



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.

V2X-Locate

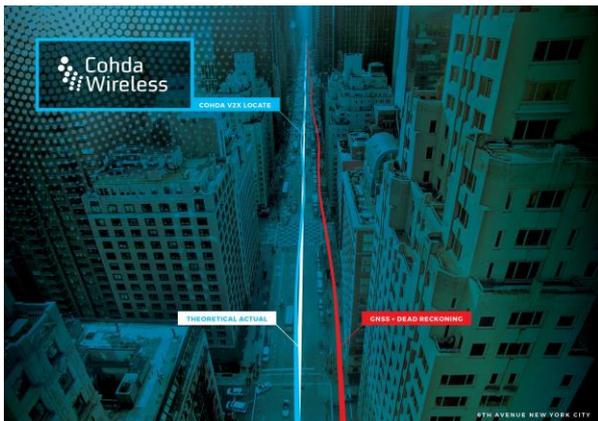
The utility of V2X-Locate is particularly evident in GNSS challenged locations. Urban areas experience the majority of traffic congestion, and are prone to poor GNSS performance due to “Urban Canyons” caused by large buildings.

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

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

Manual and datasheet available via [download](#) at support.cohdawireless.com

*based on recommended deployment set-up

V2X-Locate Whitepaper link: [LINK](#)

Cohda Wireless Pty Ltd
 27 Greenhill Road
 Wayville SA 5034
 Australia
 P +61 8 7099 5500
inquiry@cohdawireless.com

Cohda Wireless Europe GmbH
 P +49 89 208 026548
inquiry.eu@cohdawireless.com

Cohda Wireless America LLC
 P +1 317 818 5595
inquiry.na@cohdawireless.com

Cohda Wireless China
 P +61 8 7099 5500
inquiry.ch@cohdawireless.com

Beijing BOCON Automation Tech Co Ltd (China)
 P +81 10 5166 3110
inquiry@bocon.com.cn

Hancom MDS Inc. (Republic of Korea)
 P +82 31 627 3000
inquiry.kr@cohdawireless.com

Nexty Electronics (Japan)
 P +81 3 5462 9724
inquiry.jp@cohdawireless.com