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i.MX 配置工具安装用户指南

Rev. 5 ― **2023年7月31日**

文档信息

信息	内容
关键词	MCUXpresso配置工具，i.MX
摘要	i.MX 配置工具 MCUXpresso 配置工具的一部分，是一套评估和配置工具，可指导用户完成从首次评估到生产软件开发 的整个流程。使用i.MX配置工具可轻松简便地配置 i.MX 处理器设备的引脚和 DDR。一般而言，该软件使您能够创建、检查、更改和修改设备的针脚配置和多路复用方面的任何内容。它还允许您配置和验证 DDR 设置。本文档介绍了 i.MX 配置工具的基本组件，并列出了配置和使用它们来配置管脚和 DDR 的步骤。

1 简介

i.MX 配置工具是一个软件工具，可用于指导用户完成从首次评估到生产软件开发的整个流程。本手册介绍了如何安装 i.MX 配置工具软件。

i.MX 配置工具可离线（本地）安装在主机上，用于引脚路由配置、验证和代码生成，包括引脚功能/电气属性、供电电平、运行时功能。

i.MX 配置工具提供通用功能，为硬件设计师、软件工程师、嵌入式工程师和现 场应用工程师（FAE）提供帮助。它由若干工具组成。

"引脚"工具的主要特性包含：

- 用于创建和使用引脚配置的图形化视图。
- 针对设备初始化创建 C 源代码和设备树片段
- 包含所有引脚和可路由外设的封装视图
- 含初始值的寄存器

DDR工具的主要特性包含：

- 使用图形化视图来显示和更改 DDR 的基本属性，比如，内存类型，频率，和通道数量。
- 使用图形化视图来测试和验证 DDR 设置。

注：如果您的 MacOS 系统设置为繁体字，i.MX 配置工具将只能使用英文而不是中文安装。该设置是特意的。

2 最低系统要求

下面列出了安装和运行软件的最低系统要求：

- 其中一个图形操作系统：
  - Microsoft® Windows® 10（64 位）
  - Ubuntu 20.04 LTS
    注：Linux 主机衍生版本以 64 位二进制代码的形式发布，可能不适用于 32 位系统。
    - 支持的桌面环境：GNOME
  - Mac OS X (12.x)
- 4 GB RAM
- 分辨率为 1024 x 768 的显示器
- 接入互联网，以便下载器件信息

3 支持的处理器

i.MX 配置工具的安装可以得到有限的数据和器件支持。您可以稍后下载其他支持的器件。

注：这需要通过网络连接来获取支持处理器的数据。

4 限制

参见版本说明中的限制。

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5 安装

i.MX 配置工具支持离线安装。

此安装文件包含安装过程中需要的所有文件，且在安装过程中不需要联网。若网络连接速度较慢，或者在多台机器上安装软件，可以使用此方法。

在工具中加载配置时，可以从网上下载缺少的设备信息文件。

5.1 在 **Windows** 上安装

Microsoft Windows 上有一种二进制设置可用：

• 64 位版本：此版本的安装程序可执行文件名称中包含"x64"。

在指定主机系统中运行不匹配的可执行文件，例如在 32 位系统上运行 64 位安装程序文件，会弹出一个错误消息对话框。

要将 i.MX 配置工具作为桌面应用程序安装到本地主机上：

1. 运行 Config_Tools_for_i.MX_<version>_<architecture>.exe。
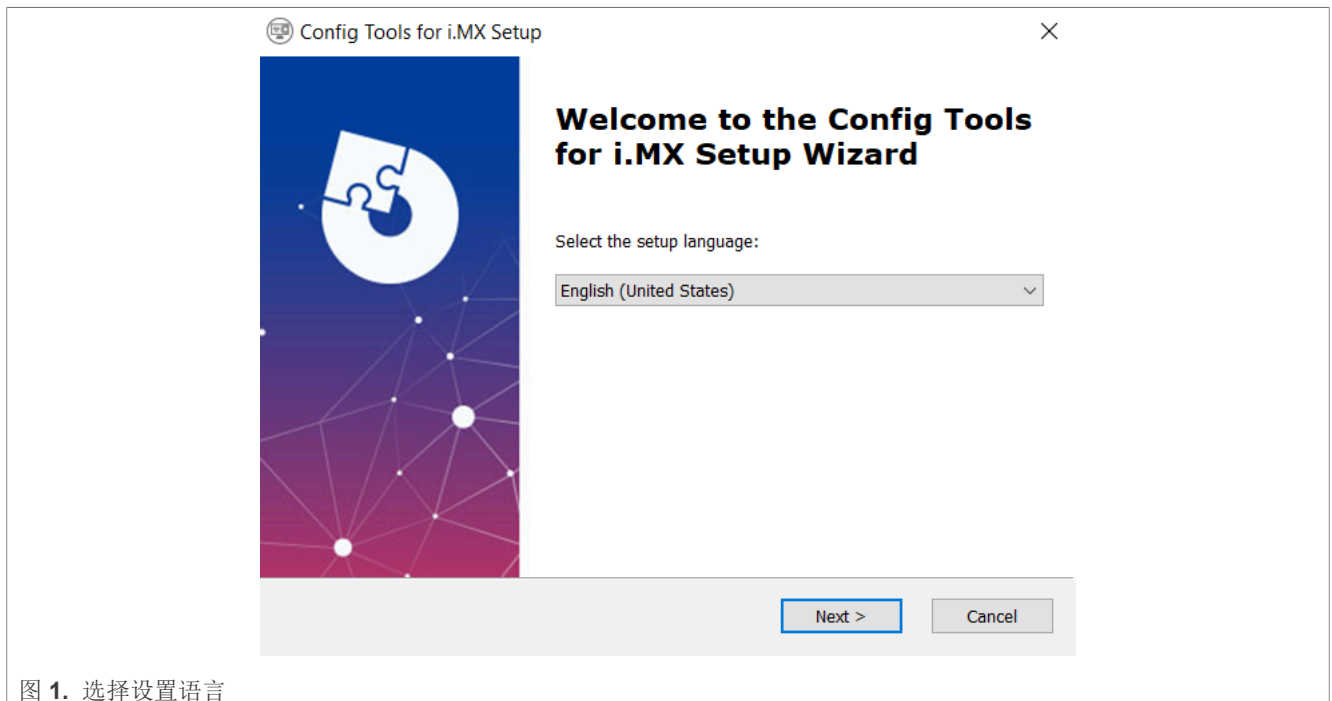   "**i.MX** 配置工具设置"向导启动。
2. 选择您想要运行此安装程序的语言。

图 **1.** 选择设置语言

3. 单击"下一步"。
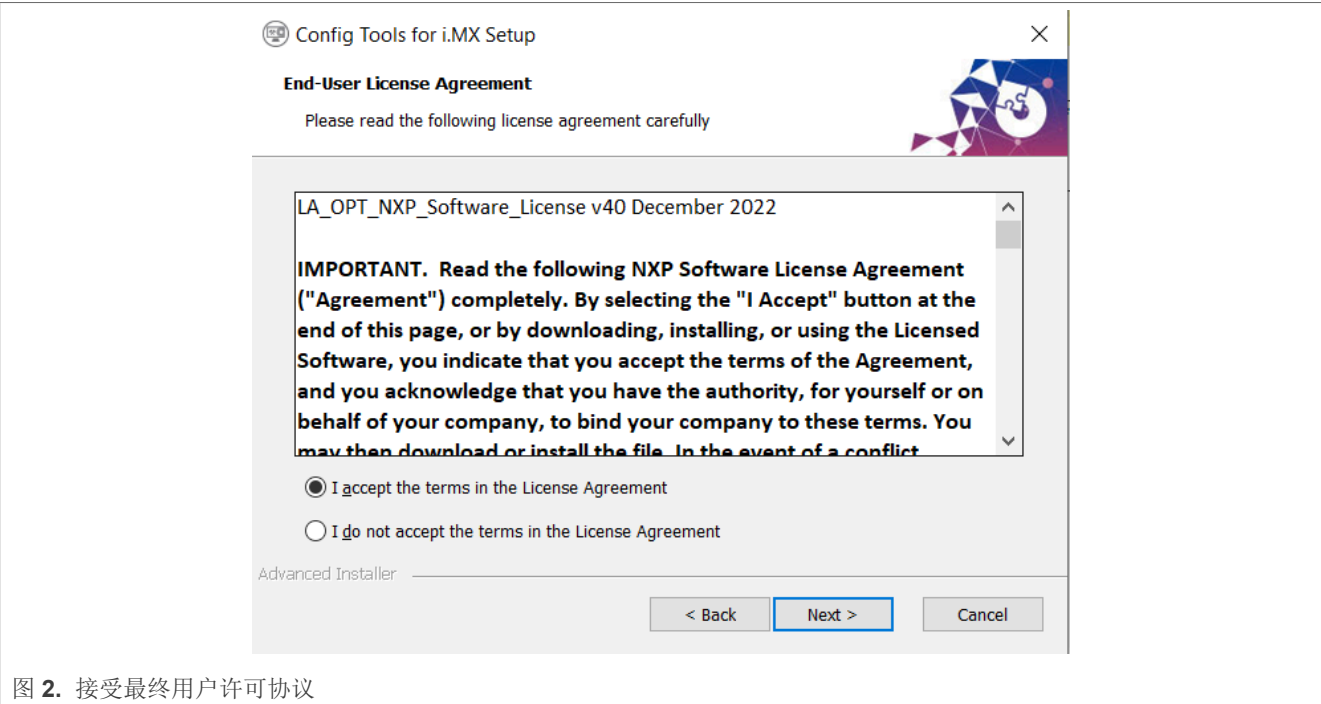4. 在下一个页面上，单击"下一步"。
5. 在"最终用户许可协议"页面上，选择"我接受许可协议的条款"。

图 **2.** 接受最终用户许可协议

6. 单击"下一步"。

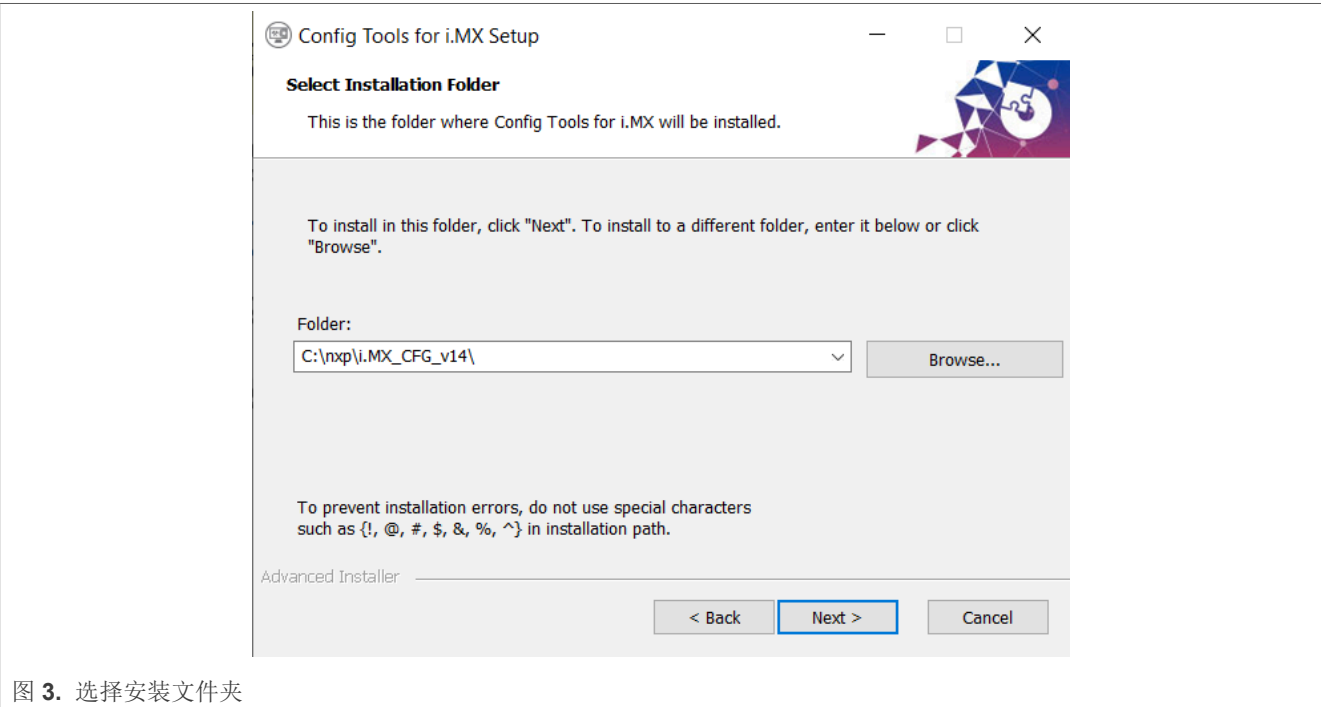7. 在向导的"选择安装文件夹"页面，选择"浏览"并导航到您希望安装 i.MX 配置工具的目标文件夹。

图 **3.** 选择安装文件夹
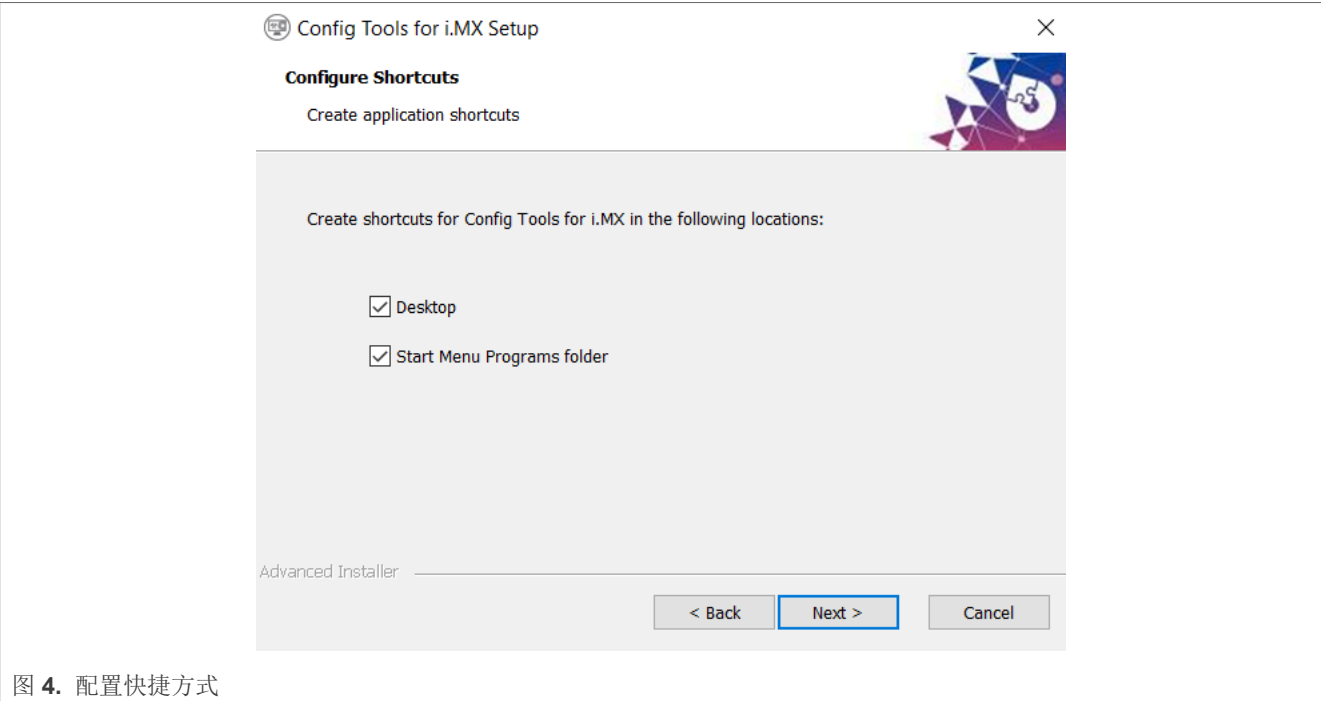
8. 单击"下一步"。

9. 在向导的"配置快捷方式" 页面，选择您希望的创建 i.MX 配置工具的快捷方式。

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图 **4.** 配置快捷方式

10. 单击"下一步"。
11. 在"准备安装"页面上，选择"安装"。
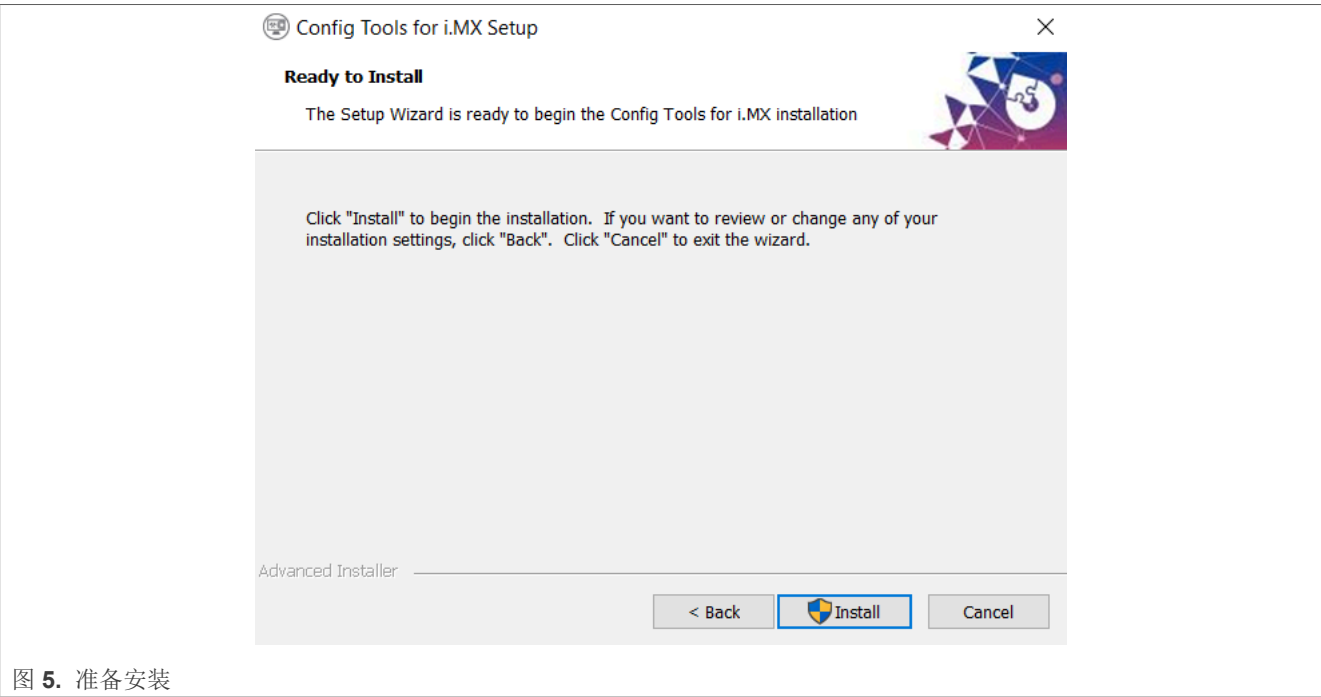
图 **5.** 准备安装

安装开始。

注：如果您想要查看或更改安装设置，请单击"上一步"。点击"取消"退出 Wizard。

安装完成时，安装程序会提示您。

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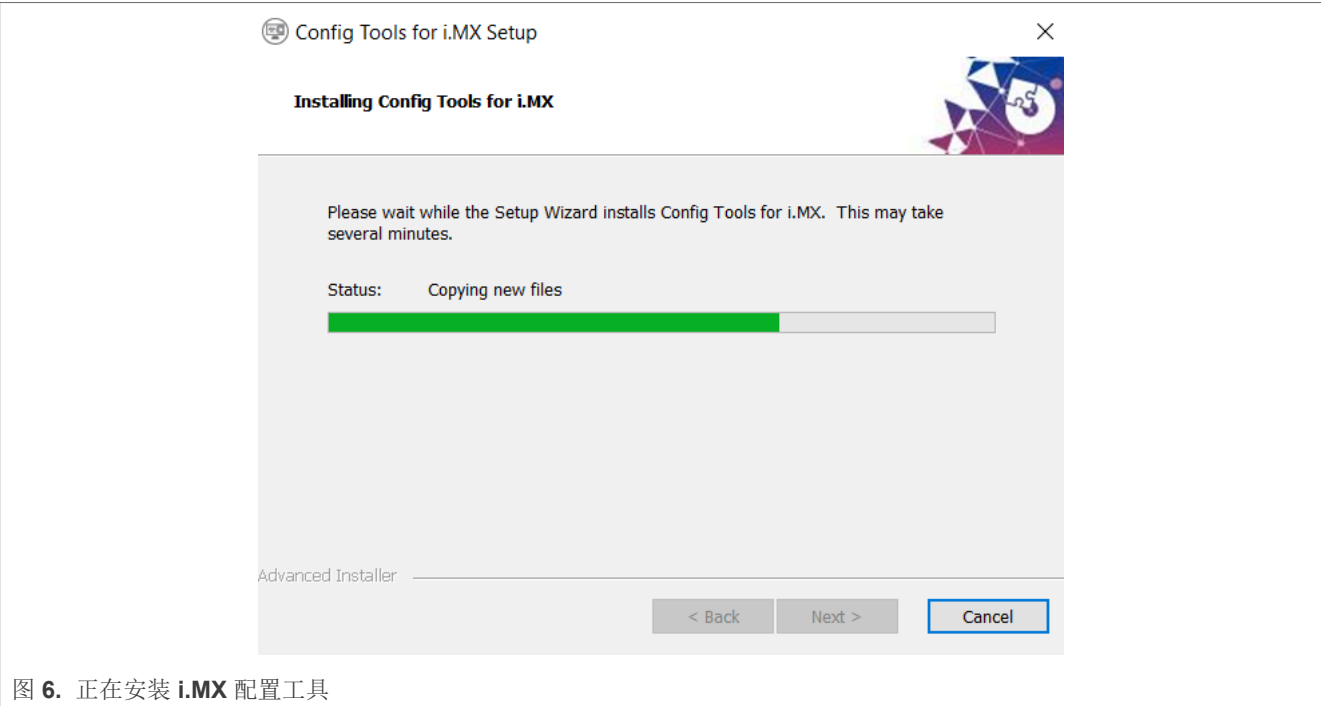
图 6. 正在安装 **i.MX** 配置工具

12. 单击"完成",关闭并退出设置向导。

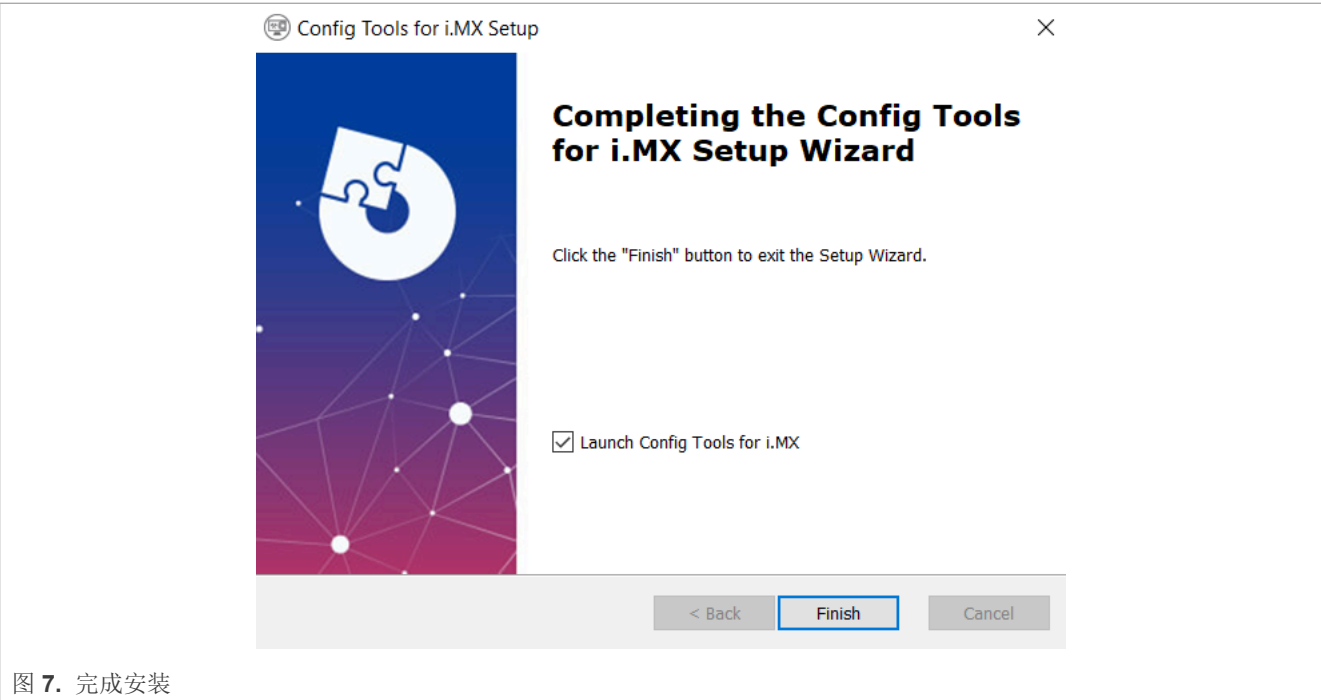

图 7. 完成安装

13. 要开始使用 i.MX 配置工具,请使用桌面的快捷方式或通过"开始"菜单运行工具。您还可以导航至<product installation folder>\bin\ 文件夹,启动 tools.exe,或者启动 <product installation folder>中的快捷方式。

5.2 在 **Mac** 上安装

要将 i.MX 配置工具作为桌面应用程序安装到本地主机上,请执行以下操作:

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1. 双击Config_Tools_for_i.MX_<version>_<architecture>.pkg 以启动"安装 **i.MX** 配置工具"设置。
   注：当尝试打开 MacOS 安装程序，您可能会接受到一个错误信息。为避免错误信息，可在"安全 **&** 隐私"
   菜单中手动选择"**Mac** 应用商店和开发者"。
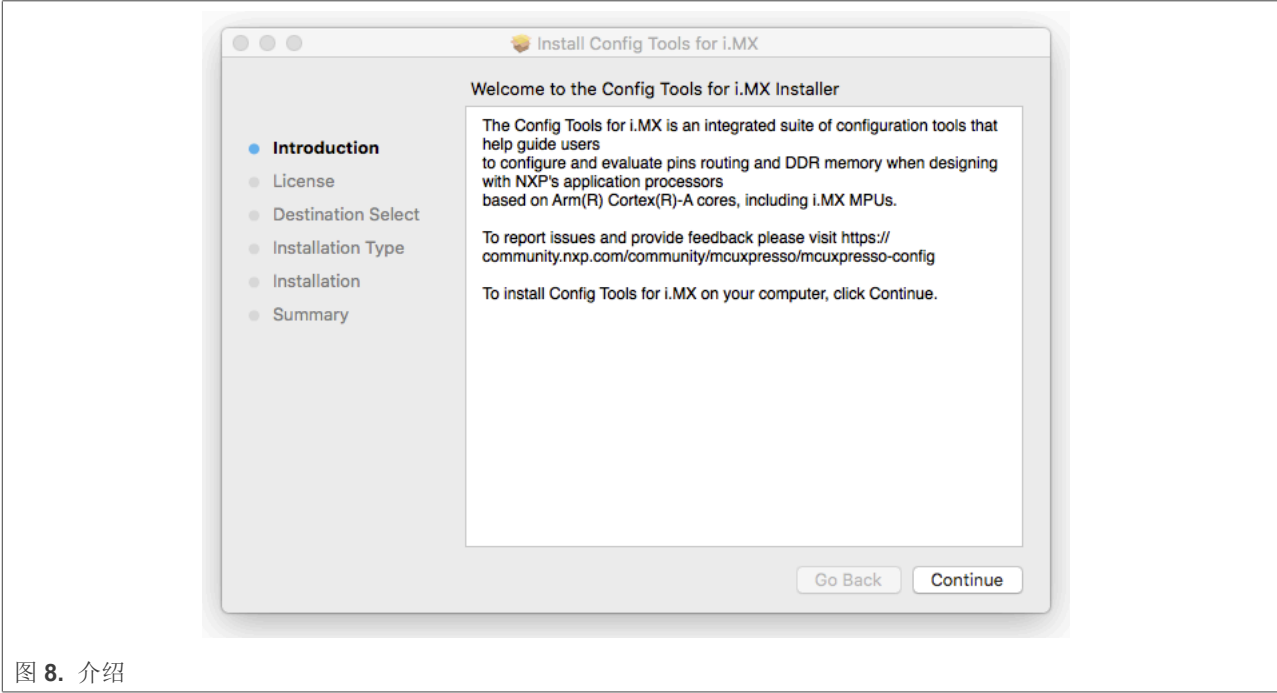

图 **8.** 介绍

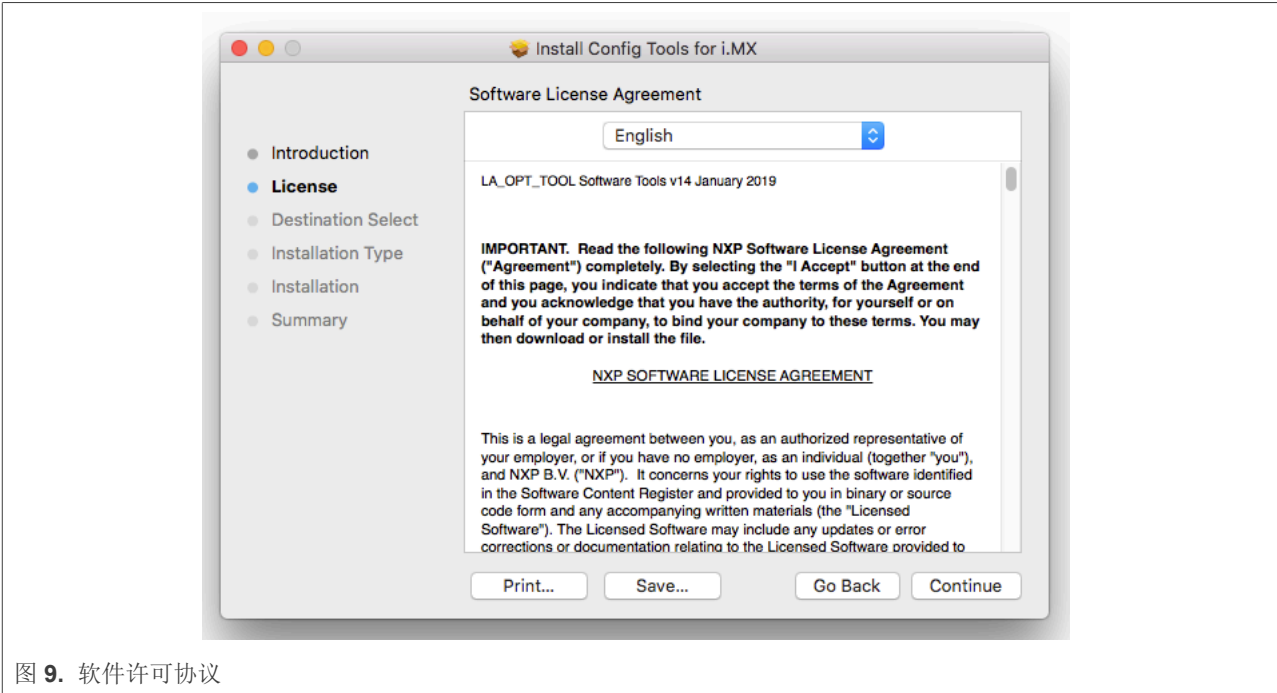2. 在"介绍"页面，点击"继续"。
3. 在"软件许可协议"页面，点击"继续"。

图 **9.** 软件许可协议

4. 请确认您已阅读并点击"同意"表示接受软件许可协议的各项条款。
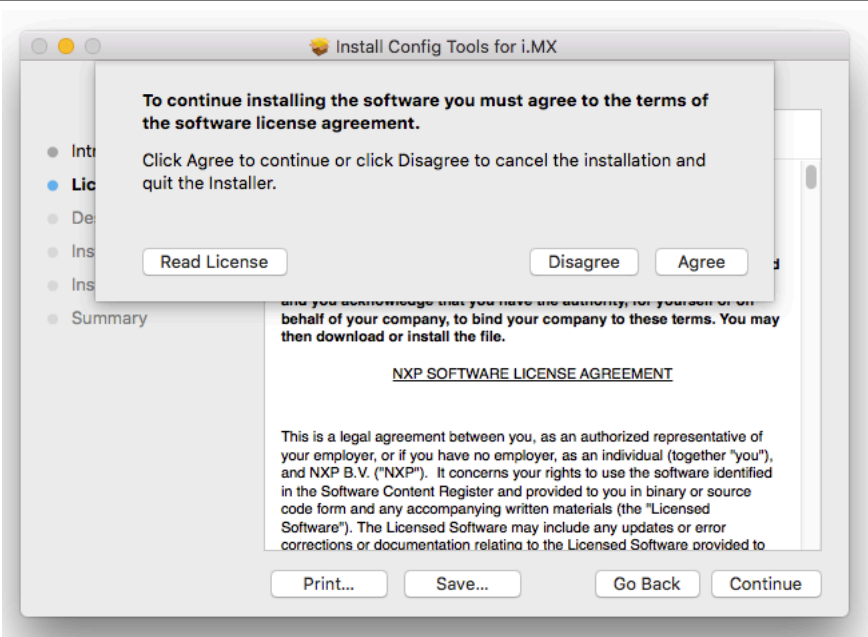
图 **10.** 软件许可协议

5. 在"选择一个目的宗卷"页面，点击绿色箭头选择安装文件夹。
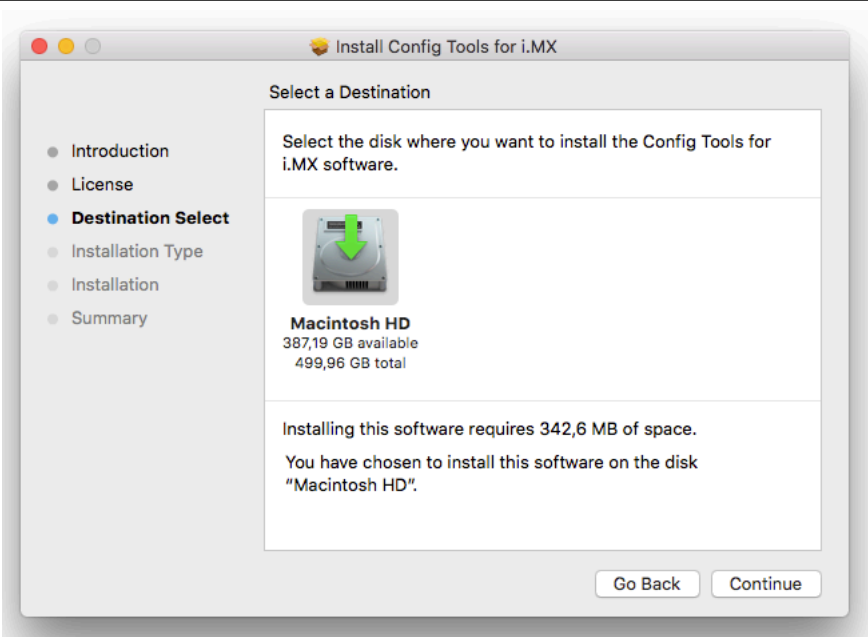
图 **11.** 选择目的宗卷

6. 单击"继续"。
7. 在"安装类型"页面，点击"安装"。

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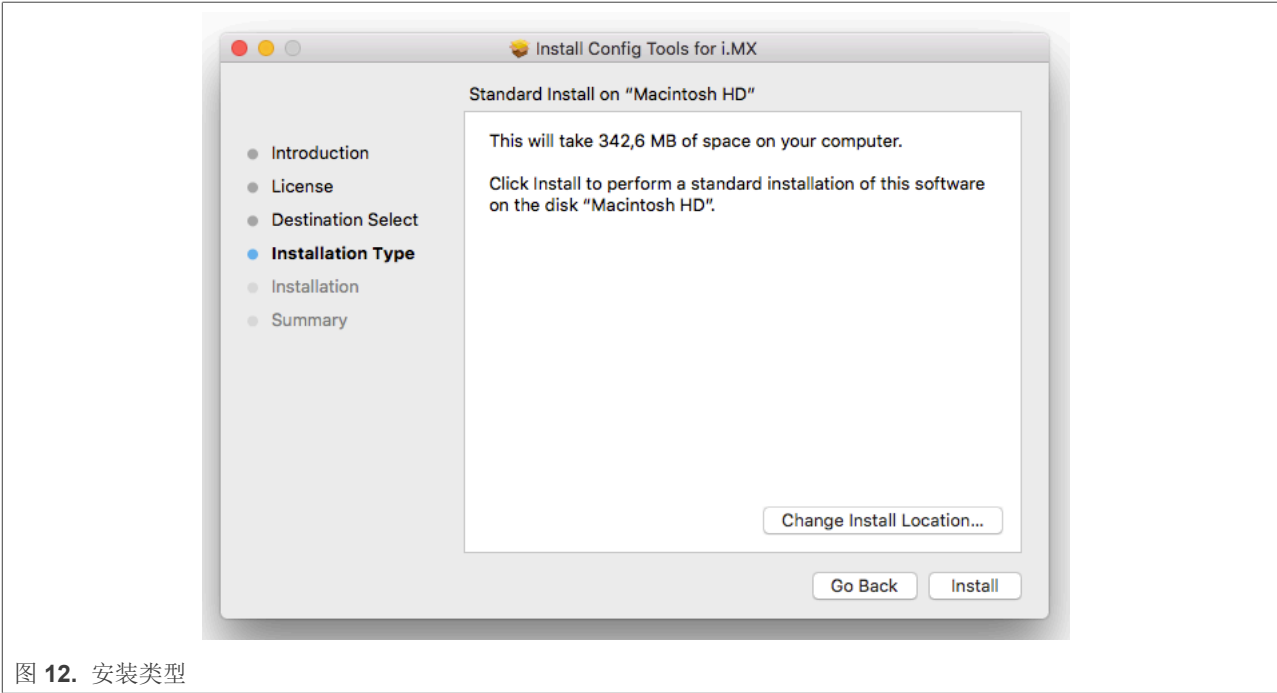
图 **12.** 安装类型

8. 键入您的登录凭证，继续安装。

9. 单击"安装软件"。

图 **13.** 安装软件

10. 单击"继续"。

    除非有错误被报告，"摘要"页面将显示安装成功信息。

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图 **14.** 摘要

11. 单击"关闭",退出安装向导。

5.3 在 Linux 上安装

5.3.1 使用命令行安装

```
chmod +x ./<name><version>-<pkg_revision><architecture>.deb.bin
$ sudo ./<name>_<version>-<pkg_revision>_<architecture>.deb.bin
  (Reading database ... .... files and directories currently installed .)
  Preparing to replace <name> <version> (using
    <name>_<version>-<pkg_revision>_<architecture>.deb) ...
  Unpacking replacement <name> ...
  Setting up <name> (<version>) ...
```

这会将工具安装到默认位置（**/opt/nxp/<default_path>**）。

5.3.2 使用命令行卸载

在终端上，您可以获得包含包名称的 MCUX配置工具列表。

```
dpkg --list "mcuxpresso-config-tools*"
Desired=Unknown/Install/Remove/Purge/Hold
| Status=Not/Inst/Conf-files/Unpacked/halF-conf/Half-inst/trig-aWait/Trig-pend
|/ Err?=(none)/Reinst-required (Status,Err: uppercase=bad)
||/ Name                          Version        Architecture Description
+++-===============================-==============-=============-
================================
ii  mcuxpresso-config-tools-v12 12.0           amd64          MCUXpresso Config
 Tools
```
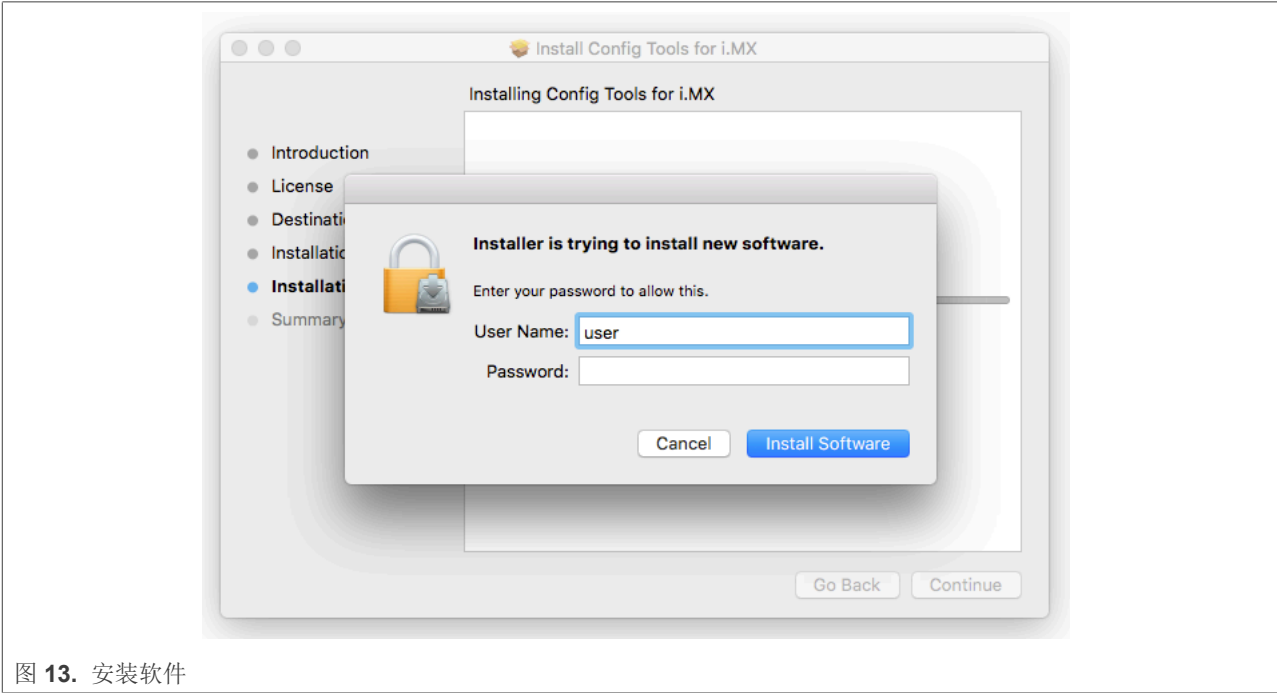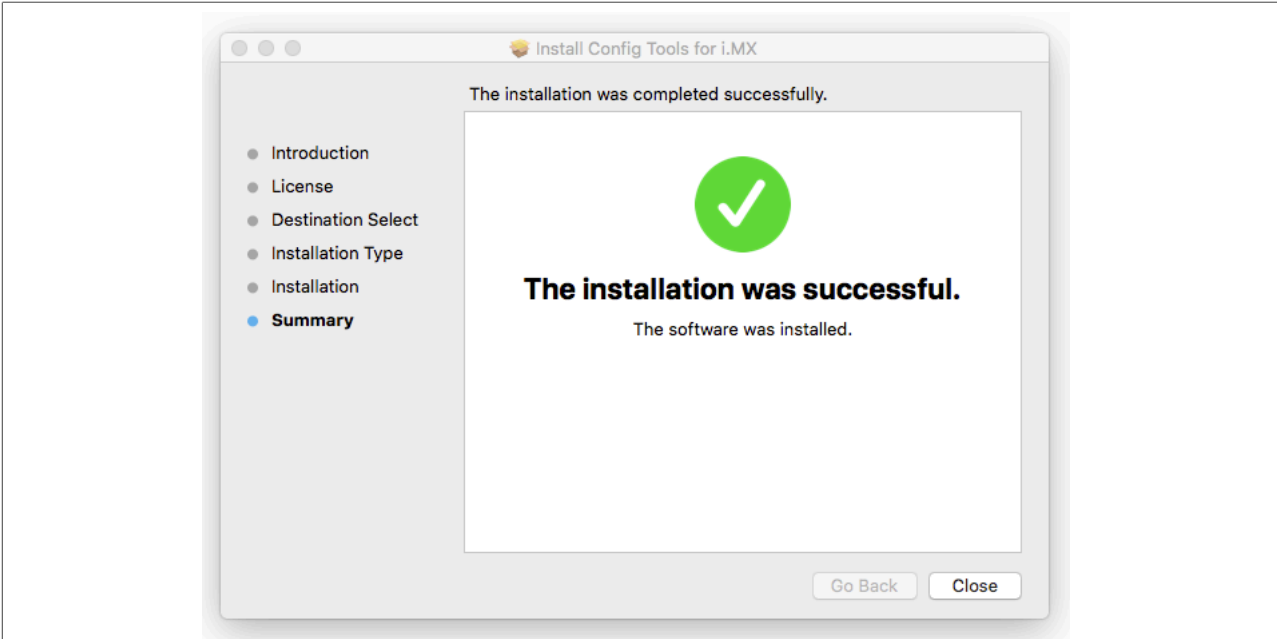
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现在，可以卸载所需的版本：

```
sudo dpkg -r mcuxpresso-config-tools-v12
```

6 修订记录

表 **1.** 修订记录

版本号	日期	重大变更
0	2021年6月23日	初始版本
1	2021年12月22日	屏幕截图已更新
2	2022年6月30日	为 v.12 更新
3	2022年9月20日	为 v.12.1 更新
4	2023年1月13日	为 v.13 更新
5	2023年7月31日	为 v.14 更新

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