

Enhanced security for LoRaWAN module

muRata

INNOVATOR IN ELECTRONICS

**TRUSTED
OBJECTS**

Murata and Trusted Objects are partnering to enhance security on LoRaWAN modules subject to logical and physical threats



Murata Type ABZ module
CMWX1ZZABZ

TO-PROTECT

Secure software library
Root of trust

TO-Protect on Murata module

- **Easy integration**, 100% software
- **Compatibility** with existing hardware
- **Reduced code size**
- **Limited impact** on MCU performances
- **STM32 stack pre-modified** for TO-Protect

TO-Protect key features

- **Security & cryptography:** mutual authentication, integrity protection and confidentiality
- **Secure connectivity:** LoRaWAN frame assembly and disassembly, frame counter secure management
- **Secure storage:** keys, counters

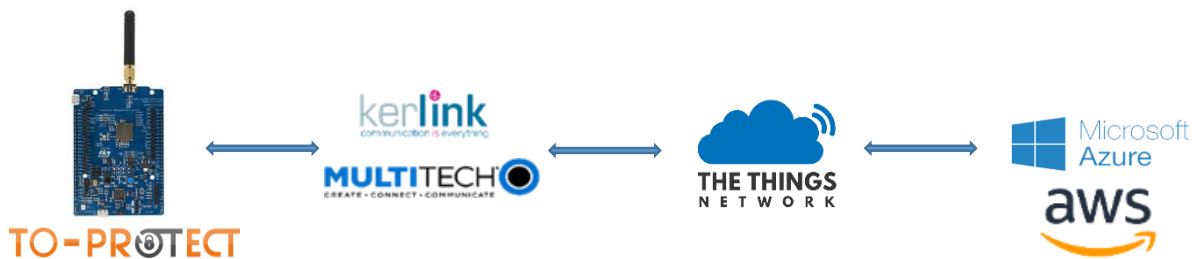
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TO-Protect evaluation
LoRa Discovery kit from STM
Board B-L072Z-LRWAN1

- Murata module CMWX1ZZABZ
- Microcontroller STM32L072CZ – Cortex M0+
- LoRaWAN transceiver SX1276
- STM32 stack pre-modified for TO-Protect
- Trusted Objects library (abstracting software Secure Element interface)
- TO-Protect software library in binary



Easy integration into the IoT chain of trust



Available now !

- Demonstration
- Application note
- TO-Protect evaluation library
- TO-Protect library for production: Technology Access License (TAL)
- OTA provisioning: library programming with personalization page