



## COMPONENTS:

### **Terminal/Control Unit:**

Support for up to 16 external wireless sensors (ambient temperature/humidity or both)  
Support data collection from option RF Select pulp recorders

Real time clock –automatically synchronized with server

Real-time operation system

Automatic over-air firmware updates

#### Temperature & Humidity Data Collection

Data checked against pre-set ranges and generate instant alert to driver/server  
Based on up to 16 sensors & RF pulp recorder

#### GPS Data

Automatically detects trailer departure/arrival based on geo-fencing algorithms.

#### Data Storage

Reliable, non-volatile Flash memory data store 1 MByte

#### Physical Characteristics

Low profile terminal box-approx. 5" X 7" X 1.4"

Protective Outer case-approx. 10" X 8" X 1.75"

Scratch-resistant, non-porous, waterproof material  
Waterproof and protected connectors.

#### Environmental Specifications:

Operating Temperature Range: -22 F to + 140 F (-30C to +60C)

Operating Humidity Rnge; 0 to 95%

#### Power

External: Standard operation on refrigeration unit battery

Auto Select: 12.2-18.5 V DC for 12 V system

24.4-32 V DC for 24V system

Power consumption: Active operation: <350mW

Idle operation < 220 mW

Sleep mode average < 10mW

Max. avg –battery charging < 9mW

Back-up rechargeable battery pack included-auto charge & control of battery

Battery life -72 hours tracking mode, Idle mode-up to 240 hours

### **ANTENNA:**

State of the art, certified communication module

Approx. 5" x 5" X 6"

Scratch-resistant, UV-resistant, Waterproof non-porous material

Secure enclosed connections

Sturdy cables/wires/weather protected

#### Communications:

4-band GSM Network (A T & T, T –mobile or other)

Data sent over GPRS network

Requests from server using SMS

Typical communication latency .5-1 minutes

Maximum Communication latency-4.5 minutes (GPS data acquire)

Unlicensed ISM Industrial/Scientific/Medical band:

915 MHz (USA, Canada, etc)

968 MHz (Europe)

Reliable communication with Drivers RF Handheld device & all wireless sensors

Standard mini USB port for configuration and firmware updates.

#### **Wireless sensors:**

Standard IMAT set includes 5 ambient sensors

1 ambient/humidity dual sensor

1 ambient/door event sensor

Sensor type: thermistor

Additional sensors or combinations available

Temperature accuracy +/- 1 deg. F

Temperature resolution .1 F

Temperature range -33 F to + 127 F ( -34 C to +54 C)

Relative humidity absolute accuracy +/- 7%

Relative humidity resolution 1%

Relative humidity measure range 0 to 100%

#### Physical characteristics:

Small & low profile: 2.7" X 4.14" X .83"

Scratch-resistant, non-porous, waterproof material

Wireless ( except for door sensor/contact)

Recessed into trailer wall/insulated or surface mounted brackets.

#### **Power:**

Lithium battery for long life, 3.6V 3200 mAh

12-24 month operation (less in sub-zero)

Automatic message if low battery to server/with location

User accessible battery for easy replacement (size and specs. Label)

#### **Communication:**

Unlicensed ISM Industrial/Scientific/Medical band:

915 MHz (USA, Canada, etc)

868 MHz ( Europe)

Reliable communication with terminal 24 hr/day.

#### **Drivers RF Handheld**

##### **Functionality:**

Full color TFT 2.4" LCD with Backlight, high contrast and brightness.

Loud beeper for alerts

Protective case

Battery charger (12V) included

Provides purchase order (single trip) and appoint time on LCD (if available)

Update at any time to see most current data in 7 or more locations,zones, etc.

#### Power:

Operates on battery or external power from USB port –12V power adapter

Operation range: -4 F to 140 F ( -20 C to +60C)

Operation humidity range: 0-to 95%

Rechargeable Lithium battery 3.6V 1200 mAh

Automatic charging and control of battery

Typical operation on battery 18 Hours (TFT on)

Up to 50 days in idle mode on battery (TFT off)

#### Communication

Unlicensed ISM Industrial/Scientific/Medical band:

915 MHz (USA, Canada, etc)

868 MHz ( Europe)

Reliable communication with terminal 24 hr/day, max 300' distance –line of sight

Standard mini-USB port for charging and firmware updates\

#### Tracking Internet server:

Functional specifications:

Secure & encrypted-only available to authorized personnel as provided by customer management administrator.

Full System redundancy

Easy and fast access to all trip information

Search functions-pending, current and archived data

Sorting and filtering for analysis and review of all facets of trip data

Flexible notification schema

Flexible permission scheme

Notification of parties by email

Real-time mapping

Automatic calculation of ETA based on geo-routing & current GPS position

50 mile advance notice of arrival at destination via Email for pre-clearing

Data storage:

Reliable Data storage in secure server database system, backed up daily

Data is never altered or removed

#### Network:

Reliable internet connection

SSL 128-bit protection of data

This data sheet information is provided as a guide, changes may be made technically and functionally without notice.