

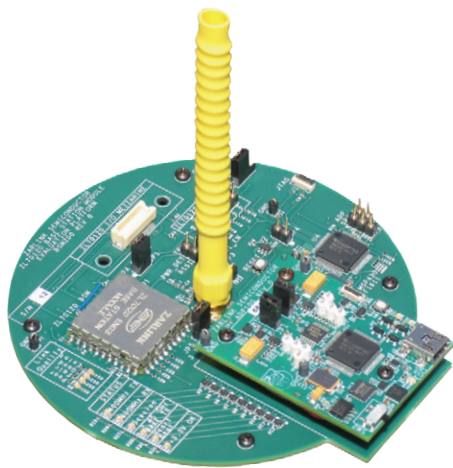
PRODUCT PREVIEW

Zarlink's ZL70102 Application Development Kit (ADK) enables rapid evaluation, prototyping and development of medical RF telemetry systems using the ZL70102 Medical Implantable Communication Service (MICS) RF Transceiver.

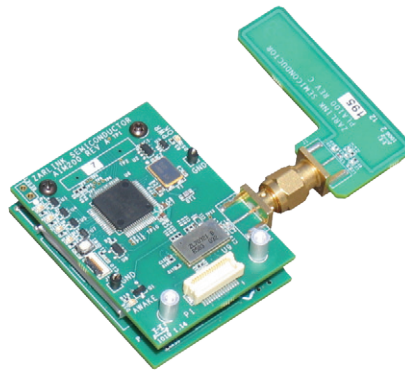
The ZL70102 ADK combines hardware and software to provide an end-to-end MICS communication system using the ZL70102. The ADK contains two applications units, one representing the base station application and one representing the implant application.

Please see the ZL70102 Data Sheet and Design Manual for more details on the ZL70102.

Using the ZL70102 ADK, users can quickly create custom board designs and use Zarlink software as a starting point for software development for specific ZL70102 enabled MICS RF telemetry systems.



Base Station Application Unit



Implant Application Unit

Applications

The ZL70102 ADK facilitates rapid development and evaluation of ZL70102 MICS based RF telemetry systems used in implantable medical devices and external remote monitoring and programming equipment, including:

- ➔ Pacemakers
- ➔ Implantable cardioverter defibrillators (ICDs)
- ➔ Neurostimulators
- ➔ Implantable drug pumps
- ➔ Implantable physiologic monitors
- ➔ Implantable sensors and diagnostic devices
- ➔ Cardiac Implantable Loop Recorders

Speeding Design of Medical Telemetry Systems

- ➔ Out-of-the-box solution. All hardware and software is provided to operate the ADK, only a PC is required to run the graphical user interface (GUI) software.
- ➔ ADK includes ZL70102 transceiver IC with integrated MAC & PHY, enables industry's lowest power and highest data rate MICS compatible RF telemetry solutions.
- ➔ Both the Base Station and the Implant Application Units are equipped with application microcontrollers with dedicated firmware.
- ➔ The Antenna used by the Implant Application Unit is optimized for air to allow for bench evaluation.
- ➔ Extensive hardware documentation including board schematics, layout, Gerber files, and bill of material (BOM).
- ➔ Complete source code for both the firmware and the GUI is available. The code is well commented and is written in C.
- ➔ The ADK software is updated periodically to support new and advanced features.

Ordering Information

The ZL70102 ADK is available for qualified customers. Contact Zarlink's Medical Product Group Sales at <http://www.zarlink.com> for information, order number ZLE70102BADA.

For detailed information on Zarlink's MICS transceiver IC technology, please refer to the ZL70102 Product Preview and Data Sheet located at <http://www.zarlink.com>.

ZL70102 MEDICAL TELEMETRY APPLICATION DEVELOPMENT KIT

ADP Board

Both the Implant Unit and the Base Station Unit are equipped with an Application Development Platform (ADP) Board that interfaces to the PC. The board is connected to the PC through a USB cable.

- ➔ Separate microcontroller to handle the communication between the application and the PC
- ➔ Battery controller with charger
- ➔ Lithium Ion Battery allowing stand alone operation
- ➔ Programmable power supply with integrated current/voltage measurement capability

Implant Application Unit

The Implant Application Unit contains the following items:

- ➔ Application Implant (AIM) Board
 - Optimized MICS radio transceiver based on the ZL70102
 - Application Microcontroller with firmware and an interface allowing programming and debugging
- ➔ ADP Board to interface with the PC
- ➔ Antenna optimized for operation in the air. The antenna is connected with an SMA connector allowing 50 Ω custom antennas to be used with the ADK
- ➔ Test Adapter Board allowing probing of digital and analog signals

Base Station Application Unit

The Base Station Application Unit contains the following items:

- ➔ Base Station Application (BSM) Board
 - Optimized MICS radio transceiver based on the ZL70102
 - RSSI IF filter, log amplifier and detector for clear channel assesment
 - 2.45 GHz Wake-Up Transmitter
 - Application Microcontroller with firmware and an interface allowing programming and debugging
- ➔ ADP Board to interface with the PC
- ➔ Dual band antenna (400 MHz + 2.45 GHz) for operation in the air. The antenna is connected with an SMA connector allowing custom antennas to be tested.
- ➔ Test Adapter Board allowing probing of digital and analog signals (board shared with the Implant Application Unit).

Graphical User Interface

The PC based graphical user interface (GUI) provides a user-friendly visual interface for controlling and evaluating the performance and capabilities of the ZL70102 RF telemetry system. The software allows access to all the functionality of the ZL70102 as well as providing several system level tools.

