

## AT32F407/437 Ping Client on FreeRTOS

## Introduction

This sample code realizes network connection detection on ping client based on Ethernet.

Applicable products:

Part number	AT32F407xx
	AT32F437xx

List of peripherals

Main peripherals	EMAC
	GPIO
	USART

# 1 Quick start

## 1.1 Hardware requirements

- 1) LED2/LED3
- 2) USART1(PA9/PA10)
- 3) AT-START-F407/ AT-START-F437 evaluation board
- 4) Ethernet cable

## 1.2 Software requirements

- 1) SourceCode
  - at32f407\_ping\_client\_on\_freertos/ at32f437\_ping\_client\_on\_freertos source code
  - LWIP source code
  - AT32 driver library
- 2) Doc
  - SC0103\_AT32F407\_437\_Ping\_Client\_on\_FreeRTOS\_V2.0.0

*Note: All of projects are built based on Keil 5. For the need to run in other compiling environments, user can make simple adjustments according to AT32F407\_Firmware\_Library\_V2.x.x/project/at\_start\_f407/templates (such as IAR6/7, Keil 4/5).*

## 1.3 Example of application

- 1) Open at32f407\_ping\_client\_on\_freertos/ at32f437\_ping\_client\_on\_freertos; compile and then download to the evaluation board;
- 2) Configure the IP address segment of the PC to be the same as that of the evaluation board, as shown in Figure 1;
- 3) The serial assistant prints the ping response result, as shown in Figure 2.

*Note: If the data received and sent by the network port is occasionally lost, check whether the amount of code exceeds the zero-wait area of the chip. In this case, users can selectively compile important codes into a zero-wait area.*

Figure 1. Set PC network segment

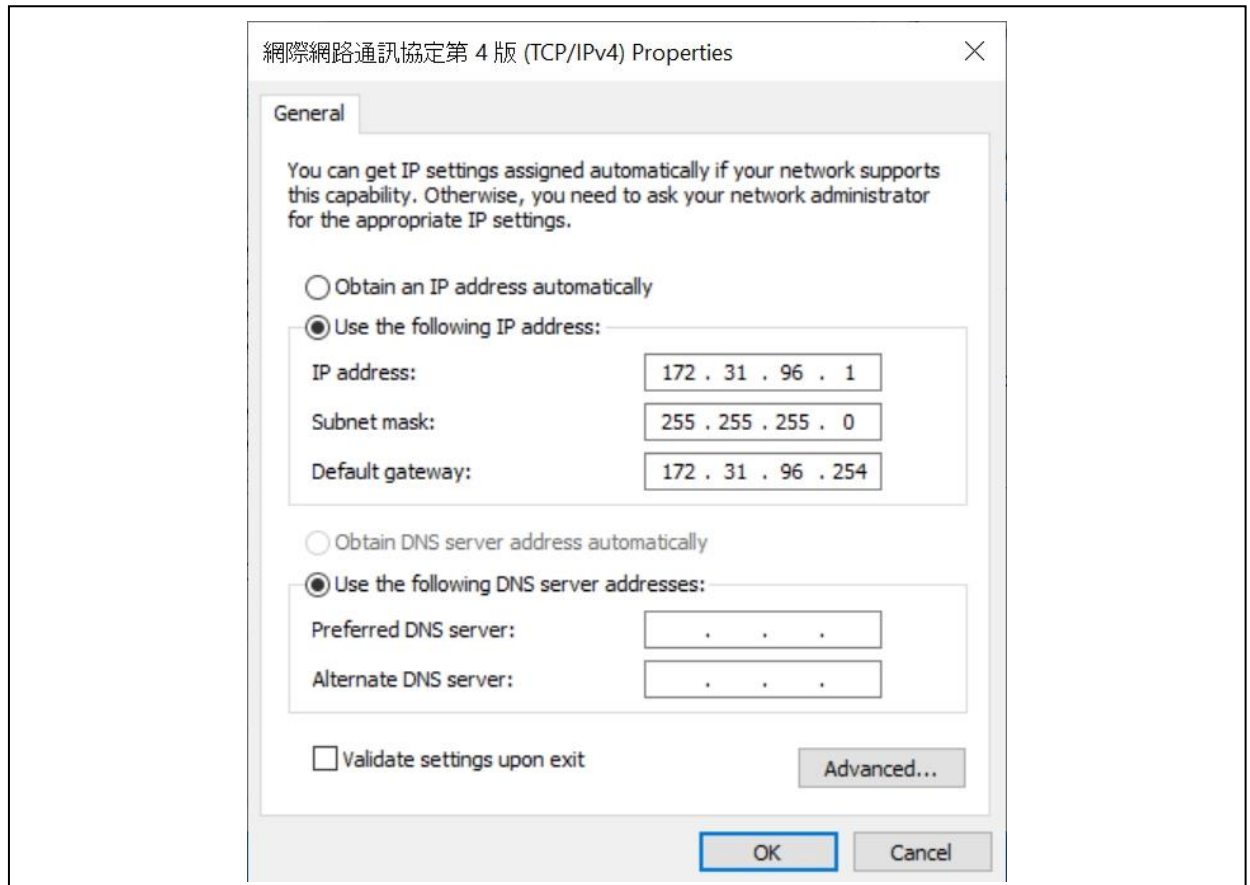


Figure 2. Ping Client sends request and receives response

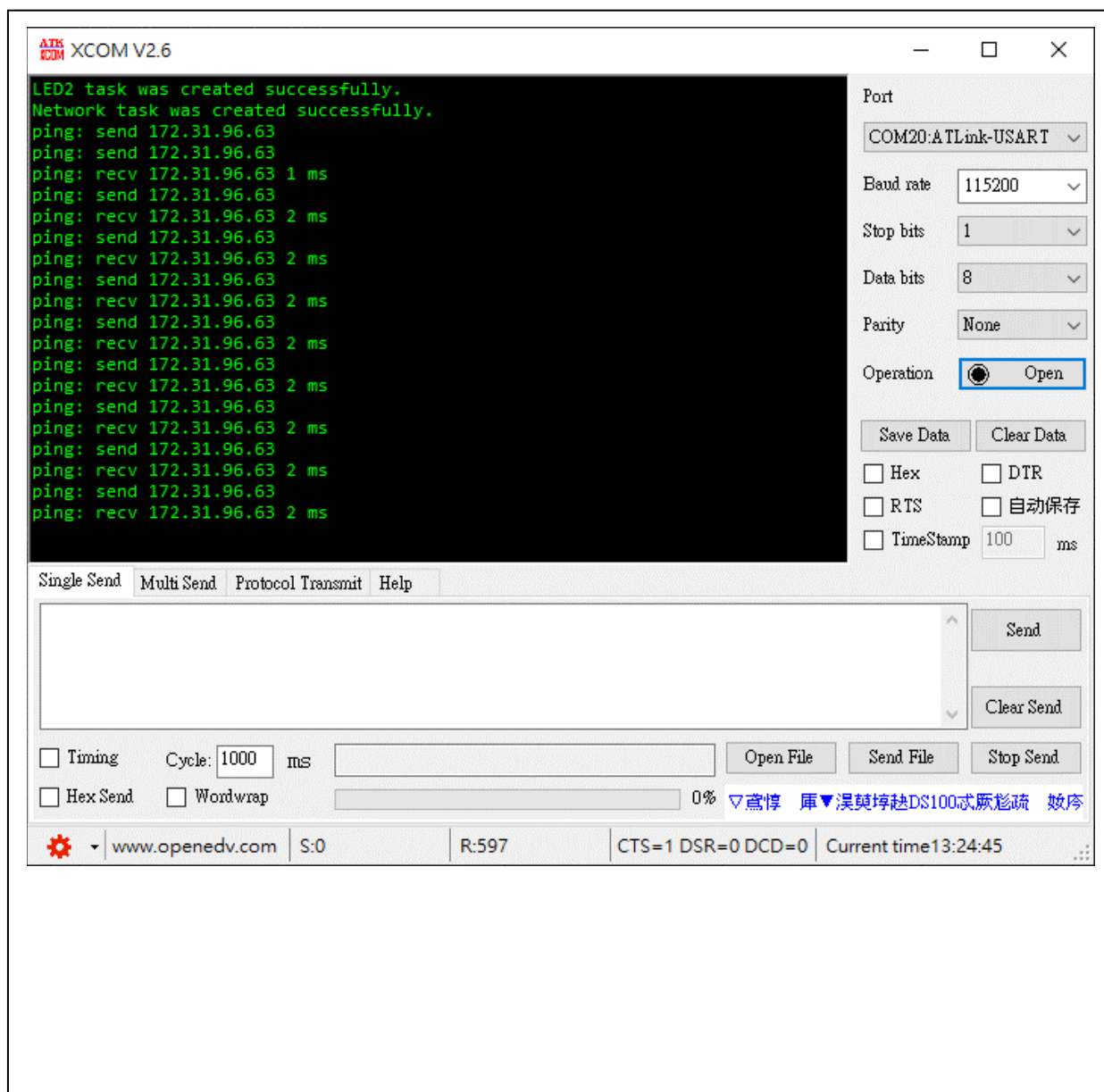


Table 1. Document revision history

Date	Version	Revision note
2022.10.03	2.0.0	Initial release.
2023.02.13	2.0.1	Free AC6 compiling errors and warnings

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