

MASTIFF™ Tracker

Active RFID Reader
with GSM/GPRS/GPS

for

Vehicle Tracking and Monitoring



Product Brochure

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Document Revision History

Revision No.	Date	Description/Changes
1.0	21/09/2012	Initial Release

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1. Introduction

Reindeer's 'Mastiff™ Tracker' is an Active RFID Reader with GSM, GPRS and GPS tracking which can be used indoors or outdoors to track people or vehicles. This is an ideal device to track and monitor students, employees, workers, visitors inside the buildings or outdoors. The reader collects the tag information from the compatible Mastiff™ active RFID tags through its dedicated RFID reader and updates the server through GPRS.

Mastiff™ Tracker can also be used for Fleet Management, Vehicle Tracking, Wireless Sensor Networking and other Machine to Machine (M2M) applications. It's a stand-alone device which tracks the location of the vehicle and communicates to the down-stream software in a seamless way. It also measures other performance parameters such as engine status, door status, vehicle speed, course over ground, tamper status etc. and sends them to the server along with timestamp.

Mastiff™ Tracker is fitted with fully functional GPS tracker and comes with GSM/GPRS connectivity for down-stream communications. Besides, it has additional power backup which can maintain continuous uptime for 48 hours when external power is disconnected. It also comes with an additional storage which can store up to 1 million records in case of communication failures.

Mastiff™ Tracker has a robust power supply with surge protection and self-resetting fuse which provides excellent power supply isolation and protects from surges when connected to vehicle ignition or to any external devices. It also has self-healing and self-correcting mechanism which will ensure reliable and continuous operation in the long-run with no manual intervention. The rechargeable backup battery makes the device portable and it comes with complete protection such as reverse polarity protection, surge protection and fuse protection.

Mastiff™ Tracker is equipped with intelligent sensors and raises alarm when the device is tampered with or on over speeding and sends real-time notifications/alert to back-end software. It's fitted in a heavy duty ABS material which protects the device from normal wear and tear and comes with a flame rating of UL94-5VA. The tracker comes with a rugged metal enclosure with flanges to fit the device in a secure way. It also comes with a lock and key mechanism to secure and protect the device from any misuse.

Mastiff™ Tracker comes with a sleek design and carries a host of LEDs indicators for various functionalities such as GSM/GPRS, GPS, Power Supply/Battery Supply, Low Battery Conditions and Tamper Alarms etc. These will be useful during troubleshooting and periodic maintenance.

Remote management is another important feature of the Mastiff™ Tracker which will help installation and maintenance engineers to cut down their time from site visits. Remote management and maintenance will help the engineers to upgrade the device configuration and settings, identification of alert situations, pinpoint the location of the device and monitor the health status of the device.

Mastiff™ Tracker also comes with an integrated RFID reader (UHF band) to track the personnel inside the vehicles or to authenticate the drivers to turn ON the ignition and enable

automatic door opening and closing. The range of the RFID reader is adjustable and it covers up to 100 meters line of sight.

Mastiff™ Reader comes with a small form factor, light-weight and carries an excellent appeal. It complies with standards such as EMI/EMC, FCC and CE making it fully qualified for international deployments with minimum changes.

2. Features

The features of the Mastiff™ reader are listed below:

- **Input Voltage:** Wide voltage input range (9V to 36V) with built-in ON/OFF power
- **GSM/GPRS:** Quad-band GSM/GPRS multi-slot class 10, Downlink (max) – 85.6 kbps, Uplink (Max) – 42.8kbps
- **GPS:** GPS receiver with high sensitivity up to -160dBm
- **Backup Battery:** 5.2 AH battery backup with up to 48 hours backup for Continuous Operation
- **Memory:** Extended Memory Storage to store up to 1 million records
- **Alerts:** Tamper Detection and Notification
- **Reliability:** True Self-healing and Self-recovering Device from any fatal errors
- **Power Supply Protection:** Capable of withstanding surges and voltage spikes of 6 KV. Protected by Self-resetting Fuse
- **Remote Management:** Over-the-air Device Configuration
- **Compliance:** EMI/EMC, FCC and CE Standards
- **Device Access:** Mini USB for device configuration, site maintenance and troubleshooting
- **ADC:** 3 Analog and 3 Digital Channels for interfacing external devices
- **LED Indications:** GPRS, GSM, GPS, Direct Power, Battery Backup, Self-healing Status Indications
- **Security:** 128-bit AES Security for data communications
- **Data Format for down-stream communications:** XML Format
- **List of Alerts:**
 - Vehicle battery disconnection alerts
 - Monitors Vehicle Battery Voltage Levels
 - Monitors door ajar warnings
 - Monitors Engine ON/OFF status
- **Integrated Sensors:**
 - Accelerometer for harsh braking detection
 - Tamper detection
- **Active RFID Reader:**
 - Long range, high performance RF transceiver Module in 865 to 870 MHz
- **Software:** Bundled with a user configuration software to configure the device settings
- **CAN Interface:** CAN interface for data acquisition from vehicle on-board computer
- **MODBUS Interface:** Compatible with external device with RS485 communication
- **Digital Inputs:** Monitor isolated digital inputs wide range up to 30 volts
- **Analog Inputs:** Monitor analog inputs 3/10/30 volts
- **Optional Features:** Integrated with active RFID reader (UHF band) for student tracking/ Driver identification
- **Other Features:** Hooter for deterrence

3. Application Areas

- Vehicle Tracking Systems
- Fleet Management
- Container Tracking
- Personnel Tracking
- Asset tracking
- Internet Gateway for Wireless Sensor Networks
- Machine to Machine Communication (M2M)
- Remote Monitoring Applications
- Telemetric applications

4. Product Variants

Feature	Basic	Regular	Premium
Colour	Black	Black	Black
Track and Trace using GSM/GPRS/GPS	✓	✓	✓
Memory to store data during GPRS failures	Up to 1 day records	Up to 2 day records	Up to 5 day records
SMS Fall Back	✓	✓	✓
Software for Device Configuration	✓	✓	✓
Secure Mounting and Protection by Lock and Key	✓	✓	✓
Analog Inputs/Outputs (Maximum)	-	3 Each	3 Each
Digital Inputs/Outputs (Maximum)	-	3 Each	3 Each
Power Backup to run the device up to 48 hours	-	✓	✓
Power Disconnect Detection	-	✓	✓
Hooter for Deterrence	-	✓	✓
Tamper Alert Notification	-	✓	✓
OTA Device Configuration			

	-	✓	✓
Accident/Harsh Braking/Sudden Accident Detection	-	✓	✓
Integrated Active RFID System for Driver Authentication/Personnel Tracking	-	-	✓
OTA Device Programming	-	-	✓
Accessories	<ul style="list-style-type: none"> • Metal Enclosure • Mini USB Cable • In-built SD Card for Data Storage 	<ul style="list-style-type: none"> • Metal Enclosure • Mini USB Cable • In-built SD Card for Data Storage • Backup Batteries • Matching 20-pin Molex Connector with wires for Power Supply/ADC 	<ul style="list-style-type: none"> • Metal Enclosure • Mini USB Cable • In-built SD Card for Data Storage • Backup Batteries • Matching 20-pin Molex Connector with wires for Power Supply/ADC

5. Ordering Information

Product part Number	Description
MASTIFF_TRACKER_PRE	Mastiff™ Tracker – Premium with GSM/GPS/GPRS and Active RFID for Vehicle Tracking and Monitoring
MASTIFF_TRACKER_REG	Mastiff™ Tracker – Regular with GSM/GPS/GPRS for Vehicle Tracking and Monitoring
MASTIFF_TRACKER_BASIC	Mastiff™ Tracker – Basic with GSM/GPS/GPRS for Vehicle Tracking and Monitoring

6. Contact Us

12.1. Technical Support

Reindeer Technologies Pvt. Ltd. has built a solid technical support infrastructure so that you can get answers to your questions when you need them.

Our technical support engineers are available Mon-Fri between 9:30 am and 6:00 pm Indian standard time. The best way to reach a technical support engineer is to send an email to support@reindeersystems.com. E-mail support requests are given priority because we can handle them more efficiently than phone support requests.

12.2. Sales Support

Our sales department can be reached via e-mail at sales@reindeersystems.com or by phone at 91-44-45022335/42606907.

Our sales department is available Mon-Fri between 9:30 am and 6:00 pm.

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