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 Application method

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 projects are built around keil 5. If users want to use them in other compiling environments, please refer to AT32F407_Firmware_Library_V2.x.x/project/at_start_f407/templates (such as IAR6/7, keil 4/5) for a simple change.

1.3 Example of application

1) Open the *at32f407_ping_client_on_freertos/ at32f437_ping_client_on_freertos* source code, 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.
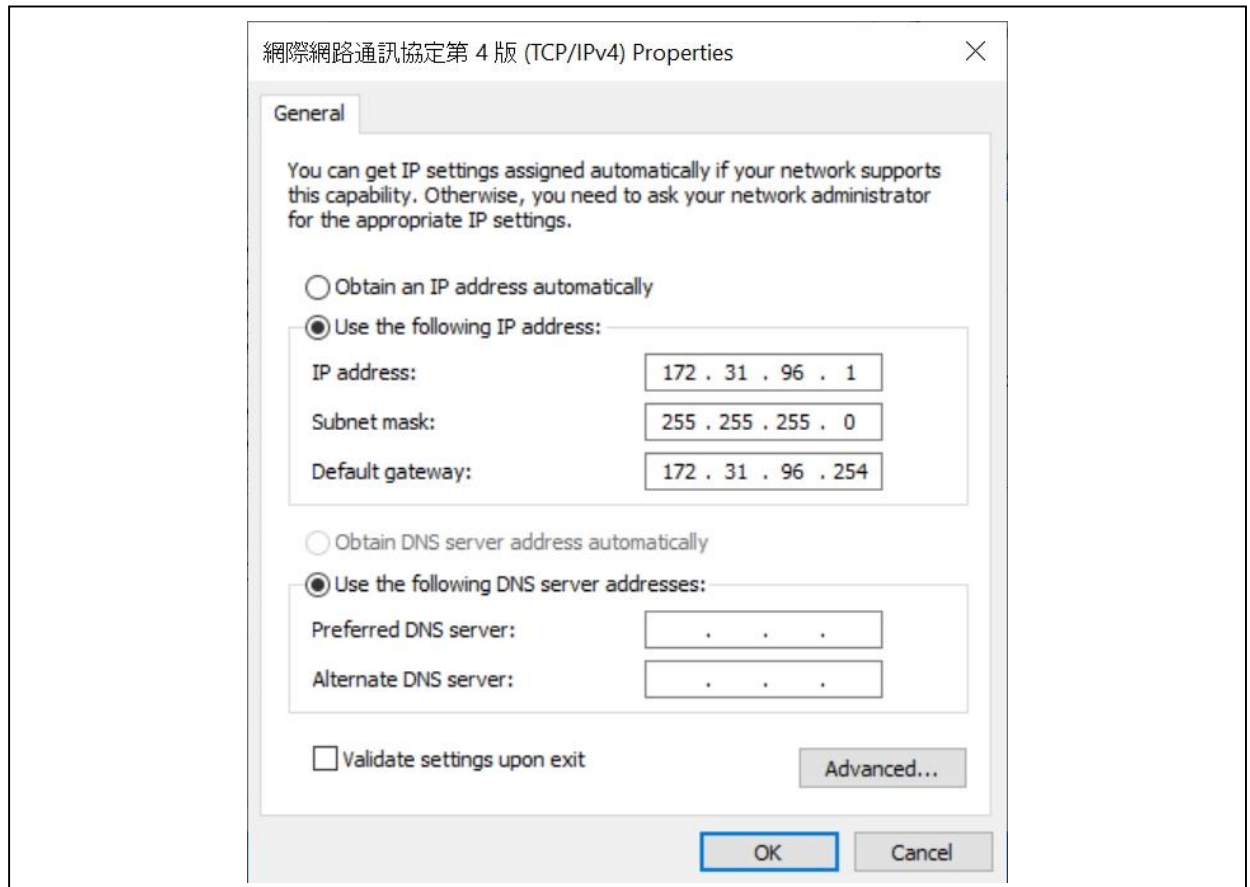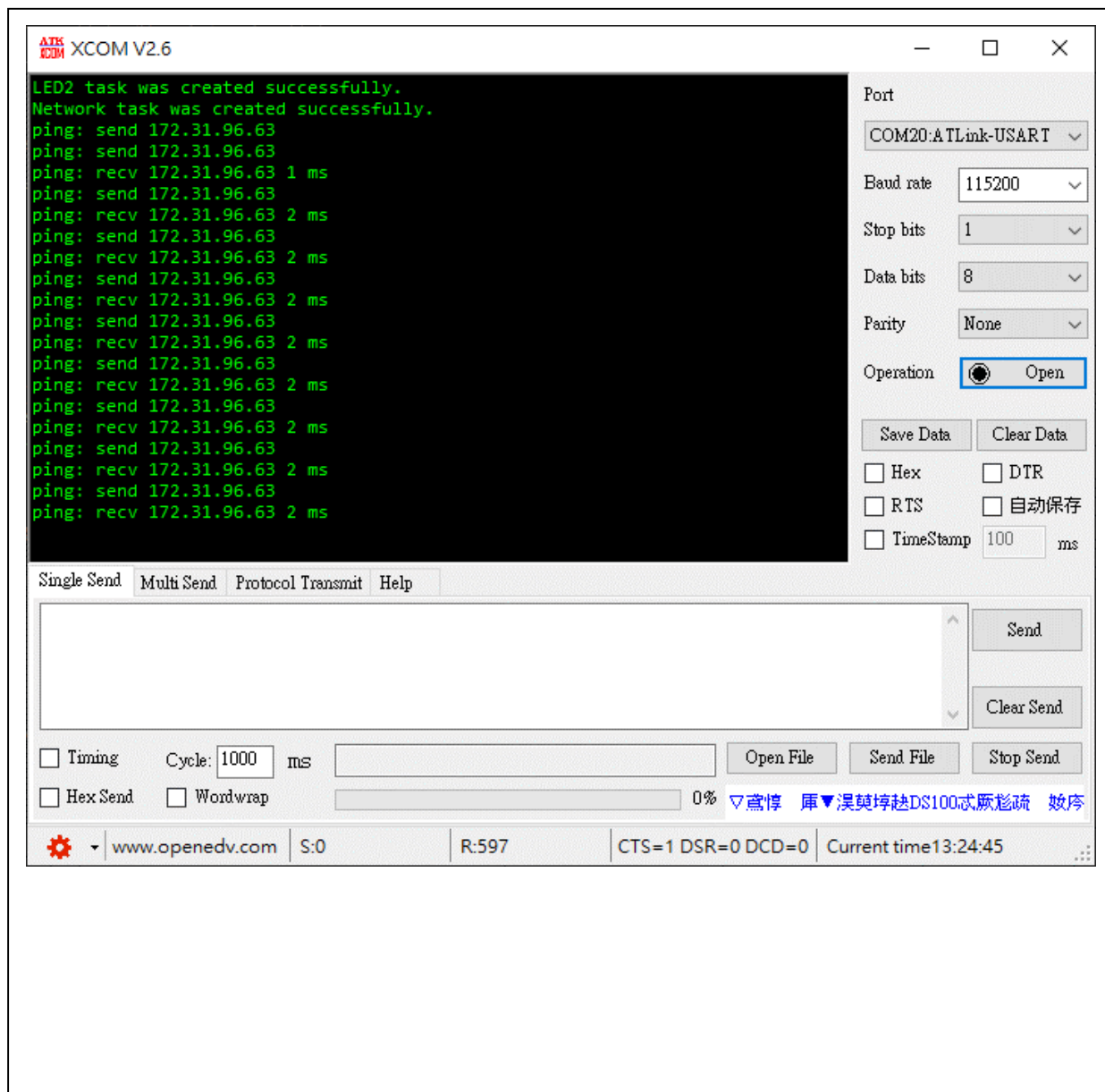
Figure 1. Set PC network segment

Figure 2. Ping Client sends request and receives response

2   Revision history

Table 1. Document revision history

Date	Version	Revision note
2022.10.03	2.0.0	Initial release.

IMPORTANT NOTICE – PLEASE READ CAREFULLY