Cohda Wireless
A DANLAW COMPANY

V2X-Locate

Breakthrough positioning software with <1m accuracy 95% of the time.

Accurate vehicle positioning is vital for safe and reliable operation of CAV and V2X applications in all operational scenarios. Typically, GNSS positioning performance degrades in areas such as urban canyons, tunnels, parking garages, and any other compromised sky views, resulting in unpredictability in determination of vehicle position.

Solution: V2X-Locate

In V2X deployments, vehicles are equipped with On-Board Units (OBU), while infrastructure is supported by installation of Road-Side Units (RSU). These RSU's generally broadcasts their position information, thus the location of these RSU's is well known to any vehicle which is within communication range. V2X Locate uses ranging measurements to these fixed RSUs to enable enhanced positioning accuracy.

The ranges from spatially separated RSUs are fed into Cohda's enhanced V2X-Locate positioning engine to accurately position the vehicle. Through the advanced processing capabilities of Cohda's software designed radio the V2X-Locate solution is able to calculate a true line-of-sight path regardless of the existence of multipath signals.

Cohda's proprietary positioning engine determines the true line-of-sight path in the OBU allowing the vehicle to know its position with accuracy <1m 95% of the time.

Cohda Wireless is a global leader in the development of Connected Vehicles and Connected Autonomous Vehicle software with proven applications for Smart City, Mining and other environments.

Cohda Wireless' V2X technology is proven with inclusion in the first two production vehicles giving Cohda Wireless practical experience in bringing automotive ITS solutions to industry.

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V2X-Locate

MK6 OBU & RSU

The utility of V2X-Locate is particularly evident in GNSS challenged locations. Urban areas experience the majority of traffic congestion, and are prone to poor GNSS performance due to “Urban Canyons” caused by large buildings.

Example:
New York, USA. V2X RSU infrastructure was installed along a test section of 6th Ave. A vehicle equipped with both V2X-Locate and GNSS solutions driven in a straight line down the third lane.

Results:
- GNSS performance was significantly challenged
- Cohda’s V2X-Locate positioning system with submeter accuracy, was over 275% more accurate than comparable GNSS solution.

The V2X-Locate solution is not intended to replace GNSS solutions, but instead compliments and integrates this technology. Thereby creating a solution that not only operates in ideal GNSS environments, but also GNSS challenged environments to enable an integrated platform capable of operating in all V2X and CAV operational scenarios.

V2X-Locate EVK Specs

Part number
CWP-V2XLK-MK05-WW00101

Standard Conformance
IEEE 802.11 - 2012
IEEE 1609 -2016
ETSI support

Expected performance*
<1m 95% of the time

Components
4x RSU Kit
1x OBU kit
V2X Locate software (V2X Locate viewer)

Manual and datasheet available via download at support.cohdawireless.com

*based on recommended setup

More details can be found @ V2X-Locate - Cohda Wireless

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