



Communication Device with IrDA and BLE Device

The HWIP ACH01B is data communication device. It provides a simple and easy to connect Infrared Data Association (IrDA) and Bluetooth Low Energy (BLE). Users have capability to utilize the instrument with communication in as easy to use environment such as plug and play function. The device is designed for data integration between instrument and mobile phone, laptop, portable etc.. The data is continue to demand more on-device processing, where data is processed on the IoT endpoint, rather the using cloud-base approaches.

Description

The HWIP ACH01B features an ARM Cortex-M0 32bits, with STM32 chip, high-speed embedded memories, the ultra-low-power microcontroller. It incorporates Universal synchronous/asynchronous receiver and transmitter (USART). USART also supports Smartcard communication (ISO7816), IrDA SIR ENDER, LIN Master/Slave capability. The HWIP ACH01B includes Bluetooth Low Energy (BLE) module and IrDA module for connectivity. It can be powered by battery-backup (lithium 3.7Vdc) and recharge by micro-USB port. This make it performance for data communication from instrument to the other device. It incorporates ARM® Cortex® M0 32-bits, operating at up to 48 MHz frequency, high-speed embeded memories (up to 32 Kbytes of Flash memory), ultra-low-power. It delivers the performance to run modern AI workloads in a small form factor, power-efficient (consuming as little as 5 Watts), and low cost The HWIP model ACH01B is designed to support communication via IrDA (Infrared Data Association) or BLE 4.0 (Bluetooth Low Energy) devices. This product features a compact design, lightweight, and convenient portability for ease of use. The ACH01B product possesses the capability to communicate data from one device to another through IrDA or BLE 4.0, enhancing efficiency in your operations.

Controller board (MCU 12 bit)

The controller board of the ACH01B has been developed using the leading-edge 8 and 16-bit microcontroller technology by Microchip Technology. This 32-bit technology is specifically designed for low-energy consumption until maximum-energy efficiency in the industry through new software and user-friendly operation. It represents a comprehensive ecosystem of tools for full-cycle development environments. Microchip's 32-bit microcontrollers are embedded in various types of devices, such as Internet of Things (IoT) applications to other embedded control purposes, providing a versatile solution for a wide array of development environments.

FEATURES

- Wireless I/O Modules.
- Compact Design for Portable.
- Battery Backup.
- Rechargeable of battery.
- Support android, ios platform.
- Easily installation and operation.

Technical Specifications

Processor	STM32L010K4 (MCU 12 bit)
Type board	TSSOP20
Memory	Flash memory
Communication interface	IrDA standard protocol (Infrared) BLE (Bluetooth) rang frequency 2.402 - 2.480 GHz / V. 2.1, 3.0, 4, 5
Power	DC 3.5-4.2 Vdc Charger (USB) 5 Vdc
Dimension	7.6 x 3.7 x 4.3 cm.
Environmental	Temperature (Operating) 30 - 40° C
LED status	Power LED status Battery level LED status Charger LED status Sync data LED status
Platform supported	IOS, Android
Flash memory (Kbytes)	16
RAM (Kbytes)	2
Timers	General-purpose 2 LPTIM 1
RTC/SYSTICK/IWDG/WWDG	1/1/1/1
GPIOs	26
Clock:HSE/LSE/HSI/MSI/LSI	1/1/1/1/1
12-bit syschonized ADC	1/10
Maximum CPU frequency	32 MHz
Operating voltage range	1.8 to 3.6 V
Operating temperatures	Ampient temperature -40 to+85° C Junction temperature -40 to+105° C