



# Tallysman Wireless Inc.

## **MPT1327**

# **Data Presentation**



# Tallysman Wireless Inc.

- Based in Ottawa, Canada
- A spin-off of Wi-Sys Communications, after it was acquired by PCTEL.
- We build our products in our facilities, using globally sourced components to minimize our cost base.



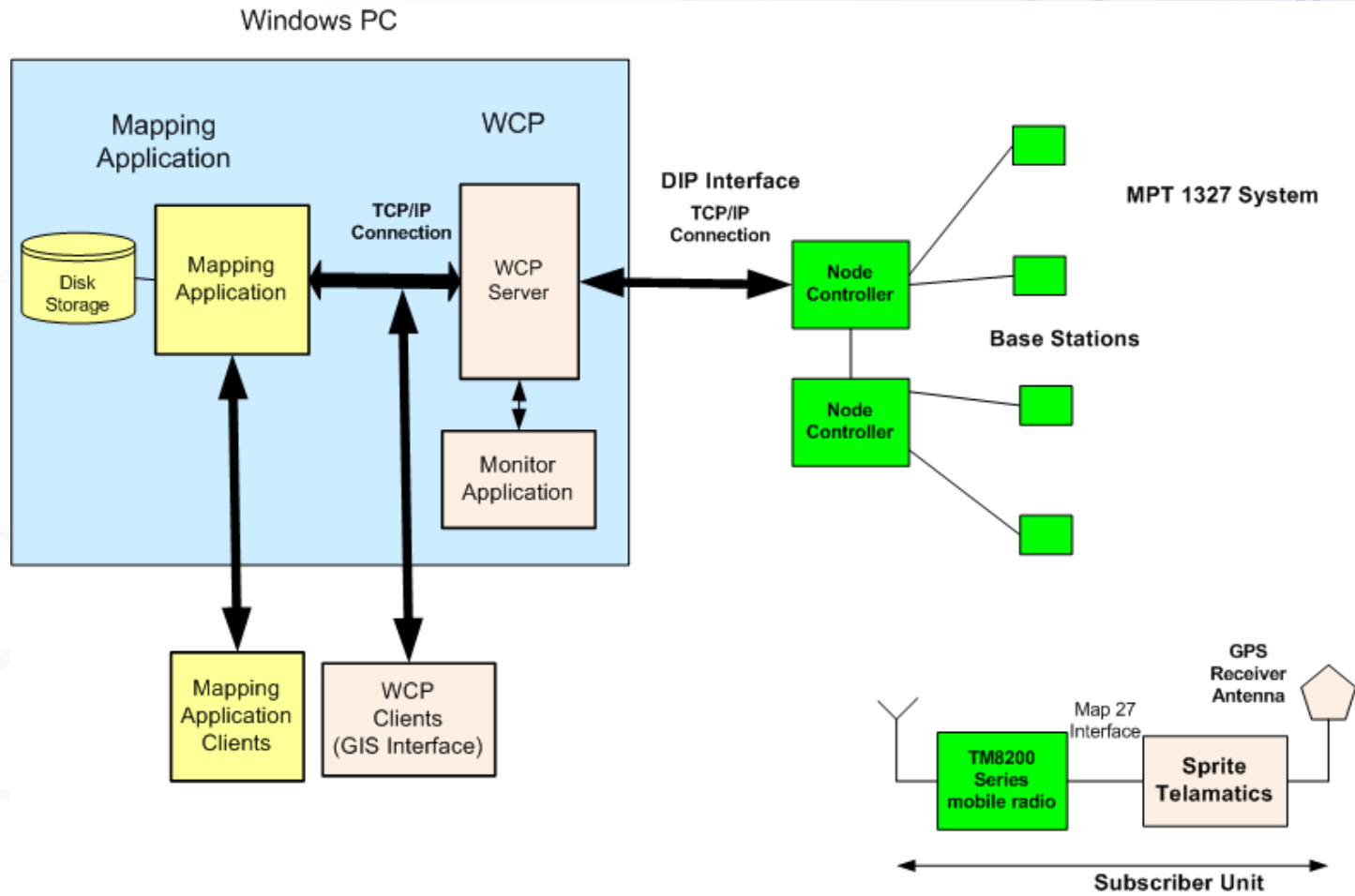
# Tallysman Wireless Inc

- Providing an extensive range of in-vehicle intelligent Telematics functions, for digital 2-way radio system including Tait mobile radios.
- We are a MPT1327 Application Developer
- Providing End-to-End Telematics Solutions for Fleet Tracking Application.



# System Configuration

- Comprised of :
  - Wireless Communications Portal (WCP) – manages the interface to the MPT1327 radio network, and provides WCP Client connections to 3rd party applications e.g. GIS systems
  - TW201 In-vehicle equipment, inc GPS antenna, power & radio cable
  - Optional Mapping application, includes database for report generation and vehicle route replay



# System Configuration



## Wireless Communications Portal (WCP)

- Windows PC with Internet connection
- WCP Service provides TCP/IP connection to Tait Node controller for sending and receiving data messages to in-vehicle devices (e.g. TW201), i.e. GPS, status and text messages
- Runs as a Windows™ service
- Optionally connects to Mapping application



## **Wireless Communications Portal (WCP)**

- Accepts 3<sup>rd</sup> party WCP Client connections e.g. (GIS systems)
- Simple protocol Interface to WCP Client



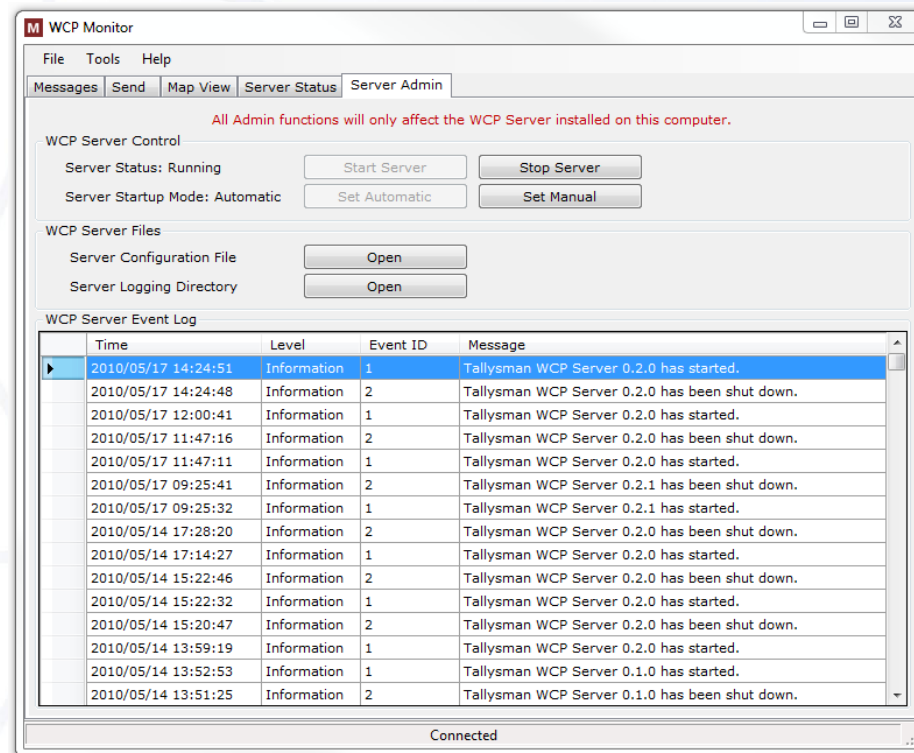
# Wireless Communications Portal (WCP)

- Monitor Application
  - Connects as a client to WCP server
  - Maintains daily text file of all communications.
  - Provides a user interface for viewing of logs, communication statistics, and system testing



# WCP Monitor

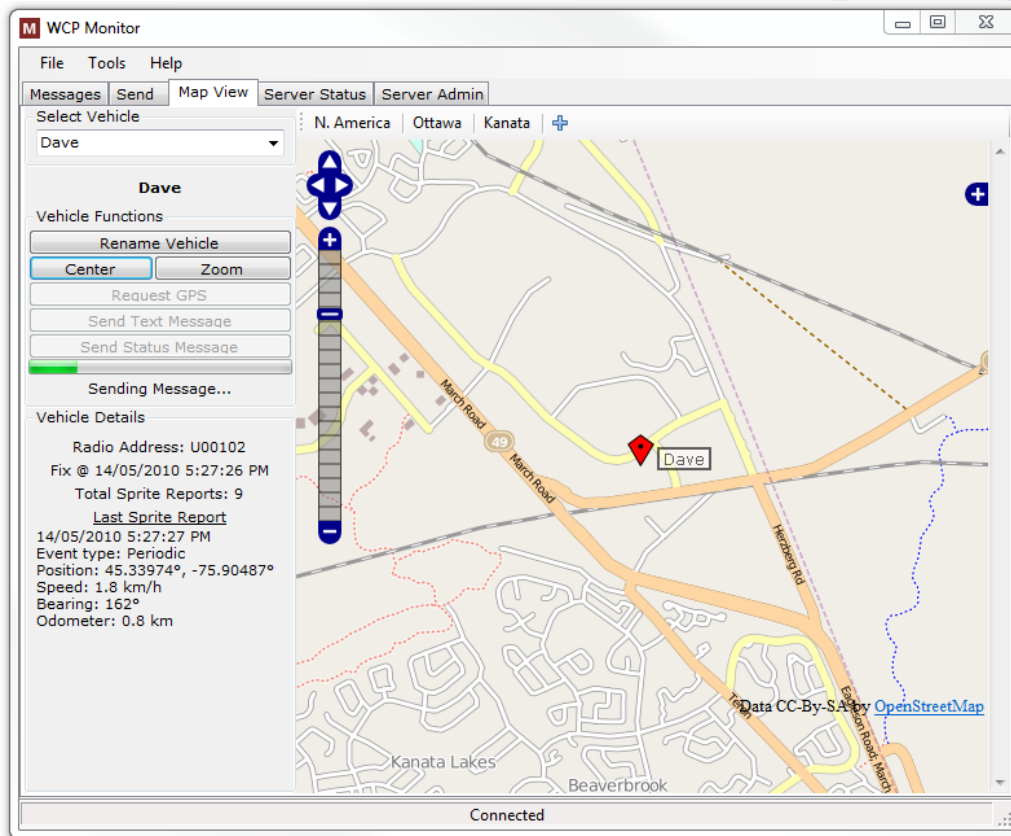
- Diagnostic Tool
- Displays all data communications messages





# WCP Monitor

- Real time Map Display for Test purposes only



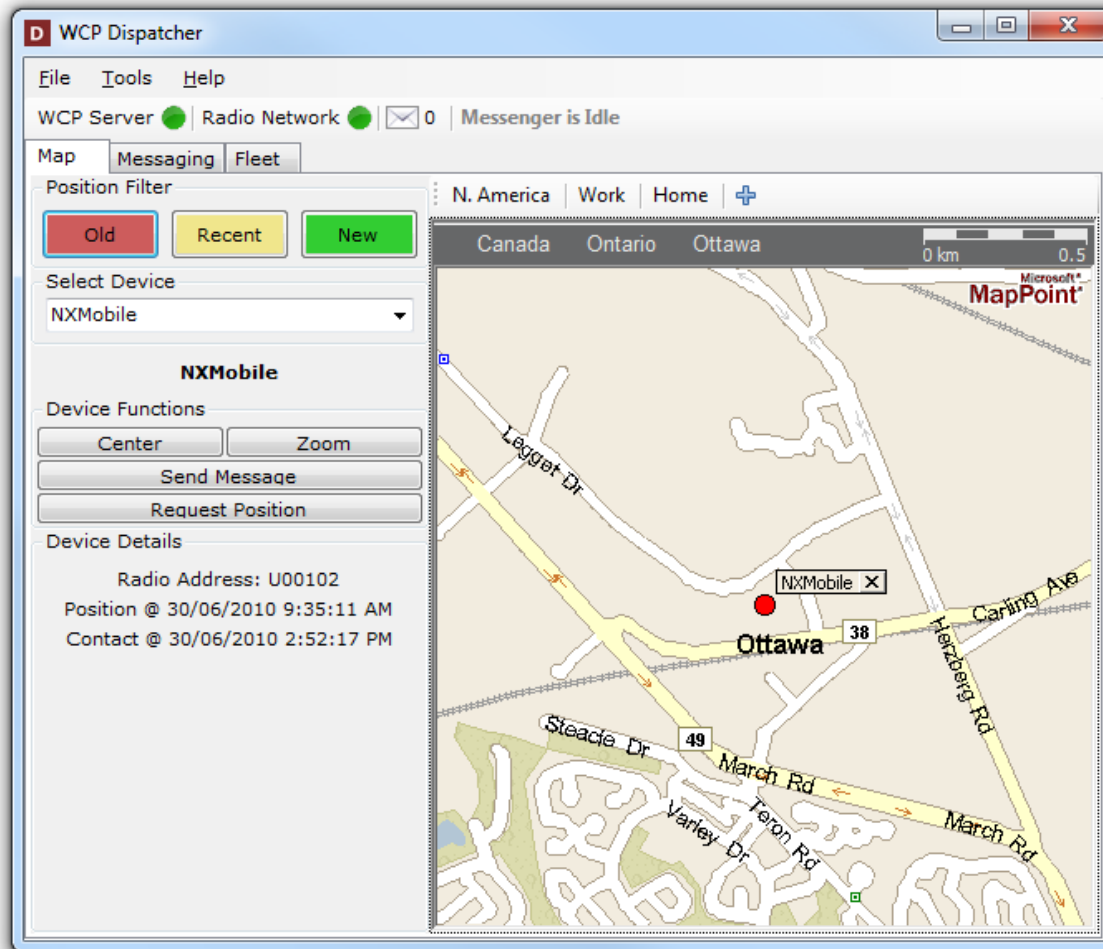


# Wireless Communications Portal (WCP)

- WCP Dispatcher Application
  - Connects as a client to WCP server
  - Provide real time position information of fleet
  - Text messaging to/from mobile units ( automatic retries)
  - Displays list of all vehicles and last contact.



# WCP Dispatcher – Map display





# WCP Dispatcher - Messaging

WCP Dispatcher

File Tools Help

WCP Server ● Radio Network ● 0 Failed: Could not reach radio

Map Messaging Fleet

Message History

	ID	Device	Message	Completed	State	Clear
	5	NXMobile	test message 4	2:03:01 PM	Sent	Clear
	4	Truck1	test message 3	2:02:22 PM	Failed, Could not reach radio	Clear
	3	NXMobile	test message 2	2:01:45 PM	Sent	Clear
▶	1	NXMobile	hello	1:57:02 PM	Sent	Clear

Outgoing Messages

	ID	Device	Message	Sending At	State	Prompt	Cancel
▶	6	NXMobile	test message 5	2:33:32 PM	Retrying Later	Prompt	Cancel

New Message



# WCP Dispatcher – Fleet List

The screenshot shows the WCP Dispatcher software interface. At the top, there is a menu bar with "File", "Tools", and "Help". Below the menu bar, there are status indicators: "WCP Server" with a green dot, "Radio Network" with a green dot, a mail icon with "0", and "Messenger is Idle". There are three tabs: "Map", "Messaging", and "Fleet", with "Fleet" being the active tab. The main area contains a table with the following data:

	Name	Address	Last Contact	Last GPS Position	Message	Map
	Harold	U00103			Message	Map
	<b>NXMobile</b>	<b>U00102</b>	<b>2010-07-05 13:57:02</b>	<b>2010-06-30 09:35:11</b>	Message	Map
	Truck1	U00110			Message	Map
	Truck2	U00111			Message	Map
▶	Truck3	U00112			Message	Map

Below the table is a large, empty grey rectangular area, likely reserved for a map or additional data.



## SPRITE™ TW201 Hardware

- Telematics hardware for MPT1327 Systems using Tait Mobile radios



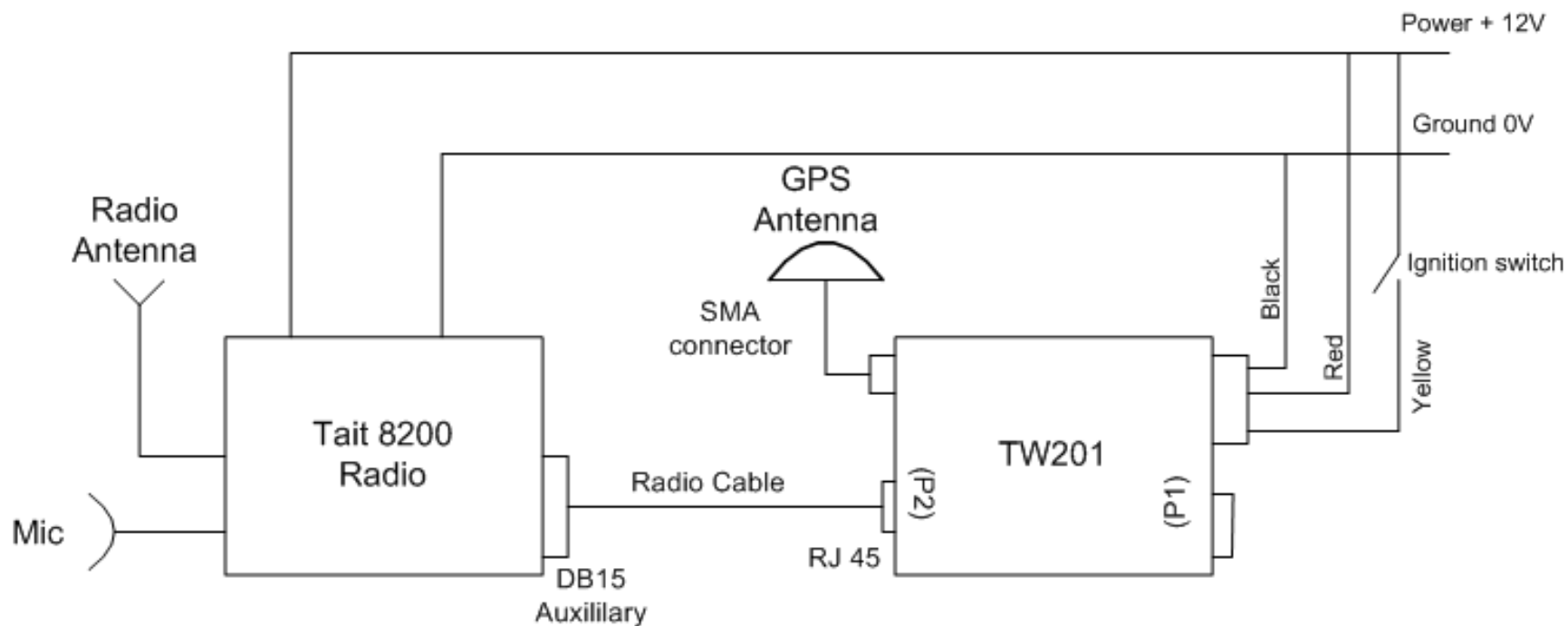
Size: 3"L \* 2.7" W \* 0.65"H



# SPRITE™ TW201 Hardware

- Simple installation in-vehicle, inc GPS antenna (fixed or magnetic mount).
- Parameter configuration using Tallysman Windows application. Periodic reports configurable over the air
- MAP27 Interface to Tait radio, through DB 15 auxiliary Connector
- RS232 Connectivity to peripheral devices e.g. Mobile Data terminal, PC , etc

# In-Vehicle Configuration





# TW201 Telematics Features

- Periodic Time , “Stopped” & “Moving” e.g. 5 mins & 30 mins ( Over air configuration)
- Distance reports
- GPS Position reports with PTT ID
- Ignition ON and OFF reports
- Radio I/O reports on status change



# SPRITE™ Telematics Features

- Speed alarm
- Waypoint entry/exit reports ( e.g. leaving & returning to depot)
- GPS Odometer
- Engine Idle time ( defined as: Ignition ON and stopped)



## Data Communications

- Data is sent as Short Data Messages (SDM) on control channel
- Event driven reporting, polling NOT required
- If voice call is in progress GPS updates are delayed
- No change in radio firmware is required



## Data Communications

- Tait Radio Communications recommend limiting control channel to one update every 2 seconds.
- Thus each signaling channel will support 1800 updates/hour.
- Assume max voice traffic loading is 200 calls/hour/site



## Data Communications

- Data traffic supported on each control channel is (1800-200) 1600/hour
- E.G. 100 vehicles “Moving” can be configured to report 16 times/hour or approx every 4 minutes on a single signalling channel
- Note: STOPPED vehicles can be configured to report less frequently e.g. every 30 minutes.



# Mapping Application (optional)

Performance based dashboard provides you with a quick view of system status in an easy to understand format

Browser-based, Web-enabled solution is easy to use and easy to support and upgrade

Pinpoint vehicle locations on integrated digital maps

The screenshot displays the VEO mapping application interface, which includes several key components:

- Performance Dashboard:** A top-level overview showing system status with a pie chart and a table of metrics for different categories like Garage, School, Stop, Student, Bus, and Unhatched.
- Vehicle Events:** A central table listing events with columns for Event Type, Actual Match, Actual Arrive, Actual Depart, Planned Arrival, and Event Name. It shows a route starting from a garage, through a school, and ending at a destination.
- Map:** A digital map showing the vehicle's current location and route. A yellow circle highlights a specific vehicle location on the map.
- Tracking Vehicle:** A detailed view of a specific vehicle (2827) showing its event history and location data.
- Rider Info:** A dialog box providing details about the rider, including name, trip name, and route.



## Mapping Application (optional)

- Vehicle positions and status is displayed in real-time on a map
- Position information and messages stored in a database
- Status and Text messaging to and from radio
- Supports multiple client connections



## Mapping Application (optional)

- Replay of vehicle records based on unit ID and time period
- Reports and replay of data



## Mapping Application (optional)

- Radio Status Messaging.
  - Status reports can be configured in the radio e.g. to indicate, start an end of shift etc,
- Emergency report from vehicle
  - Signalled by status button on radio
  - Mapping Application sounds an alert