九齊科技股份有限公司
Nyquest Technology Co., Ltd.

User Manual

NYC for NX1 Series

Toolchain with C Compiler

Version 1.0

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Revision History

Version	Date	Description	Modified Page
1.0	2016/11/16	Formal release.	-

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1 Introduction

NYC_NX1 is the Software Programming Toolchain for Nyquest 32-bit MCU "NX1 series". It contains a collection of various programming tools: C Compiler, Assembler, Linker, Make, Debugger and library. *NYC_NX1* is called by the upper level development tools such as *NYIDE* and *Q-Code_NX1* to compile and link the target file and generate the .bin file used to download to the board or burn to OTP IC. When developing the NX1 series, regardless of the choice of *NYIDE* or *Q-Code_NX1* to develop, users must install *NYC_NX1* first to compile the final .bin file.

1.1   Outline of the manual

1   Introduction

This chapter explains the role *NYC_NX1* plays and the basic requirements for the installation of *NYC_NX1.*

2   Use *NYC_NX1*

How to use *NYC_NX1* through *NYIDE* / *Q-Code_NX1.*

3   C Language Syntax and Standard Library

Refer to the documents included with the *NYC_NX1* Standard Library.

1.2   System Requirements

◆   A PC compiled with Pentium 1.3GHz or higher CPU, Windows XP/ 7/ 8/ 10.

◆   At least 2G SDRAM

◆   At least 2G free space on the hard disk.

◆   .NET Framework 4.0 installed.

1.3   The Installation of *NYC_NX1*

Please contact Nyquest Technology to obtain the latest installation program. Double click the execution icon to activate installation wizard, and following the instructions to complete the installation process.

2 Use *NYC_NX1*

After programming by NX1 software development tool - *NYIDE*/*Q-Code_NX1*, pressing Build in the *NYIDE*/*Q-Code* interface will automatically find and use *Q-Code_NX1* installed to compile and link. The procedures for using *NYC_NX1* through *NYIDE* and *Q-Code_NX1* are described below.

2.1   Use *NYC_NX1* through *NYIDE*

NYIDE is a tool for developing application using assembly language of Nyquest NY4 / 5 / 6 / 7 / 8 / 9T / 9UB / NX1 series. The main purpose is to provide users programmming with Assembly language and C language, and having build and strong debug function. Using *NYIDE* to develop NX1 project, when building and debugging, *NYIDE* will automatically find and use the *NYC_NX1* toolchain installed on computer. The following is a simple introduction to the use of developing NX1 project by *NYIDE*. More detailed way of operation, please refer to the *NYIDE* user manual.

2.1.1   Create New Project

Open NYIDE, select New Project. In the Project New window, choose C on the Categories and select NX1. Press "Create" after specify project name and type, and NYIDE will automatically generate the necessary files.
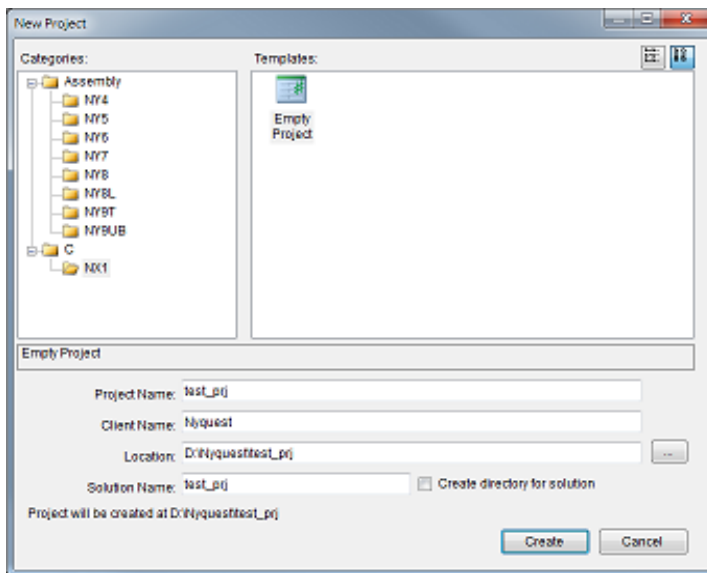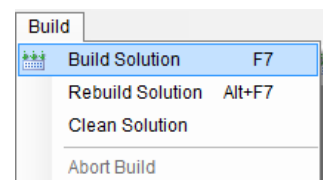

Figure2-1 *NYIDE* Select Project Type

2.1.2   Build

Select "Build / Build Solution" on *NYIDE* main menu (or press F7), *NYC_NX1* will execute the Build action. If the build is successful, it will generate .bin files in the project directory and be ready for download or burn.

2.2 Use *NYC_NX1* through *Q-Code*

Q-Code_NX1 is an application development tool for NY4 / 5 / 6 / 7 / 9T / NX1 series of Nyquest Technology Co., Ltd. It provides a simple graphics processing interface to complete the development of application program and allows users to write program by QC language, which is downloaded to ICE or FDB for demo after compiled.

Using *Q-Code_NX1* development new project, when building and debugging, *Q-Code_NX1* will automatically find and use the *NYC_NX1* toolchain installed. The following is a simple introduction to the use of developing NX1 project by *Q-Code_NX1*. More detailed way of operation, please refer to the *Q-Code_NX1* user manual.

2.2.1 Create New Project

Open *Q-Code_NX1*, select File / New in the menu to create a new project. Chose NX1 series on the IC Body Option, users can start writing QC programs on the edit window.
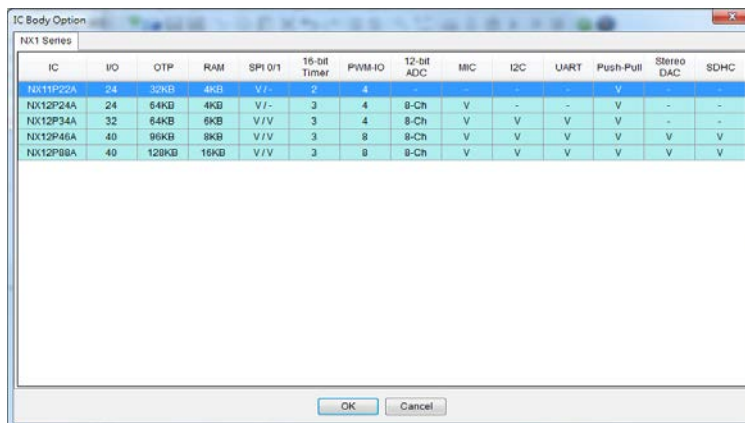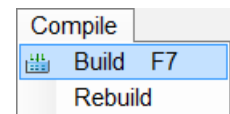

Figure2-2 *Q-Code_NX1* IC Body Option

2.2.2 Build

Select "Compile / Build" on *Q-Code_NX1* main menu (or press F7), *NYC_NX1* will execute the Build action. If the build is successful, it will generate bin files in the project directory and be ready for download or burn.

2.2.3 Error Message

If the Errors window shows error message, which means *NYC_NX1* is not installed on the computer or currently installed *NYC_NX1* version is obsolete. Please contact Nyquest Technology to acquire the latest version of *Q-Code_NX1* and *NYC_NX1*.
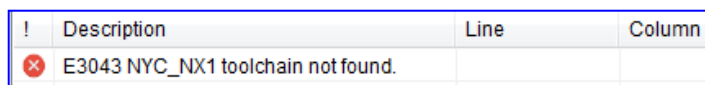

Figure2-3 Errors window

3 C Language Syntax and Standard Library

The C language Compiler in the *NYC_NX1* toolchain uses GNU GCC, so it supports all C89 standard syntax. After installing NYC_NX1, it will install a C language syntax and reference material of the standard library at the same time. Users can find the C Reference hyperlink in the **StartMenu / Nyquest / NYC_NX1 / C Reference**, which will open a web browser and load the C language reference document.
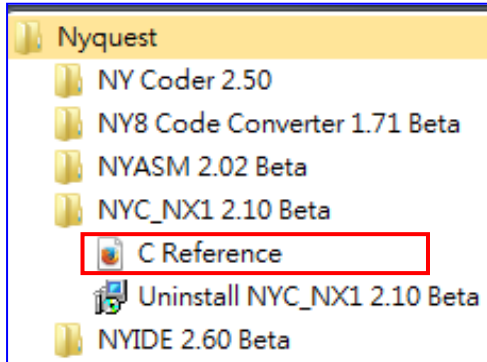

Figure3-1 The C Reference Hyperlink in Start Menu