# nuvoTon

# PLL Generator Tool
# User Guide

V1.00.003

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**Support Chips:**

N55UL Series

**Support Platforms:**

Windows

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# Table of Contents

# 1. Introduction

## 1.1. What is the PLL Generator Tool

PLL stands for phase-locked loop which is used to generate an output frequency based on the input signals.　PLL generator tool can calculate the proper register setting based on the hardware design circuit.

Because the design has some constraints on it, this tool obeys these constraints and generates desired PLL setting.　It is easy and helpful for the software engineer to use.
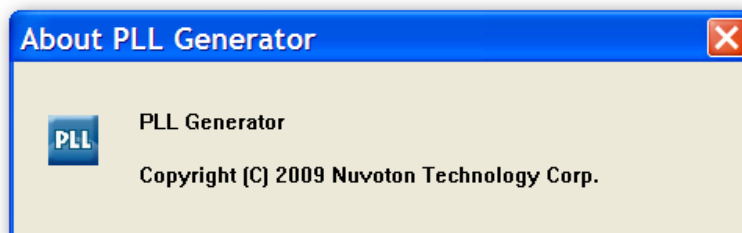
# 2. Quick Start

PLL generator is one tool to provide two functions.　One is to calculate the PLL setting for the desired frequency.　The other is to get the output frequency from the PLL setting.

After executing this program, main menu will show you these two options.
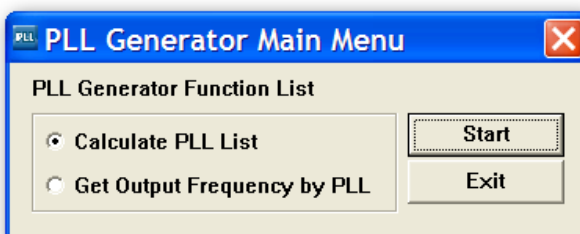


## 2.1. Calculate PLL List

Select "Calculate PLL List" radio button, then press "Start" button.　It will show next diagram box to prompt you to input some setting.
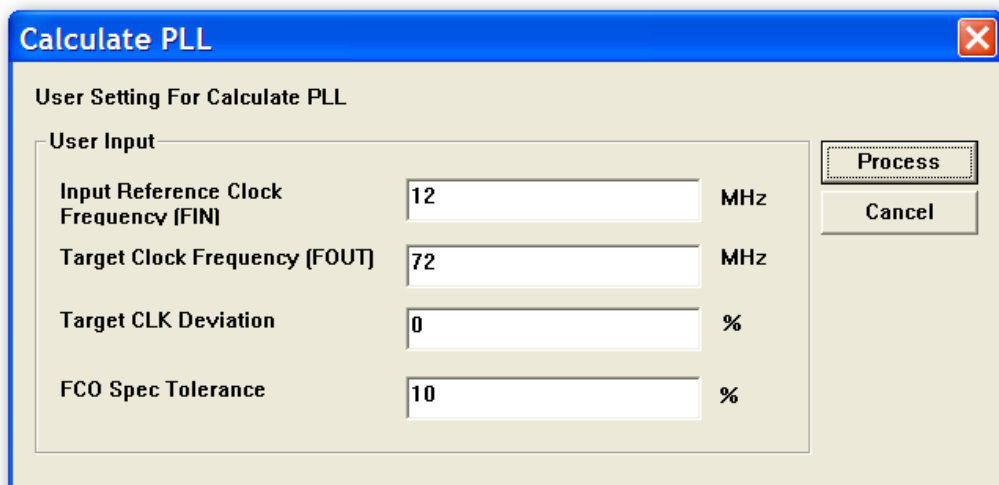


The meanings of each filed are as following:
- Input Reference Clock Frequency:　The input (Reference) clock frequency on the board.
- Target Clock Frequency:　　　　The output clock frequency.
- Target CLK Deviation:　　　　　Set the output clock frequency reasonable deviation.
- FCO Spec Tolerance:　　　　　　The constraint tolerance.

After finishing setting, press the "Process" button to start calculate & sorting the PLL list.　The result will show the sorted PLL list and display the optimal one at left bottom corner.　The below figure show it.
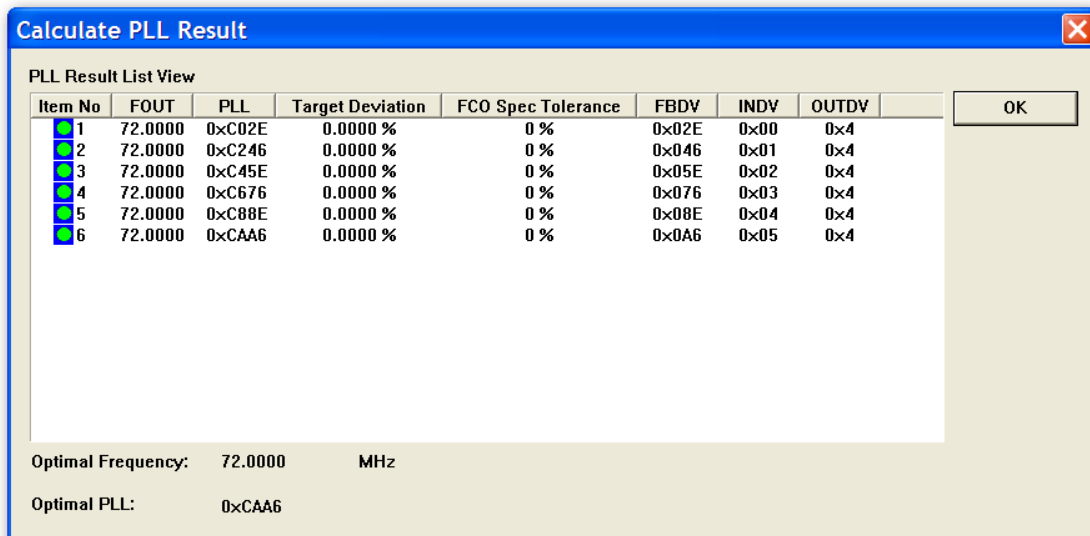


Sometimes, you will get the error message as following figure.　If your target clock frequency is reasonable and get this message, please adjust the target CLK deviation.

## 2.2. Get Output Frequency by PLL

Select "Get Output Frequency by PLL" radio button, then press "Start" button.   It will show next diagram box to prompt to input related setting.



Then, the calculated result will display in the Output Frequency.   Next figure shows the result in the "Output Clock Frequency".

# 3. Environment

Put the "PLLGeneratorTool.exe" and "generator.ini" files at same folder.　Or you will get an error message as below.
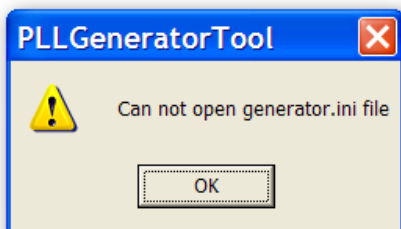
# 4.   Revision History

| Version | Date | Description |
|---------|------|-------------|
| V1.00.003 | Jan. 10, 2009 | ● Force quit Tool if "generator.ini" is not found in the same folder. |
| V1.00.002 | Jan. 5, 2009 | ● Change output format of FBDV, INDV, and OUTDV to hex.<br>● Tool fixed a bug that some PLL results are lost. |
| V1.00.001 | Nov. 27, 2008 | ● Created |

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