



BOLERO40 Series

LANTRONIX®
CONNECT SMART. DO MORE.™



Distributed by:



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.

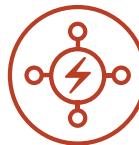
- V0 flame retardant
- Waterproof (immersion at 1.2 metres for 60 minutes)
- Dustproof



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 providers effectively reducing mobile roaming charges.

"Indestructible" Power Section



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



Electrical Vehicle

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



Motorbike / Vehicle Tracking



Bike & Car Sharing



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.

LANTRONIX



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)
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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

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 MAX. 32 VDC ANALOGUE INPUT DIGITAL OUTPUT DIGITAL INPUT OPEN COLLECTOR; 100 mA MAX.; 32 V DC MAX. 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 BRACK- ING 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

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, Korea	2G ^{1,2}	5/8/3/2	x	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 ^{1,2}	5/8/3/2				B45H00FS
BOLERO43	EMEA	LTE-M1	20/8/3 – cf. note ^{2b}	2G ^{1,3}	8/3		FCC, Verizon Wireless	Q1 '20	B43H002S
	Verizon Wireless		13	x	N/A				B43H001S
	Japan		18/19/1 – cf. note ^{2d}				JRF, JPA, NTT docomo, SoftBank Mobile		B43H007S

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: ^{1,2} 85.6 / 236.8; or 236.8 / ^{1,2} 236.8; or ^{1,3} 296 kbps
- LTE-M1: 375 / 375 kbps
- 3G: 5.76 / 7.2 Mbps

² Ranked by increasing frequencies

- ^a Containing Japan's B19, that contains B6 – cf. note^{2c}
- ^b Contemplating adding B1
- ^c Containing Japan's B6 (3G)
- ^d Contemplating adding B8, B3 (containing Japan's B9)

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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