Intelligent and flexible configuration alarms

INTERFACES

SIM interface	2FF SIM 1.8 V / 3.0 V x 2 or factory-fitted MFF2 as SIM #2
Cellular and GNSS antennas	Internal
Internet	TCP / UDP / SMS
RS-232	V.24 level on 2 wires
I/Os	Two 'versatile', i.e. user configurable as analogue input or digital output
Analogue input	Maximum 24 VDC
Digital output	Open collector
Digital input	Ignition sensing
1-wire interface	3.3 VDC for temperature / humidity sensor or driver ID
Power saving mode	✓
Accelerometer	Internal 3-axis
LEDs	Cellular and GNSS
Cloud Services	Embedded profile to connect to D2SPHERE™ remote management services

POWER

Main Source	Roadworthy 9 VDC ~ 60 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

- Multi power-saving modes and wake-up conditions
- Report by distance, time, bearing and on demand
- Drivers Logbook / History / Trip management
- FALCOM PREMIUM features supported
- Local and remote firmware update and configuration
- Over-the-air-access (OTA)

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			CE Marking e-mark	GCF		Q1 '17	BOLERO-41#02
BOLERO-41	World excl. Japan and Korea	2G	2/3/5/8							BOLERO-41
BOLERO-42	EMEA	NB-IoT (*)	8							BOLERO-42#8
BOLERO-42	EMEA	NB-IoT (*)	20							BOLERO-42#K
BOLERO-42	Australia, New-Zealand and Taiwan	NB-IoT (*)	28							BOLERO-42#S
BOLERO-42	Asia Pacific	NB-IoT (*)	5							BOLERO-42#5
BOLERO-43	Verizon Wireless	LTE-M1 (**)	13							BOLERO-43#D
BOLERO-43	AT&T Wireless, T-Mobile USA and Sprint	LTE-M1 (**)	12							BOLERO-43#C
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

(*) 227 kbps down; 21 kbps up | (**) 300 kbps down; 375 kbps up | (***) 7.2 Mbps down; 5.76 Mbps up

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