

BEACON™

Vehicle Lot Management System



RFID (Radio Frequency Identification)

GPS (Global Positioning System)

Cellular

The **BEACON INDUSTRIES RFID GPS Inventory Control System** can be configured to fit a wide variety of applications. One exceptionally useful application is known as the Vehicle Lot Management System (“VLMS”). Using truck-mounted or hand-held RFID and GPS devices, the VLMS can connect to a computer inventory database by either cellular phone or Internet Wi-Fi. Each such device is capable of displaying vehicle information and photos of any specific vehicle to ensure effective use of equipment and manpower in the management and control of individual vehicles stored on large scale vehicle lots. The VLMS is capable of inducing, storing, locating, inspecting, and retrieving any single vehicle from a large number of vehicles stored in a lot – even when many of those vehicles are dynamically moved from one location to another on either a random or regular basis.



Vehicle Inventory Management



RFID Label Applied to
Vehicle Windshield



Close Up of RFID Label
(Note RFID device in zoomed portion of label.)

The VLMS provides virtually everything any manager of a vehicle lot needs to maintain an accurate and complete inventory of stored vehicles including critical field information to ensure loader operators can quickly store, relocate, inspect, and retrieve vehicles from practically any size vehicle storage lot.

Vehicle Induction

As a vehicle arrives at the lot, the VLMS produces an RFID label containing the vehicle ID. The RFID label prominently displays the vehicle’s unique stock number. The RFID label is then affixed to the vehicle windshield. In some applications, the VLMS information can even include photographs of the vehicle.

Vehicle Storage

After initial induction, VLMS also can validate the time and date the vehicle enters the property zone. A loader equipped with GPS hardware and an RFID transceiver moves the vehicle to a storage location. Regardless of whether that location was predetermined or randomly selected by the loader operator, the vehicle’s location is captured by the VLMS using GPS coordinates. The VLMS can be used to automatically assign a unique storage location (e.g., Row A-Z, Slot 1-100) to the stored vehicle.

Vehicle Movement

When any stored vehicle must be moved, the onboard VLMS RFID and GPS systems can be used to automatically update the location of any vehicle after the vehicle has been moved. Because the VLMS updates the inventory database to show the moved vehicle in its new location, there is no reason to expend any unnecessary effort to return a vehicle to its previous location. This can be particularly cost effective in large lots where hundreds of vehicles are stored.

Vehicle Inspection

When vehicles are stored on a lot for long periods of time, the vehicle should be periodically inspected. Using the VLMS, vehicles can be flagged for inspection after being stored for a certain amount of time and then automatically direct the loader to each individual vehicle flagged for inspection.

Vehicle Retrieval

When a vehicle must be retrieved from the storage lot, the VLMS directs the loader operator to the correct location of any individual vehicle to be retrieved. Additionally, the VLMS can be used to validate that the correct vehicle has been identified by the loader operator. VLMS also can validate the time and date the vehicle exits the property zone.

DLI 8500

Intel® Celeron processor • 10.4" Indoor/Outdoor Touchscreen
Color Camera • WLAN • WWAN • WPAN • GPS • RFID • Cellular



Mobile Windows-Based
Computer RFID/GPS/Cellular



To be Mounted on
Mobile Equipment



Software Control Panel

The DLI-8500 Vehicle Mount Computer (VMC) can be equipped with a cellular radio and a GPS radio and can run an RFID reader plugged into one of the available ports. It can also run .net applications. The OS choices are Windows 7, XP Pro OS or Tablet PC OS (Vista or 7 downgrade) or Linux Ubuntu OS.

System

- **Casing** - Impact-resistant ABS+PC polymer, IP64 rated, multiple 4ft drops to bare concrete,
- **Processor** - Intel Celeron M ULV 423 1.06GHz,
- **Chipset** - Intel 945GME, L2 Cache: 1MB, FSB: 533Mhz,
- **Display** - 10.4" LCD 400NIT LED Backlit indoor/outdoor readable, 1024 X 768 Resolution, Contrast Ratio: 400:1,
- **Touchscreen** - Resistive (standard or polarized), Industrial rated @ 3 million touches in a single location,
- **Video** - Intel GMA950 Controller, 224MB RAM, 256-bit graphics core running at 400MHz,
- **Audio** - Intel High Definition Audio; dual integrated speakers, 3.5mm microphone headset jack,
- **Memory** - 2GB DDR2 SODIMM 667Mhz,
- **Storage** - **HDD**: 1.8" 60GB or 80GB Shock Mounted,
SSD: 8GB, 16GB, 32GB, Industrial,
- **Operating System** - Vista® Business, XP® Pro, Windows® Embedded Standard, Windows® 7, Linux 2.6 (Ubuntu),
- **Ports** - (2) USB 2.0 Locking Connectors,
- (1) RS232 or (1) VGA Port (optional) - (1) Ethernet, 10/100/1000 - (3) GPIO - (3) Analog to Digital 0~5V,
- all ports IP67 rated w/sealed locking connectors,
- **Keys** - (6) user programmable.

Environmental

- **Temperature** - Operating -40F to +140F (-200C to 600C); -22F0 w/optional screen heater, Storage -70F to 1490F (-220C to 650C),
- **Impact** - Multiple 4ft drops to bare concrete,
- **Vibration** - 5~500Hz 1G PTP, MIL STD. 810F 514.5C-3 Highway truck vibration exposure,
- **Shock** - Operating -20G, (11ms), Non Operating -40G (11ms), Crash -75G (11ms),
- **EMI/EMC** - FCC Class B, CE,
- **Water/Dust** - IP64, Dust - (Protected against dust - limited ingress), Water - (Protected against sprays from all directions - limited ingress).

Physical

- **Dimensions** - H-10.3" (260mm), W-11" (280mm), D-1.90" (48.5mm),
- **Weight** - 5 lbs. (with internal battery) • **Warranty** - Standard One Year. Available No-Fault Service Coverage,
- **GPS** - SiRFstarIII chipset with Internal Geohelix Passive Antenna (External Antenna required),
- **Camera** - Color 2 Mega Pixel, Autofocus, UVC Compliant,
- **WiFi** - 802.11a/b/g/n WiFi Radio (Cisco® CCX4), (optional),
- **WWAN** - Integrated Cellular Card (optional) incl. support for external antenna, Cellular carriers included Verizon®, AT&T/Cingular®, T-Mobile®,
- **Bluetooth** - Class 2 radio (optional),
- **Voice Communications** - VoIP, Integrated microphone,
- **Power** - Power Filtering DC Converter: 10~60V Input, Integrated Backup 1950mAh Lithium Ion Battery (1hr of usage @ level 5 bright ness), AC Adapter, 19VDC 100Watt 110/220 VAC 50/60 Hz Input (Multi Country Line Cords Available).

Accessories:

- IP64 Rugged USB Keyboard, Cigarette Lighter Power Adapter, Quick Release Mount, Handle.



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