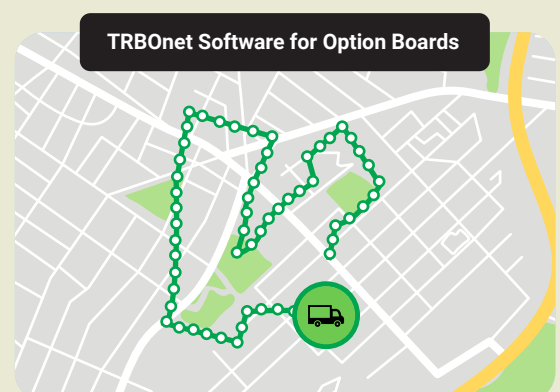# TRBOnet
Dispatch Systems

OPTION BOARD SOFTWARE

Some MOTOTRBO radios have a slot for an option board. It is an add-on designed to support third party applications that significantly extend the functionality of the regular firmware. Depending on the radio model, you can use either the TRBOnet Option Board (TOB) or the Generic Option Board (GOB) by Motorola. TRBOnet Option Board Software (OB Software) enables the option board to gain access to location data, voice calls, the radio's accelerometer etc., which unlocks a few unique features. The software pre-processes this information and can raise a variety of alerts if predefined conditions are met. The built-in memory collects specific information and sends it to TRBOnet when required. The licensed features of the software include Location Tracking, Safety and Voice Recording.

ADVANCED LOCATION TRACKING

OB Software utilizes a Store and Forward technique in which collected location information is kept on the option board and sent to TRBOnet later. That allows the radio unit to store location updates every few seconds, providing a much more detailed historical route, even when the radio goes out of the coverage range. The software compresses location data so each data package contains up to 60 coordinates. This package is then sent to TRBOnet on schedule if the channel is free. You can also choose not to set a schedule and request GPS data manually when you need it, via a radio channel or Wi-Fi.

You can define how frequently the software should record the radio's location. To optimize the storage space on the option board, the software ignores useless location data, for example, when the vehicle stands still or moves on a straight road. At the same time, if it changes its direction and goes around a curve, the software will automatically record its location more frequently. This allows TRBOnet to show the exact route taken by the radio user. This gives a much more detailed location history than you get from regular location updates with a DMR radio.

Traditional DMR Technology

TRBOnet Software for Option Boards

KEY FEATURES

Dynamic Channel Selection
[requires Location Tracking feature]

OB Sofware can automatically select a predefined channel based on the radio's location. The location can be a geofence region or proximity to an iBeacon with a specific ID or ID range. The feature can be beneficial to roaming radio users who can have their radios pick the correct channel when they enter the coverage area of another radio system. You may also want to have the selected channel 'locked' by the option board: if the radio user tries to change it manually, the radio will change it back after a few seconds.

Radio Allocation
[requires Location Tracking feature]

The radio user can use a dedicated iBeacon-based transmitter as a security token that sends authentication information via Bluetooth to the radio, and then to the dispatcher console via a radio channel. After successful authentication, the user's name will appear in the dispatcher console next to the radio ID. The token must be within range of the radio all the time the radio is in use. There are a variety of options to customize this feature to your needs. For instance, the option board can 'lock' the radio if it is taken out of range of the iBeacon. Radio Allocation enables the dispatcher to keep track of radios checked out to users. It also allows the system owner to prevent or reduce thefts and losses.

Requirements:

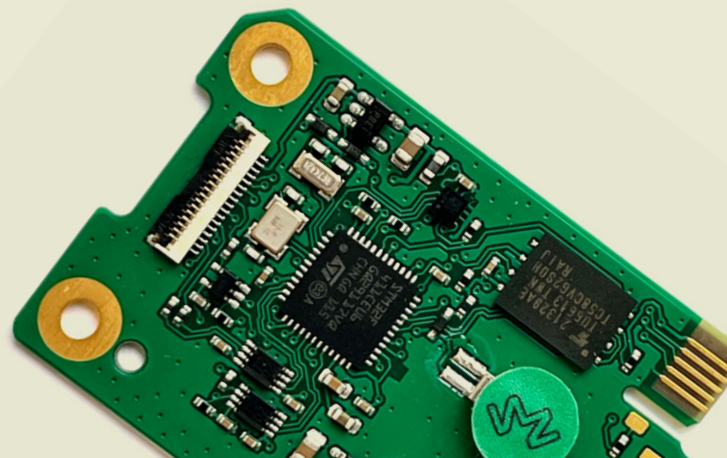TRBOnet 5.5 or newer, a Bluetooth-capable DP/DM4000 or R7 with an option board.

Data Transfer via Wi-Fi

If the radio has an activated Wi-Fi module, the OB Software can upload location data to TRBOnet using a predefined Wi-Fi network. The option board can automatically switch to this network and use it to report its current location and send alerts to TRBOnet, which decreases radio channel loading.

Other Features

• iBeacon-based and GNSS tracking

• Frequent location updates

• Fast iBeacon detection

• Instant geofence alerts, configurable per radio

• Internal memory can store up to 500,000 coordinates (~3 months*) for GOB and 16mln. coordinates (~8 years*) for TOB

• Remaining battery life (IMPRES batteries)

* Estimated time to fill up the memory with location updates stored every 15 seconds 24/7

VOICE RECORDING

Voice Recording allows all incoming and outgoing voice calls initiated by the radio user to be recorded on the option board. With the storage capacity of 256Mb allocated for audio files on the TOB, you can have up to 190-200 hours of continuous voice recording.

Motorola's GOBs are also capable of storing voice recordings, but they are limited to 8Mb, or up to 5-6 hours of continuous recording. Stored recordings can be retrieved using our Swift CPS software (recommended), via radio or Wi-Fi channel. The radio must work in digital mode. Supported audio format is AMBE.
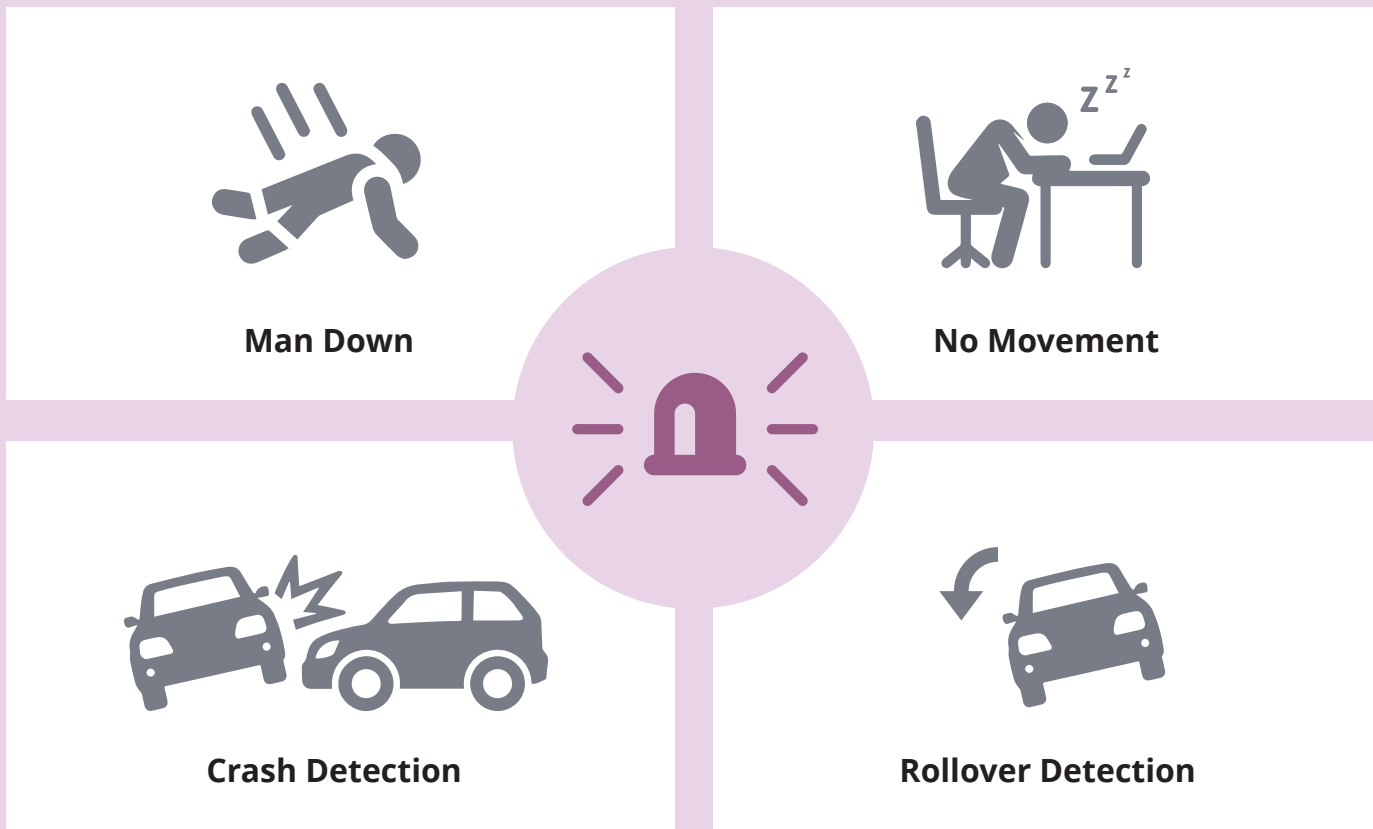
ALARM HANDLING

This built-in module allows you to create special rules that determine what your radio should do if one or more conditions are met. For example, if the radio has entered a restricted area, it can make an alert tone, display a warning message and send a distress signal to the dispatcher. Swift CPS offers high flexibility in creating complex rules and multi-step actions.

You can define scenarios, sets of actions that can be started within any rule for custom event handling. It is also possible to loop a sequence of actions. As an example, it can be used for a periodic check of the radio's orientation after a rule has been triggered.

PERSONAL SAFETY

The OB Software includes the most popular personal safety features. The software analyzes data from the radio's orientation and its acceleration. If the parameters exceed the predefined user programmable values, the software will raise an alarm. All settings are configurable per device and can be adapted to the customer's unique needs.

Man Down

No Movement

Crash Detection

Rollover Detection

Compatibility

	TRBOnet Software for Option Boards	TRBOnet Option Board	Generic Option Board
Memory capacity, MB		512	8
Radio Model EMEA: DP4000(e), DM4000(e) NAR: XPR 5000, XPR 7000 LACR: DGM 5000, DGM 8000 APAC: XIR M8600(i), XIR P8600(i)	⊘	⊘	⊘
R7	⊘	⊗	⊘

Sales & Support

For Sales & Support please contact your local TRBOnet dealer or visit www.trbonet.com for a complete list of dealers in your region.

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