



IP68-rated and roadworthy micro-tracker

Available in 2G, LTE-M1 and 3G, the BOLERO40 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 at 1.2 metres for 60 minutes) and dustproof, it is the perfect tracking device for extreme conditions and activities

**“Indestructible”
power section**



Roadworthy 10.8 VDC ~ 48.0 VDC,
(India, Asia) 10.8 VDC ~ 24.0 VDC
Ideal for electrical 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.

BOLERO40 Series specifications

HARDWARE

Casing	Automotive compliant, 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	-40°C ~ +85°C 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, Galileo, BeiDou SBAS: WAAS, EGNOS, MSAS
A-GNSS	AssistNow Online / offline / autonomos
Protocols	NMEA, FALCOM (binary)
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 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
- Detection of GPS jamming signals
- 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 ~ 48.0 VDC, (India, Asia) 10.8 VDC ~ 24.0 VDC.
Alternate source	Li-ion 3.15 Wh backup battery
Average power consumption	3G normal operation: 1.2 W

MODEL NAME	TERRITORIES OR OPERATOR(S)	CELLULAR TYPE	BAND(S)	FALL BACK MODE	BANDS	GNSS	PLANNED CERTIFICATIONS	FCS (*)	ORDER CODE
BOLERO41	World excluding Japan, Korea	2G	2/3/5/8			Concurrent GPS and GLONASS	RED, E-Mark, GCF		BOLERO41
BOLERO43	Verizon Wireless	LTE-M1	13	*	N/A		FCC, Verizon Wireless	Q2 '18	BOLERO43#D
	AT&T Wireless, T-Mobile USA, Sprint		2/4/5/12				IC, FCC, PTCRB, AT&T Wireless		BOLERO43#245C
	World	LTE-M1 / NB-IoT	2/3/4/5/8/12/13/20/28		3/8		TBD	Q3 '18	BOLERO43
BOLERO45	EMEA, [most of] Asia Pacific	3G	1/8	2G	2/3/5/8		RED, E-Mark, GCF		BOLERO45#02
	World		1/2/5/8						BOLERO45

Please consult us regarding the models shown in grey which are factory option subject to MOQ and other considerations

Uplink / Downlink maximum data rates – 3G: 5.76 / 7.2 Mbps;
NB-IoT: 62.5 / 27.2 kbps; LTE-M1: 375 / 375 kbps

* First customer shipment

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