

@Road iLM® 3100-W Series



Give your Field Force the Wi-Fi Advantage

For years the @Road GeoManager_{SM} service has provided organizations with the ability to immediately locate field workers on a dispatcher's online map, communicate with them in real time about route changes, and automatically generate reports that give valuable insight into daily operations.

Now the @Road *i*LM[®] 3100-W Series (Internet Location Manager 3100—Wi-Fi) in-vehicle hardware system adds 802.11 Wi-Fi access-point capability to @Road GeoManager. This enables the mobile worker to use a Wi-Fi equipped mobile computer to instantly access corporate applications through the *i*LM's wireless data connection.

Using the @Road *i*LM 3100-W Series, field technicians can receive updated information from their company's Customer Relationship Management (CRM) system prior to a customer visit, or access the company's Enterprise Resource Planning (ERP) system to place a customer order. The Wi-Fi connection also enables remote workers to easily update ordering and inventory records, or complete other necessary documentation, without having to return to the office.

Connect Securely and with Control

With advanced built-in security capabilities, the @Road *i*LM 3100-W Series helps you keep your corporate data secure while enabling field workers to access back-office applications from their vehicles or customer sites. It provides flexible wide-area network access, but also enables routing and configuration security protocols, as well as firewall capabilities, to enable policy-based routing. It allows you to control

access to applications and the web for each field worker on an individual basis.

Enable High-Speed, Cost-Effective Connectivity

The @Road *i*LM 3100-W Series incorporates high-speed EvDO or EDGE wireless data communications, thereby minimizing data upload and download times. With this capability, workers' mobile computers need only have built-in Wi-Fi capability—not extra-cost wireless data setups—since Wi-Fi links them to the *i*LM's wireless data connection. The @Road units are designed to be upgradeable as faster wireless data technologies emerge over time.

@Road iLM 3100-W Series

- Provides field-location services, integrated Wi-Fi and high-speed wireless data connections
- Enables field workers to access CRM and ERP data, as well as other corporate applications
- Allows completion of ordering, inventory and other forms from remote locations
- Enables advanced security capabilities so you can protect your corporate data

@Road iLM 3100-W Series Features

Technology

- Enables use of GPS satellite location features through @Road GeoManager
- Enables 802.11 Wi-Fi access to wireless data connections for mobile computers
- Supports access for multiple simultaneous Wi-Fi users
- Provides Wi-Fi connectivity up to 300 feet from within a structure, and up to 800 feet with outdoor line of sight
- Designed to withstand mobile environment use, including extended temperature, shock and vibration
- Uses auto channel selection to find the clearest available data connection
- Allows remote access by administrator for status check and configuration

Enterprise Uses

- Extends @Road field worker communication capabilities for access to enterprise data
- Enables application access for easy documentation of job time, activity and materials
- Allows field workers to close work orders and job tickets at the point of activity
- Provides service technicians with remote access to customer contact or status information
- Enables remote updating of inventory records or parts-ordering systems
- Allows field workers to place orders in corporate ERP or transaction systems from a mobile computer or hand-held device
- Provides access to online technical manuals and information

Security

- PAP/CHAP Authentication
- Dynamic keys

Scalability

- Upgradeable modem module capability to support future wireless infrastructures
- Multiple I/O ports support added peripherals

Product Specifications

Physical Unit

- Dimensions: 7.3"x 6.2" x 1.65" (185 mm x 157 mm x 42 mm) Weight: 23.5 ounces (666 grams)
- CPU: MIPS3100 equivalent, 100 MHz
- Operating System: Linux 2.4
- Memory: ROM 8 MB/RAM 16 MB

Environmental Specifications

- Operating temperature: -4° to 158° F (-20° to 60° C)
- Storage temperature: -40° to 185° F (-40° to 85° C)
- Humidity: 0% to 95% non-condensing
- Vibration, Shock and Drop: Per ASTM D-3580, ASTM D-4728, ASTM D-5176, SAE J1455 Aug94
- ESD: 4kV in Contact and 8kV in air
- Input Voltage: 8 to 24V DC (transients up to 70V DC)
- Wireless Modem Modules: EDGE and EvDO
- GPS Module: uBlox TIM-LF

External I/O Connectors

- Connectors for WLAN, GPS, wireless cellular and diversity antennas
- RJ-45 10 Base-T Ethernet connector
- RS-232 DB-9 serial port connector
- Two RJ-45 8 pin serial port connectors
- Two USB connectors (one host and one client interface)
- 4 pin latching Molex power interface connector

LED Indicators

- GPS: Solid when tracking is locked, blinking when searching, off when sleeping
- WAN: Off when the modem is in sleep mode, blinking when acquiring an IP address or solid when connected to a wireless cellular infrastructure
- WLAN: Off when Ethernet and WLAN are disabled, on when either are enabled
- Status: Slow blink on and off when operating, red on error or off when power off

WLAN Specifications

- Wi-Fi compliant 2.4 GHz direct spread spectrum 802.11b access point
- Wireless Data Rates: 11Mbps, 5Mbps, 2Mbps and 1Mbps auto fallback
- Wireless Channels: 11 (USA), auto channel select

Protocol Support

- Protocols: IP, ARP, TCP, UDP, PPP
- Clients: DHCP, DNS, HTTP, TFTP
- Servers: DHCP, HTTP, HTTPS (128 bit), SSH

Wireless Security

- 64 and 128 bit WEP
- MAC filtering 802.1x (EAP-TLS, EAP-PEAP) Wireless AP mode, WDS
- Routing: NAT, RNAT
- Firewall: SPI, packet filter
 - Password protected web management, HTTP or 128 bit HTTPS



About @Road

@Road, Inc. is a leading global provider of solutions designed to automate the management of mobile resources and to optimize the service delivery process for customers across a variety of industries. @Road delivers Mobile Resource Management (MRM) solutions in three key areas: Field Force Management, Field Service Management and Field Asset Management.

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