Description

The DECT-ULE Expansion Board (DU-EB) includes a DECT-ULE Module (DHAN-J) which comes loaded with a SW image that accounts for the DECT-ULE PHY-MAC Protocol as well as for the ULE HAN-FUN Standard. The DU-EB has a 3.3V, Arduino R3 connector scheme which allows straightforward interfacing with applications running on the ST Nucleo (STM32), Arduino (eg M0) or other similar development platforms. The DU-EB, in conjunction with a ULE Hub (typically a ULE Dongle), can serve as a both a learning vehicle or a development tool for creating application SW for a ULE Device.

Features

* Operates 1.9GHz frequency bands allocated by regulatory bodies (FCC Part15.239, ETSI EN300175, ARIB STD T101) exclusively to DECT-ULE protocol compliant devices.

* Includes DHAN-J SMT radio module with on-board antenna. The DHAN-J has FCC Part15D regulatory certification, Industry Canada RSS-213 certification, as well as certification according to the Radio Equipment Directive (RED) 2014/53/EU.

* Easily configurable (jumpers) for power supplied by USB, Battery or from the 3.3V pin at CN6 on the Arduino interface

* Configurable (resistor jumpers) for routing of DHAN-J UART Rx/Tx to available pins on the Nucleo or Arduino development platform

* Firmware on the DHAN-J can be upgraded either via JTAG, USB or over the air (SUOTA) from a ULE Hub

* Can be controlled either via a PC running a simulator host (CMND API) or via an external MCU like the STM32

* ULEasy reference SW is available - as libraries for Arduino or extension for the STM32Cube firmware

* Can be configured to run a simple application directly on the DHAN-J – convenient for evaluation without an external development platform
Expansion Board (EB) Block Diagram

**CN5, D15-8 (SPI, I2C)**
- Mini-USB
- DC2DC 3V
- 3V Socket for Battery
- CN6, 3.3V

**CN9, D7-0 (UART)**
- USB to UART
- UART0 Tx, D1
- UART0 Rx, D0
- UART1 Rx
- UART1, Tx
- UART2, Rx
- UART2, Tx
- UART3, Rx
- UART3, Tx
- 20-pin JTAG
- CN9, 3.3V
- CN8, 6 ULE I/Os

**Operation with CMND Simulator**
- DU-EB
- FDTI Converter
- SW3
- CMND API Simulator
- Green LED Activity Indicator
Interconnect with External Development Platform

Related Documents

see https://www.dspg.com/developers/

*DHAN-J Data Brief
*ULE System Development Tool Brief
*Getting Started with ULEasy

DHAN-J Module Data Sheet DU-EB Part Number

HOMEA-DHX913-EXTDHNJ-NN-IL.BRD
Note: Can also be ordered as part of the ULE System Development Tool (HOMEA-DEVTOOL-BN-IL.SET)
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