

## Dialog SmartPulse™ for ultra-low energy applications

Based on the universal DECT ULE voice and data transmission standard

### Product portfolio

The product portfolio consists of the following:

- SmartPulse modules
- Development kits
- Reference designs
- Full ecosystem examples

Dialog's SmartPulse™ portfolio of products have been created to enable the simple creation of applications using DECT ULE technology – the most suitable Home Automation, Energy Control and Security (HAECS) wireless standard.

These pre-certified modules guarantee a reliable and easy to implement integration of RF technology into such applications. Modules can be delivered fully preprogrammed and can also be simply programmed using Dialog's DECT ULE software stack, downloadable from Dialog's ftp server. This approach allows for rapid application software development either on the module or on host processor.

Dialog's SmartPulse development kits can be used for software development and technology evaluation. Furthermore a portfolio of complete reference designs has been created for a range of popular products, further lowering the time to market. Full ecosystem examples are available, including server (cloud) applications that allow the control of a system via a smartphone, laptop or tablet PC. SmartPulse allows you to expand your business within home automation, security and home care, easily accomplished with low R&D and product costs.





## Overview

Figure 1 shows the core overview of the SmartPulse product portfolio and the selection guide.

- Products

- **SC14SPNODE**

- The SC14SPNODE is a generic, unprogrammed module that supports multiple software stacks - provided via Dialog Semiconductor's ftp server. In this overview the use of the DECT ULE protocol stack, ultra low energy voice and data transfer functionality, is assumed.

- **SC14CVMDECT**

- The SC14CVMDECT is a preprogrammed cordless voice module (CVM) and can be used as a generic basestation in addition to a voice node for traditional DECT applications. As a basestation, the device supports both ULE data nodes and voice nodes.

- Development and reference kits

- **SC14DECTIPBSREFKT**

- The reference kit is a versatile solution that can be applied to virtually any cloud based wireless application. It includes all required hardware, software and cloud server access. The reference kit contains a Dialog Semiconductor SC14452 internet enabled host processor connected on a single PCB to a SC14CVMDECT basestation module. Additionally it includes two end nodes (SC14WSMDATA\_DB) and an extensive development environment.

- **SC14CVMDECTDEVKT**

- This development kit can be used to develop your application software for the SC14CVMDECT and the SC14SPNODE modules. The SC14CVMDECT can be driven by a host processor or as an embedded solution to control voice and ULE end nodes. It contains development boards, as well as an ULE end node and a development environment for multiple voice based applications, including conferencing, baby monitor and walkie-talkie systems. With the ULE end node, a module to module ULE RF link can be established.

- **SC14WSMDATA\_DB**

- The SC14WSMDATA\_DB is a separate ULE end node development board that can be used to expand the nodes in a development environment. Both the SC14CVMDECTDEVKT and SC14DECTIPBSREFKT contain the SC14WSMDATA\_DB.



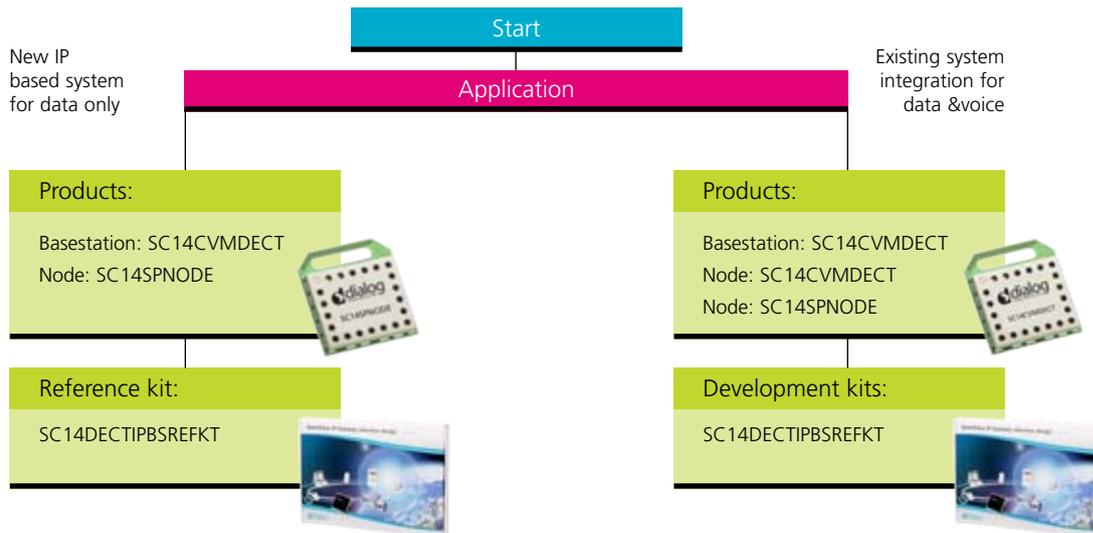


Figure 1: Portfolio overview

### Taking prototype to mass production

After integrating Dialog's wireless links into your system you are assured of a reliable, long-range, interference-free, low-power connection. By providing you with pre-certified modules, all of the assets of the licensed and royalty free worldwide DECT frequency band are available. The following are typical routes from ordering kits to mass production:

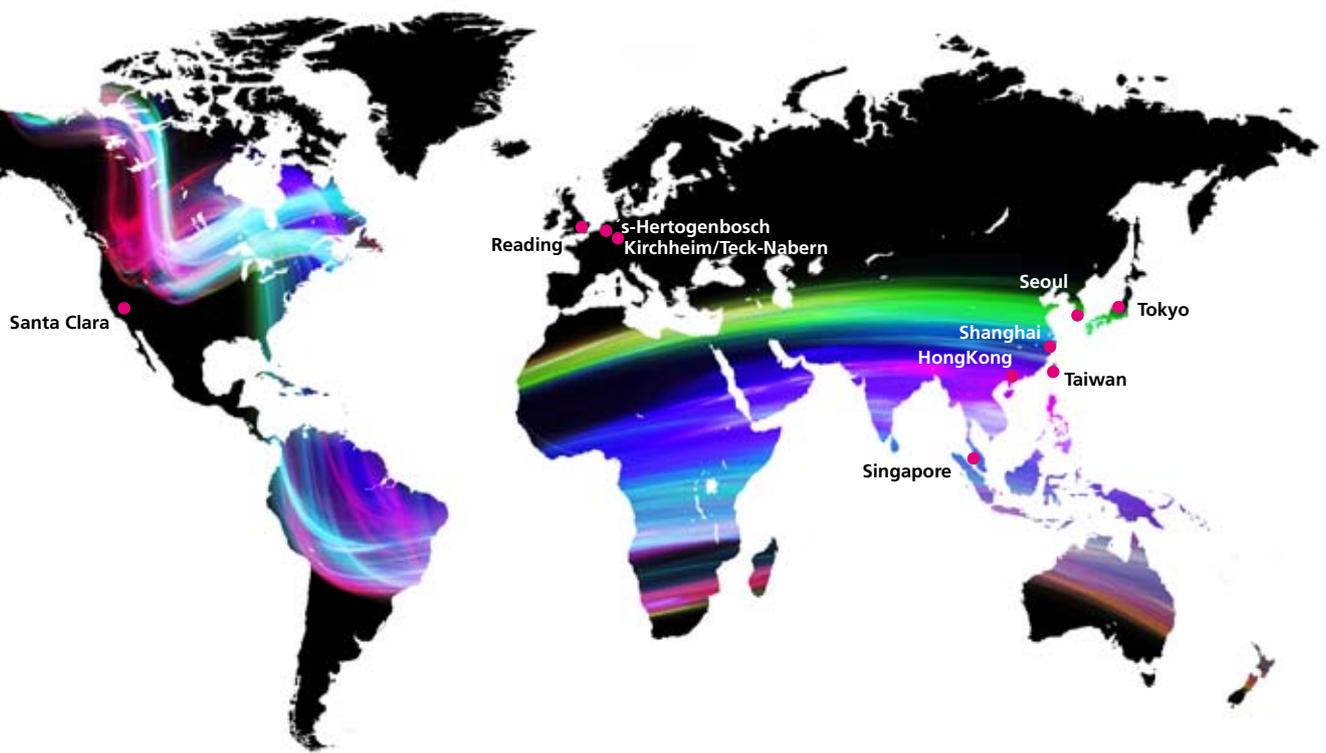
Case 1: Pre-programmed SC14CVMDECT system-in-package (SiP) modules

- Select a product and corresponding development kit
- Use development kit to integrate the software driver to control the preprogrammed module
- Develop or modify the end product hardware to include the module
- Test end product
- Order module for mass production

Case 2: Non-programmed SC14SPNODE modules (supporting multiple stacks)

- Select a product and corresponding development kit
- Download wireless stack and reference application firmware
- Modify module application firmware corresponding to your system
- Develop or modify end product hardware to include the module
- Test end product
- Setup production to program the final firmware into the module
- Order the module for mass production

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