

NXP UWB SOLUTIONS

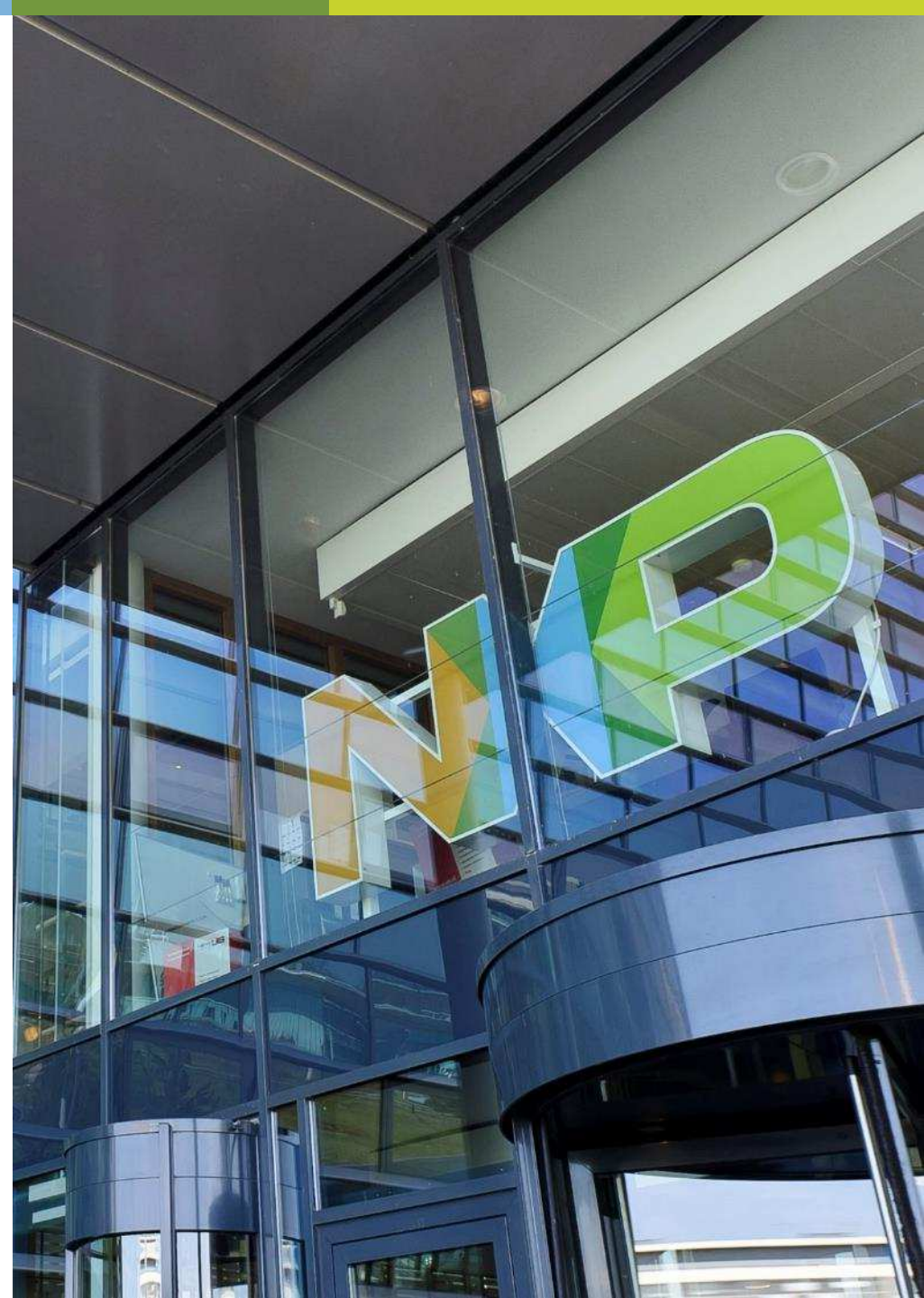
Hongxu Luo
FEBRUARY 2021



SECURE CONNECTIONS
FOR A SMARTER WORLD

PUBLIC

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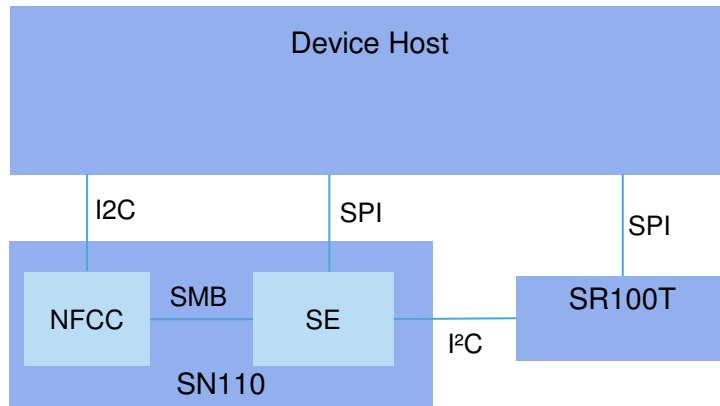
NXP TRIMENSION

NXP’s Trimension™ family captures one of the world’s most comprehensive secure UWB portfolio, spanning best-in-class security, automotive and mobile architectures for real-time, precise, localization capabilities across market applications.

Trimension™						
IoT UWB			Mobile UWB	Auto UWB		
NEW Trimension SR150		NEW Trimension SR040	Trimension SR100T	Trimension NCJ29D5B/C		
<ul style="list-style-type: none">• Dual-RX for AoA functionality• 3D AoA possible• Connected to EdgeLock SE for Secure Ranging Use Cases• RTOS and Linux SW Solution for IoT integration• In accordance with FiRa• Arm® Cortex®-based		<ul style="list-style-type: none">• Specialized part for battery-operated use cases• On-chip prohran memory, for download-free booting• Optimized low-power modes• Integrated Tx/Rx switch• Arm® Cortex®-based	<ul style="list-style-type: none">• Connected to SE SN100 Family for Secure Ranging Use Cases• Android SW Solution for Mobile Integration	<ul style="list-style-type: none">• Interoperability granted for smart car access• Highest localization resolution• Lowest system cost• Integrated power management• High band operation from 6.0-8.5 GHz• Arm® Cortex®-based• On-chip support for a wide range of cryptographic operations		

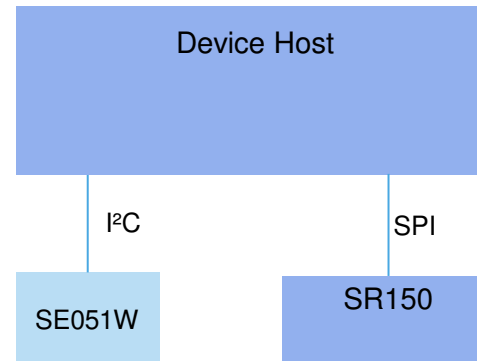
All solutions are IEEE 802.15.4 forward and backward compatible.

UWB PLATFORM VARIANTS (NXP ONE-STOP-SHOP)



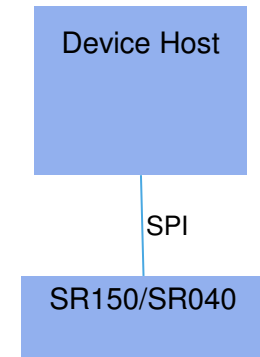
Dynamic Secure Ranging Mobile Platform

SN100 and SR100T are designed to work together to fulfil system level use cases in a secure way for smart phones



Dynamic Secure Ranging IoT Platform

SR150 and SE051W (EdgeLock) are designed to work together to fulfil system level secure use cases in IoT devices



Static Secure Ranging IoT Platform

PRODUCT VS USE CASE MAPPING

Use Case	Details	Product
UWB Tracker	Battery Powered. Limited feature set Initiator/controller FiRa MAC only.	SR040
TDoA Tag	Battery Powered. Limited feature set of blink packets only.	SR040
Door Access Control (e.g. HID, Alligion, Yale, etc.)	AoA and Security, multicast/multisession with full FiRa MAC	SR150 + SE051W
Location Service Anchor	AoA multicast/multisession with full FiRa MAC	SR150
Long Term Eco-system like Payment and Transit	AoA and Security, multicast/multisession with full FiRa MAC	SR150 + SE051W
Smart Home and Consumer Electronics	AoA multicast/multisession with full FiRa MAC	SR150



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