e-Link32 Lite

Quick Start Guide

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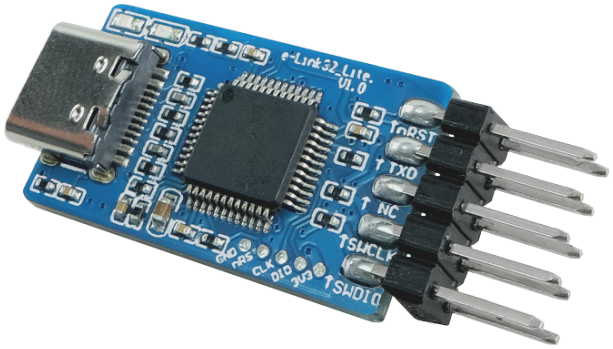
Table of Contents

Introduction **3**
Features **3**
Pin Description **4**
Hardware Description **4**
Application Description **5**
Keil MDK Usage Steps 5
HT32 ICP Tool Usage Steps 7
USB to TTL Serial Port Usage 8
Dimensions **9**

Introduction

The e-Link32 Lite is a development tool that combines emulation and programming functions. The e-Link32 Lite is a lite version of the e-Link32 Pro, supporting the emulation and programming functions for all HT32 MCUs. This product supports a wide range of emulation development software, such as Keil MDK and IAR. Holtek provides a proprietary emulation development software HT32-IDE and also offers HT32 ICP programming software HT32_ICP_Tool. The programming and emulation functions can be carried out on the software by connecting to a PC via USB type C. This product features a small design and simplified hardware, making it more cost-effective for users to purchase.

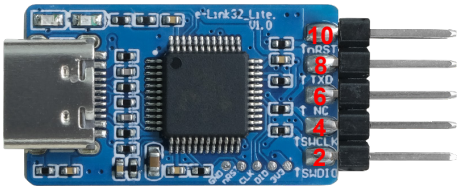
This quick start guide is intended to help users get familiar with the settings and usage of the Holtek e-Link32 Lite. The guide includes the e-Link32 Lite hardware introduction, emulation, programming, and virtual serial port applications.



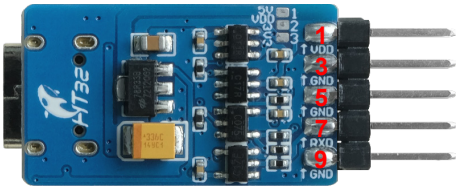
Features

- Power supply methods
  - Internal power supply: 3.3V/5V, the writer provides power for the programming chip
  - External power supply(default): the programming chip is self-powered
- Functions: e-Link32 Lite is the lite version of e-Link32 Pro, supporting HT32 MCU emulation and programming functions
- Related software:
  - Development software: HT32-IDE, Keil MDK, IAR EWARM, Arduino IDE
  - Programming software: HT32_ICP_Tool
- Supported MCU types: all HT32 MCUs
- USB type: type-C
- USB driver: driver-free, plug-and-use
- Interface: 10-pin pin header 2×5
- Size: 36.7mm×15mm×6.5mm

Pin Description



Top View



Bottom View

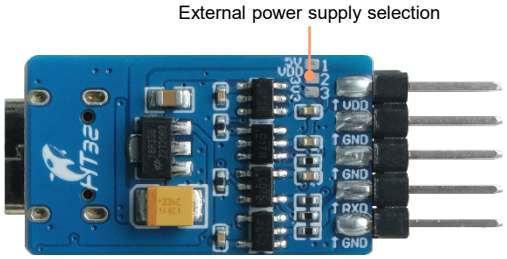
Pins	Function	Type	Description
1	VDD	PWR	logical positive power supply
2	SWDIO	IO	Emulating programming data line
3/5/9	GND	PWR	Logical negative power supply
4	SWCLK	IO	Emulating programming clock line
6	NC	-	Reserved
7	VCOM_RXD	IO	USB virtual serial port receive
8	VCOM_TXD	IO	USB virtual serial port transmit
9	VCOM_RXD	I/O	USB virtual serial port receive

Note: PWR: Power; I: Input; O: Output; I/O: Input/Output.

Hardware Description

PCBA Front View

- Green indicator light: USB connection status
  - Constant off: USB not recognized
  - Constant on: USB recognized successfully
- Blue indicator light
  - Constant off: Not in the programming progress
  - Flashing: In the programming progress



PCBA Back View

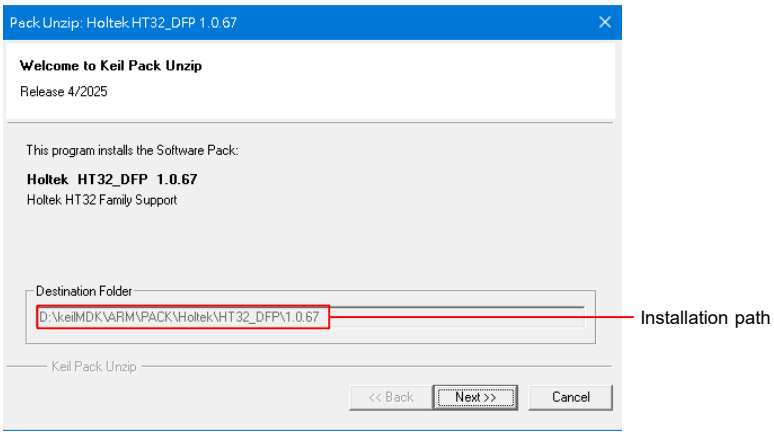
- Power supply selection of the programming chip
  - No soldering (default): the programming chip is self-powered
  - 1 and 2 short connection: the writer supplies 5V for the programming chip
  - 2 and 3 short connection: the writer supplies 3.3V for the programming chip

Application Description

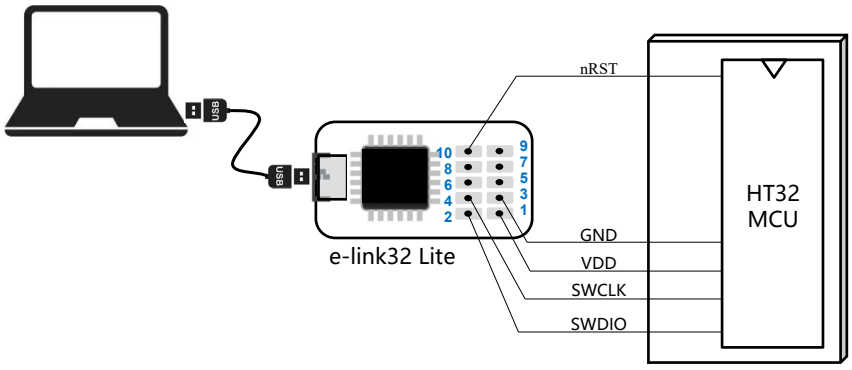
Keil MDK Usage Steps

Step1. Download the Keil MDK5 from the keil official website and install it. Download websit: https://www.keil.com/demo/eval/arm.htm

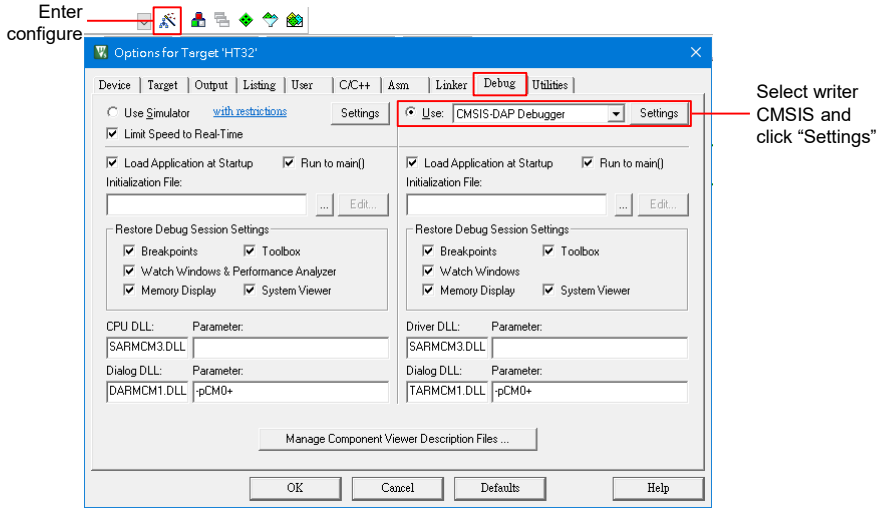
Step2. Install the Keil supported pack of the relevant MCUs. For example, the HT32F52352 is used as the programming chip, download its related Keil supported pack: Holtek.HT32_DFP.1.0.67.pack. After downloading, install the .pack file to the the Keil MDK installation path. The relevant software downloading website: https://www.holtek.com/page/vg/HT32F52342-52



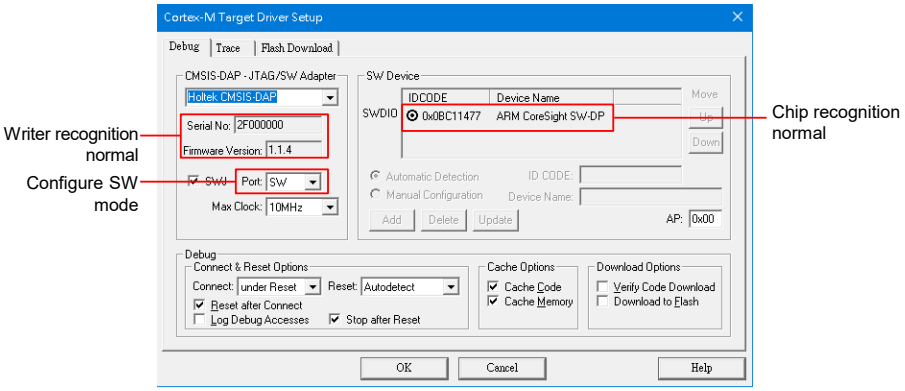
Step3. Connect the Writer to the HT32F52352 and connect the USB of the e-Link32 Lite to the PC.



Step4. Open the HT32 Keil project, configure the Debug option, select CMSIS-DAP and click "Settings".



Select SW mode and observe whether the chip is recognized, if the chip cannot be recognized, it is necessary to check whether the wiring and the chip are in normal condition.



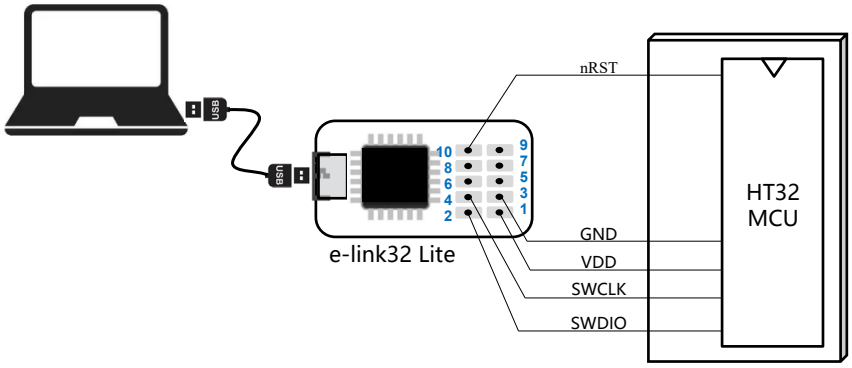
After completing the above steps, Keil emulation or programming can be carried out. For the emulation and programming methods, refer to the Keil usage instructions.

HT32 ICP Tool Usage Steps

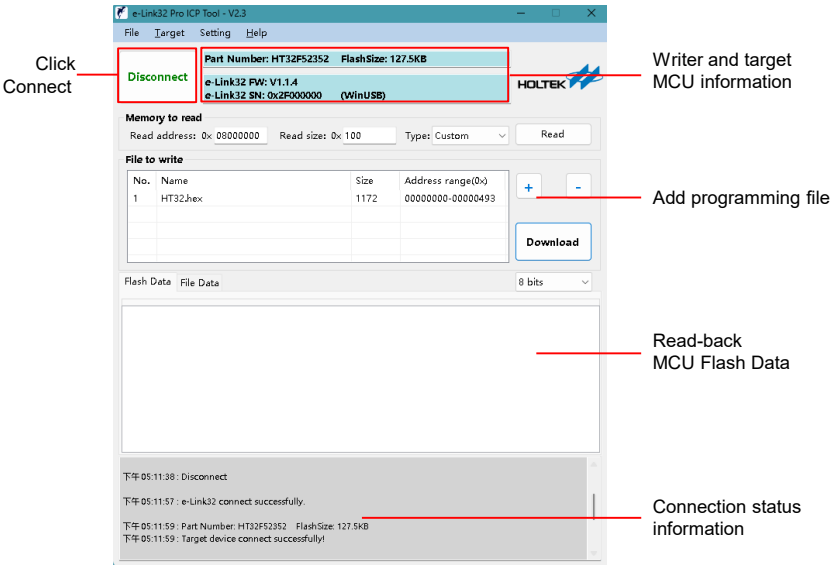
Step1. Download the e-Link32 Pro ICP Tool software and install it.

Download websit: https://www.holtek.com/page/ice_list/i_32

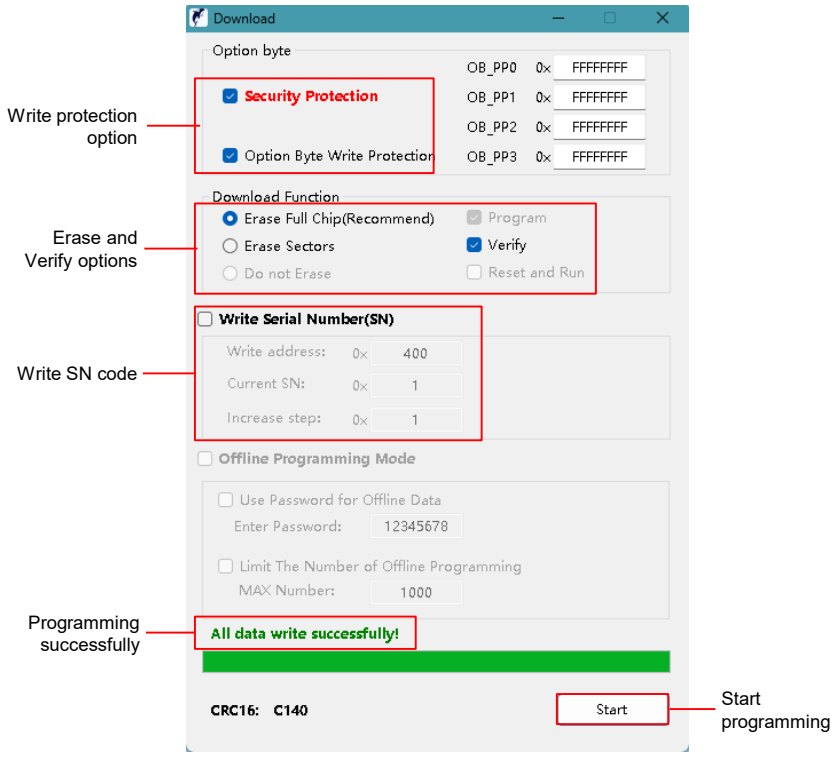
Step2. Connect the Writer to the target MCU.



Step3. Open the e-Link32 Pro ICP Tool software. Click "Connect", and the software will automatically identify the Writer and the target MCU information. Load the .hex programming file.



Step4. Click "Download" to configure and programming. "All data write successfully!" appears after programming, which means that the programming is successful.

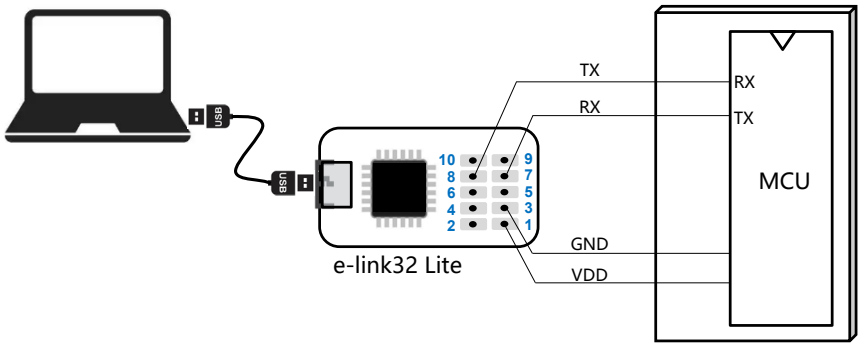


USB to TTL Serial Port Usage

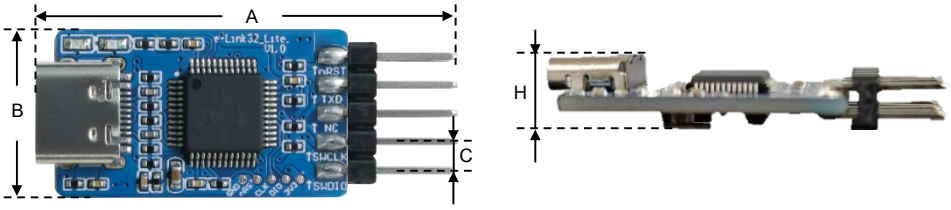
Step1. Install the virtual serial port driver : the HT32 Virtual COM Driver.

Download website: https://www.holtek.com/page/ice_list/i_32

Step2. Connect the USB to the circuit board serial port to enable communication between the board and the PC.



Dimensions



Dimension Information

Symbol \ Unit	mm	inch
A	36.7	1.445
B	15	0.590
C	2.54	0.100
H	6.5	0.268