BOLERO40 Series

LANTRONIX®
CONNECT SMART. DO MORE.™

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.

Trustworthy Automotive Compliant Design

Performance in even the harshest environments.

- V0 flame retardant
- Waterproof (immersion at 1.2 metres for 60 minutes)
- Dustproof

"Indestructible" Power Section

Resilient power supply offering roadworthy 10.8 VDC ~ 48.0 VDC.
Ideal for electrical and recreational vehicles

Save Money and Ensures Highest Coverage Available with Dual Sim Function

Hosts two Mini SIM (aka 2FF) and switches between carriers to ensure continuous nationwide/cross border coverage across two service provides effectively reducing mobile roaming charges.

Improve Efficiency with Smart Remote Management

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 Lantronix Mobility Solution 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

Micro-Tracker

HARDWARE

Casing	Automotive compliant, non-flammable fibre-glass-reinforced IP68-certified casing
Dimensions	70 x 52.5 x 20.6 mm without connection cable
Weight	Approx. 118 g
Wire harness	1 m with a (2x4) connector at cable's end
Temperature range	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

MOUNTING

Mounting types	- Double-sided adhesive pad (not included) - Cable ties (not included)

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 and Ignition sensing
Analogue input	Max. 32 VDC
Digital output	Open collector; 100 mA max.; 32 V dc max.
Digital input	0 - 32 Vdc; User-programmed high and low thresholds
1-wire interface	3.3 VDC for temperature sensor or iButton driver ID
Multi power saving mode	a
Accelerometer	Built in, ± 8g triple-axis (moving, standing, harsh braking and acceleration, tilt detection)
LEDs	User-configurable (e.g. Cellular, GNSS, Power ... etc.)
Cloud Services	Embedded profile to connect to D2SPHERE™ device management

POWER

Main source	Roadworthy 10.8 VDC ~ 48.0 VDC
Alternate source	Li-ion 3.15 Wh backup battery
Average Power consumption (Wh)	At temp.= 23°C, DC_{IN}=12 V; BOLERO41: 2G (1800 MHz); BOLERO45: 3G (2100 MHz) Sleep*: 0.02 (BOLERO41); 0.02 (BOLERO45) Standby*: 0.61 (BOLERO41); 0.61 (BOLERO45) Tx max.: 1.90 (BOLERO41); 2.28 (BOLERO45) * These values will be about 50 mA higher during battery charging

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
- 40 programmable Timers, Triggers, Counters
- 3000 built-in geofences and 2000 waypoints (rectangular/circular)
- Support primary and backup servers
- GSM/GSM jamming detections
- Multi power-saving modes and wake-up conditions
- Intelligent and flexible configuration settings
- Alert notification rules based on combined events/states
- Drivers Logbook / History / Trip management
- Driver behvior evaluation
- 2 x APN settings for home and roaming
- FALCOM PREMIUM features supported
- Local and OTA firmware update
- Local and OTA device configuration

Model name	Territories or Operator(s)	Cellular type [1]	Band(s) [2]	Fallback mode [1]	Bands [2]	Location services	Planned / Obtained certifications [3]	Planned / Made FCS [4]	Order code
BOLERO41	World excl. Japan, Koreas	2G [λ1]	5/8/3/2	N/A		Concurrent GPS, Galileo and either GLONASS (factory setting) or Beidou	CE [6], E-Mark	Apr. '19	B41H00FS
BOLERO45	World [5]	3G	5[a]/8/2/1	2G [λ2]	5/8/3/2				B45H00FS
BOLERO43	EMEA	LTE-M1	20/8/3	2G [λ3]	8/3			Q2 '20	B43H002S
	Verizon Wireless		13	×	N/A		FCC, Verizon Wireless		B43H001S
	Japan		19/8/1 – cf. note [2b]				JRF, JPA, NTT docomo, SoftBank		B43H007S
	South Korea		26[c]/3				KC, SK telecom		B43H009S

Please consult us regarding the models or features shown in grey, which are subject to MOQ and other considerations

1 Uplink / Downlink maximum data rates
- *2G: [λ1] 42.8 / 85.6; or 236.8 / [λ2] 236.8; or [λ3] 296 kbps*
- *3G: 5.76 / 7.2 Mbps*
- *LTE-M1: 375 / 300 kbps currently; 1,200 / 375 kbps in Q4 '20 via a 3GPP Release 14 software update*

2 Ranked by increasing frequencies
- *a incl. Japan's B19, itself incl. Japan's B6 (3G only)*
- *b Contemplating adding KDDI's B18*
- *c incl. B5*

3 Besides MIL-STD-810H

4 First customer shipment [date of]

5 A special software build is available for NTT docomo

6 Based on compliance with RED; EN 60950-1; etc.

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