Intelligent Fleet Management System
Fleet Enterprise User Manual
V1.0

2013-11-1
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1. System Introduction

Intelligent Fleet Management System focuses on providing professional fleet management and GPS tracking solutions for enterprise. This solution integrates with advanced GIS, GPS, GPRS, OBD, WEB technology, binding enterprise’s each vehicle into monitoring and service system, and providing location tracking, real-time monitoring, remote diagnostics, key data report, trend analysis and vehicle/driver management services, etc. for enterprise fleet asset management.

<table>
<thead>
<tr>
<th>Account level</th>
<th>Suitable Customer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fleet operator</td>
<td>Fleet operator, manage some fleet management enterprises or fleets or drivers</td>
</tr>
<tr>
<td>Fleet enterprise</td>
<td>Fleet enterprise, manage lower level fleet management enterprise/fleet/driver</td>
</tr>
<tr>
<td>Fleet</td>
<td>Fleet, manage some vehicles/drivers</td>
</tr>
<tr>
<td>Driver</td>
<td>Terminal driver</td>
</tr>
</tbody>
</table>

Multi-level authority distribution: Create account level based on business requirements.

Flexible configure management authority: Enterprise internal creating different roles, controlling data access, it could improve enterprise vehicle information management level effectively and reduce operation cost.

For more terminal device information, pls visit [tp://www.castelecom.com](http://www.castelecom.com)

2. Guide Objective

This file is for customers who buy and use intelligent fleet management and GPS tracking system (Fleet enterprise role), and providing clear operation instructions for customers to grasp platform operation method more easily and quickly.

Attention: Some images may too large, we advise you to amplify display scale, such as 130%.

3. Recommended Operation

User Terminal Circumstance: Windows XP (recommended);


Support Browser: IE7/IE8, Firefox 4.0 and above, Google chrome 21.0 and above

4. How it works

4.1 Logging in

Pls input this website at browser address: [http://www.livetelematics.com](http://www.livetelematics.com) to visit intelligent fleet management system;

Login account: Login account that provided by Castle
4.2 The platform architecture

- Realtime Monitoring
- Login management platform

I have created vehicle related info

I need to create new info

Create a group in Group management (if needed)

Create a group login account in User management (if needed)

Create a driver belongs to a group in Driver management

Create a role to set the user access right in Role management

View vehicle driving data in Statistics;
View vehicle driving analysis in Analysis;
View fleets driving trends in Analysis
View mileage/Fuel Consumption/Location report in Reports;
View/New/Edit/Delete assets info in Management;
Add/Edit/Delete Geo-fence alarm in Geo-fence management

Only fleet operator/enterprise can do this for his client enterprises.
Here, you may assign the devices to the client in Device management

Create a login account for the group user or your staff

Create a vehicle to bind a device in Vehicle management

* Important: device must be bind with a vehicle before use;
Only stored device can be bind with a vehicle

4.3 Operating Instructions

Mainly aimed at backend management:

a. Data display area full screen: Exit full screen display;

b. Click to return previous page;

c. Click Export the current page data to be in Excel format; At report function, Export all search results;

d. All data area column name right side’s lower triangular matrix, click to choose display/hide some columns content;

4
4.4 Realtime Monitoring

After login, system go to realtime monitoring interface, customer could view vehicle location, realtime tracking, vehicle, monitoring vehicle DTCs/Alarms.

**Figure 4.4_1**

1: Vehicle list area:
Support to search, choose more enterprises, vehicles to search;

2: Map operation area;
Distance measurement, Test Area, Search vehicle at current map viewing area

3: Vehicle position information:
Check location information on the map: Lic.#, Group, Online status (Indicator is green when online), whether there is alarm (Light on means there is new alarm), whether there is DTC (Light on means there is new DTC), driver, device ID, speed, RPM, GPS received time;

4: Data list:
The selected vehicle at left side area 1 could display here, could check:
<table>
<thead>
<tr>
<th>Data type</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle current status</td>
<td>Online status, Alarm status, DTCs status, Location condition: Lic.#, Driver, GPS received time, ACC status, Location, Trip, Speed, RPM, GPS direction</td>
</tr>
<tr>
<td>DTCs list</td>
<td>Lic.#, Unit, Occurred time, DTCs, DTCs Type, DTCs details, Occurred Location, Freeze frame</td>
</tr>
<tr>
<td>Alarms list</td>
<td>Lic.#, Unit, Occurred time, Alarm type, Alarm description, Occurred location</td>
</tr>
</tbody>
</table>

**5: Page identified area:**

Current map viewing to check all tracked vehicle, all vehicles online/offline volume

![Online/Offline 2/60](image) Alarms volume ![Alarm 0](image) DTCs volume ![DTCs 0](image)

Choose the unnecessary remind alarm type, default setting is all: Alarm sound setting: If turn on all vehicles alarm sound: online, offline prompts:

![Set automatic reminder for all](image)

**6: Realtime alarm area:**

Realtime pop-up DTC alarm, Alarms alarm, Geo-fence alarm;

### 4.5 Backend management

Realtime monitoring interface, click: ![Goto Backend Management](image) to enter into backend management.

Backend management including functions range:

- Vehicle asset management
- Vehicle driving trip data query
- Driver driving analysis
- Fleet key data trend analysis
- Report query and export
- Geo-fence alarm setting
- System management

Each account level supported functions list at left side:

<table>
<thead>
<tr>
<th>Functions list</th>
<th>Fleet operator</th>
<th>Fleet enterprise</th>
<th>Fleet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle data statistics</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Vehicle safety driving analysis</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Vehicle economic driving analysis</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Fleet driving trip data analysis</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Travel report</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Feature</td>
<td>Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------------</td>
<td>--------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel consumption report</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location report</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group management</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>User management</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Driver management</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehicle management</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Device management</td>
<td>√</td>
<td></td>
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</tr>
<tr>
<td>Role management</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geo-fence management</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Message dispatch to terminal</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(with screen)</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>System log</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enterprise information</td>
<td>√</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 4.5_1**

**Overall display:**

1. **Alarm prompt:**
   - a. Current existed DTCs volume  - click to check DTCs list;
   - b. Current new alarm volume   - click to check alarms list;
   - c. Current maintenance remind volume  - click to check automatic appear maintenance reminder;
2: Oil price edit: Put the mouse on current oil price, the system will pop-up oil price information, as shown in figure:

![Figure 4.5_2](image)

Click edit button to edit oil price:

![Figure 4.5_3](image)

Fast download: Click this button, direct download system tool, click it would pop-up download tooltip:

![Figure 4.5_4](image)

3: Data display and operation area;

4: Function swift area;

**4.6 Vehicle data statistics**

After creating vehicle relative information on platform, if customer use PC Tool to set OBD device and platform’s communication parameter successfully, then after plugging device into vehicle and start engine, all vehicle relative data will be uploaded to platform.
Vehicle based data statistics including:

Trip | GPS data | Fuel consumption | DTCs | Alarms | Snapshots | PIDs | Repairs | Maintenance

Figure 4.6.1

4.6.1 Trip

Enter into: Statistics -> Vehicles -> Trips:

Default display: All vehicles trip record at current account, as shown in figure:

Figure 4.6.1_1

Check trip details: Click View details column icon at right side, check one vehicle trip details, as shown in figure:

Figure 4.6.1_2

History trace replay: Click Operation column icon 3 at right side, check one vehicle trip ’s trace replay, as shown in figure:
4.6.1 Real-time RPM/Speed display;
2: Whether display happened alarm information at history trace replay;
3: Play speed control;

4.6.2 GPS data

Enter into: Statistics -> Vehicles -> GPS data :

Default display: All vehicles the latest GPS data record currently, as shown in figure:

Check GPS data details: Click Operation column icon at right side, check one vehicle GPS data receiving details, as shown in figure:
4.6.3 Fuel consumption

**Enter into:** Statistics -> Vehicles -> Fuel:

**Default display:** All vehicles fuel consumption record at current account, as shown in figure:

**Check fuel consumption details:** Click View details column icon at right side, check one vehicle fuel consumption details, as shown in figure:

1: Time setting for fuel consumption trend analysis;
2: Fuel consumption details;
3: Fuel consumption graph: checking on the basis of fuel consumption and average fuel consumption

4.6.4 DTCs

**Enter into:** Statistics -> Vehicles -> DTCs:
Default display: All vehicles DTCs record at current account, as shown in figure:

![Image](image1)

**Figure 4.6.4_1**

1: Pending: un-cleared DTCs, still existed DTCs, click the number to check one vehicle Pending DTCs list;
2: Cleared: cleared DTCs, occurred DTCs, click the number to check one vehicle Cleared DTCs list;

**Check DTCs details**: View DTCs details by clicking one vehicle Pending or Cleared number, as shown in figure:

![Image](image2)

**Figure 4.6.4_2**

1: DTCs severity level:
   - Very serious, please handle it immediately;
   - Serious, please handle it in time;
   - Common, you can handle it later;
   - Slight, you can ignore this fault;
2: DTCs occurred times: click to view the exact occurred time;
3: DTCs details: click view DTCs possible reasons and maintenance suggestions that shows icon;
4: DTCs location: click map window view DTCs exact location;
5: Freeze frame: click view data saved by vehicle system and current DTCs related data when DTCs occurred (maybe no data, it is relative to vehicle system record when DTCs occurred)

4.6.5 Alarms

*Enter into*: Statistics -> Vehicles -> Alarms:

Default display: All vehicles alarms record at current account, as shown in figure:
Check alarm details: Click one vehicle View details column icon, check alarm details, as shown in figure:

Check alarm location: Click Location column icon, check alarm location details on map window (how to set alarm ?);

4.6.6 Snapshots

Enter into: Statistics -> Vehicles -> Snapshots:

Default display: All vehicles recent data informations for vehicle ignition record at current account, as shown in figure:

Check Snapshots details: Click Operation column icon, check one vehicle snapshot data, as shown in figure:

1: Occurred location: snapshot upload location;

2: Snapshot detailed data, different vehicles support different data (How to check the data that my car support ?);
4.6.7 PIDs

Enter into: Statistics -> Vehicles -> PIDs:

Default display: All vehicles PIDs record at current account, as shown in figure:

![Figure 4.6.7_1](image)

1: Data details: Click view detailed PIDs data record, as shown in figure:

![Figure 4.6.7_2](image)

2: Data graph: click view icon-based PIDs data, as shown in figure:
Check details: click view details, as shown in figure:

4.6.8 Repairs

Enter into: Statistics -> Vehicles -> repairs:

Default display: Vehicle repair record at current account, as shown in figure:

Support operations: Add, modify, import (Excel format), delete, export repair record;

4.6.9 Maintenance

Enter into: Statistics -> Vehicles -> Maintenance

Default display: Vehicle maintenance record at current account, as shown in figure:
1: Maintenance setting: Click set vehicle maintenance reminder, system will automatically generated
reminder according user setting, as shown in figure:

Figure 4.6.9_2

Click New Reminder:

- Group: -select-
- Lic #: 2166001

Remind basis: Mileage or time, whichever is earlier

- Mileage
- Driving time

Mileage

- First maintained:
- Maintenance interval:
- Pre-reminder mileage:

Driving time

- Time interval:
- Maintenance date:

Remind switch: ON OFF

Figure 4.6.9_3

4.7 Analysis

Analysis model mainly include vehicle safety driving analysis, vehicle economic driving analysis and fleets
driving data trend three parts.
4.7.1 Safety driving

Enter into: Analysis -> Vehicles -> Safety driving

Default display: Vehicle safety driving analysis at current account, as shown in figure:

![Safety driving analysis](image1)

Check details: Click View details column icon at right side, check details:

![Check details](image2)

4.7.2 Economic driving

Enter into: Analysis -> Vehicles -> Economic driving

Default display: Vehicle economic driving analysis at current account, as shown in figure:

![Economic driving analysis](image3)

Check details: Click View details column icon at right side, check details:
4.7.3 Fleets

Enter into: Analysis -> Fleets:

Default display: Vehicle relative driving data overview (mileage, fuel consumption, alarm, DTCs, maintenance and repairs, etc.) at current account, as shown in figure:

![Figure 4.7.3_1](image1)

![Figure 4.7.2_2](image2)
4.8 Report

4.8.1 Mileage report

Enter into: Reports -> Mileage:

a. Activity report:

Set to check one vehicle mileage situation in a period, as shown in figure:

![Figure 4.8.1_1](image1)

b. Daily Drive report:

Set to check some vehicles daily drive report situation under one enterprise, as shown in figure:

![Figure 4.8.1_2](image2)

4.8.2 Fuel consumption report

Enter into: Reports -> Fuel consumption report:

Set to check some vehicles fuel consumption situation under one enterprise, as shown in figure:
4.8.3 Location report

Enter into: Reports -> Location:

Set to check some vehicles the latest received GPS location informations situation on platform under one enterprise, as shown in figure:

![Figure 4.8.3_1](image)

4.9 Management

4.9.1 Group management

Enter into: Management -> Group management:

Default display: All the enterprises informations including current enterprise, as shown in figure:

![Figure 4.9.1_1](image)

Supported operation: Add, import, edit, delete and export enterprise;

Note: this function only available for fleet operators and fleet enterprises, fleet or driver account role doesn’t have this function.

4.9.2 User management

Enter into: Management -> User management:

Function: Create a new user account for one unit to login platform, as shown in figure:
Supported operation: Add, edit and delete user account, modify password;

- Superior manager can use this icon to shield one user account temporary; The shielded account can not login platform;

Note: if current user has binding relationship with vehicle and device, then need to cancel binding relationship before delete.

### 4.9.3 Driver management

Enter into: Management -> Driver management:

Function: Set up driver under one unit, as shown in figure:

![Figure 4.9.3_1](image)

Supported operation: Add, import, export, edit and delete and modify driver account information;

- Click into driver's individual platform;

- Superior manager can use this icon to shield one driver user account temporary; the shielded account cannot login platform;

Remark: if current driver has binding relationship with vehicle and device, then need to cancel binding relationship before delete.

### 4.9.4 Vehicle management

Enter into: Management -> Vehicle management:

Function: Create vehicle information under one group, as shown in figure:

![Figure 4.9.4_1](image)

Support operations: Add, import, export, edit and delete and modify vehicle information;

- The icon is used for canceling binding relationship between vehicle and one device; after cancelled, there is no data will be uploaded to the vehicle data record unless bind the device to the vehicle again.
The icon is used for Binding one device to the vehicle, user can check the vehicle data on platform and knowing the collected data informations by device only after binding the device to exact vehicle.

PID data query icon, click view data flow informations that current vehicle support to read, as shown in figure:

![Figure 4.9.4_2](image)

Note: Choose required and optional PIDs, total chose PIDs limit to 10, due to the fuel consumption need, user can choose other interested data on Optional column icon. The selected the data upload details can be checked on PIDs list.

**4.9.5 Device management**

**Enter into:** Management -> Device management:

**Function:** Manage devices informations under current account, user devices come from upper enterprises, as shown in figure:

![Figure 4.9.5_1](image)

**Supported operation:** Assign, export, authorize, set, etc;

The icon can set current device basic setting, alarms setting, mobiles setting, as shown in figure:
### Basic Setting

- **Device ID**: IDD-216002Test130111
- **Device type**: OBD-216G
- **Device switch**: ON
- **GPS device**: ON
- **PIPs switch**: ON
- **Mobiles**: ON

#### PIPS Parameter Setting:
- **Collection interval**: 60 seconds (range: 2-8600)
- **Upload packets**: 10 (range: 1-30)

#### GPS Upload Setting:
- **Collection interval**: 120 seconds (range: 1-8600)
- **Upload packets**: 1 (range: 1-30)

- [ ] Apply to all devices

---

### Alarms

- **Speed alarm setting**: 120 Kmph
- **Sudden accel alarm setting**: 0.4 g
- **Sudden decel alarm setting**: 0.6 g
- **Temperature alarm setting**: 98℃
- **Over RPM alarm setting**: 4500 rpm
- **Low-voltage alarm setting**: 10.5 V
- **Parking with engine running setting**: 15 min
- **Quick change line alarm setting**: 0.4 g
- **Sharp turn alarm setting**: 0.5 g
- **Fatigue driving alarm setting**: 4 hour
- **Crash alarm setting**: 1.5 g

- [ ] Enable for the devices with same type

---

Figure 4.9.5.2
1. Click Settings, modify all the alarm threshold value setting, as shown in figure:

![Figure 4.9.5_3](image)

2. Click Setting, set mobile number for receiving alarm message.

4.9.6 Role management

Enter into: Management -> Role management:

Function: After user login system, use system function and data access authority. User can configure access for other subsidiary account according to business need, as shown in figure:
Note: Added role could authorize user account by User management.

4.9.7 Geo-fence management

Enter into: Management -> Geo-fence management:

Function: This function is used for vehicle regional monitoring, providing region drive in/out alarms; as shown in figure:
**Supported operation:** New、Edit、Delete

1: Click New，directly click draw monitoring region on the ma, double click to determine the region, and set the region vehicles,properties and alarm type.

![Set area](image)

**Figure 4.9.7_2**

4.9.8 System Broadcast

**Enter into:** Management -> System broadcast:

**Function:** This function is only for device with a screen-side, the platform dispatch message to screen-side display.

![Message List](image)

**Figure 4.9.8_1**

**Supported operation:** send message、delete message、delete message in bath;

4.9.9 Enterprise Information

**Enter into:** Management -> Enterprise information:

**Function:** This function is used for checking current account enterprise information, as shown in figure;
4.9.10 System log

**Enter into:** Management -> System log:

**Function:** This function can record user’s system operation, it could be used in operation query, as shown in figure:

<table>
<thead>
<tr>
<th>Time</th>
<th>Module</th>
<th>Operator</th>
<th>Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012-01-16 21:40:54</td>
<td>Login/Exit</td>
<td>System</td>
<td>2160</td>
</tr>
<tr>
<td>2012-01-16 20:40:20</td>
<td>Login/Exit</td>
<td>login system</td>
<td>2160</td>
</tr>
<tr>
<td>2012-01-16 20:45:11</td>
<td>Login/Exit</td>
<td>login system</td>
<td>2160</td>
</tr>
<tr>
<td>2012-01-16 19:43:10</td>
<td>Login/Exit</td>
<td>login system</td>
<td>2160</td>
</tr>
</tbody>
</table>

Figure 4.9.10_1