IMXQSUG_ZH

i.MX 配置工具的快速入门指南

Rev. 17.0 — 17 September 2026 **User guide**

Document information

Information	Content
Keywords	MCUXpresso配置工具，i.MX
Abstract	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 是一套用于配置 NXP i.MX Cortex-A 和 Cortex-M 处理器的工具套件。

使用 引脚 工具可以自定义设备的引脚路由配置，包括配置所有相关引脚信号的电气特性，并创建适用于设备初始化的源代码，可以是寄存器的直接初始化或 SDK API 代码和/或设备树代码片段（如果支持）。

使用 **DDR** 工具可以配置和验证双倍数据速率 RAM 配置。

使用 可信执行环境 **(TEE)** 工具可以配置内存区域、总线主控和外设的安全策略，以隔离和保护应用程序的敏感区域。

2 开始新配置

首次启动 **i.MX** 配置工具 时，您将看到 开始开发 窗口。您可以使用此窗口创建新配置或加载现有配置。

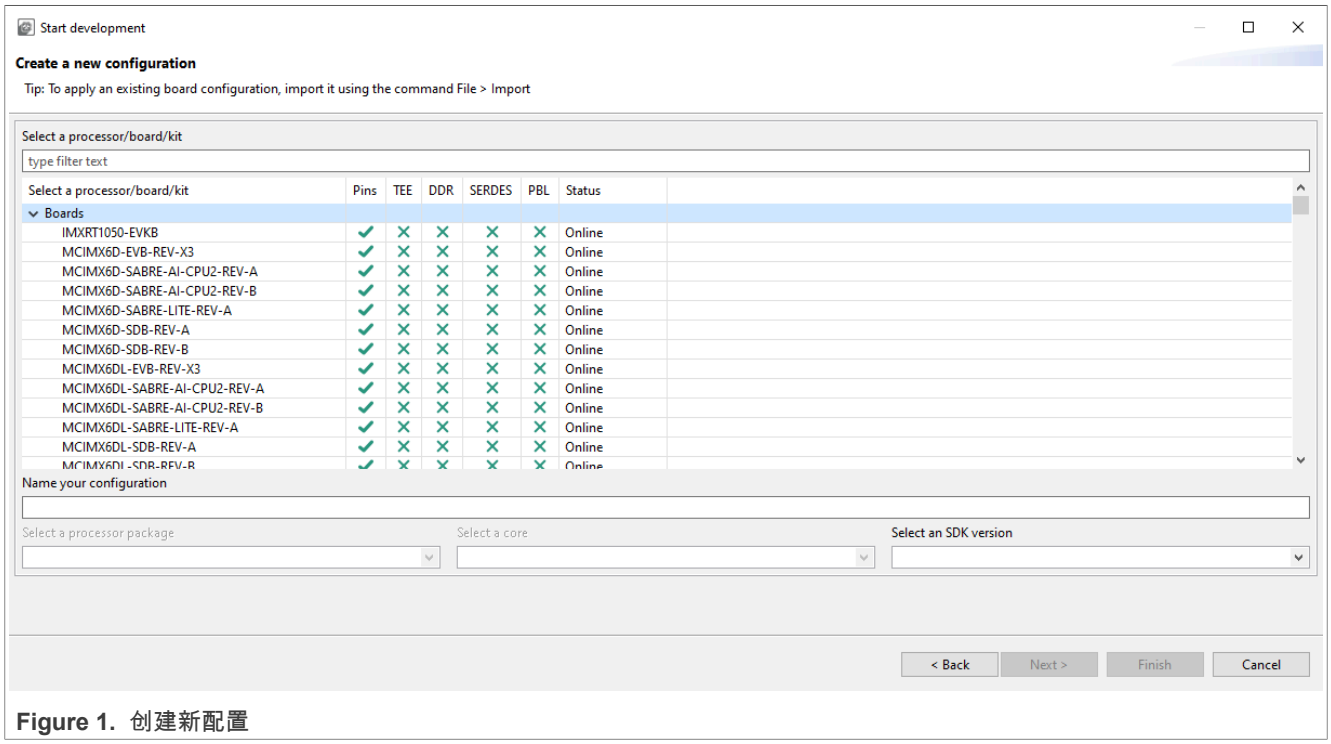

Figure 1. 创建新配置

要为选定的处理器、开发板或套件创建新配置，请执行以下操作：

1. 启动工具或选择 文件 > 新建。
2. 选择选项 为处理器、开发板或套件创建新配置。
3. 选择 下一步。
4. 展开树形结构并选择任何处理器、开发板或套件配置。您也可以使用过滤器字段快速查找所需项目。
5. 自定义配置名称并选择 完成。

使用 文件 > 保存 将现有配置保存到磁盘。

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3 导入现有配置

您还可以使用内置的导入向导导入现有配置，从传统项目格式（IO Mux 工具设计配置 XML 或 i.MX 的 PEx）或另一个已存在的配置文件 (MEX) 或 引脚 工具生成的包含 YAML 配置详细信息的源文件中获取引脚和 DDR 配置。

要导入现有配置：

1. 选择 文件 > 导入。
2. 选择导入向导，选择 下一步 并按照说明操作。
3. 选择 浏览，然后选择所需的输入文件。
4. 选择 完成以导入文件。

如果导入成功完成，将创建新配置，然后使用 文件 > 保存 将其保存到磁盘。

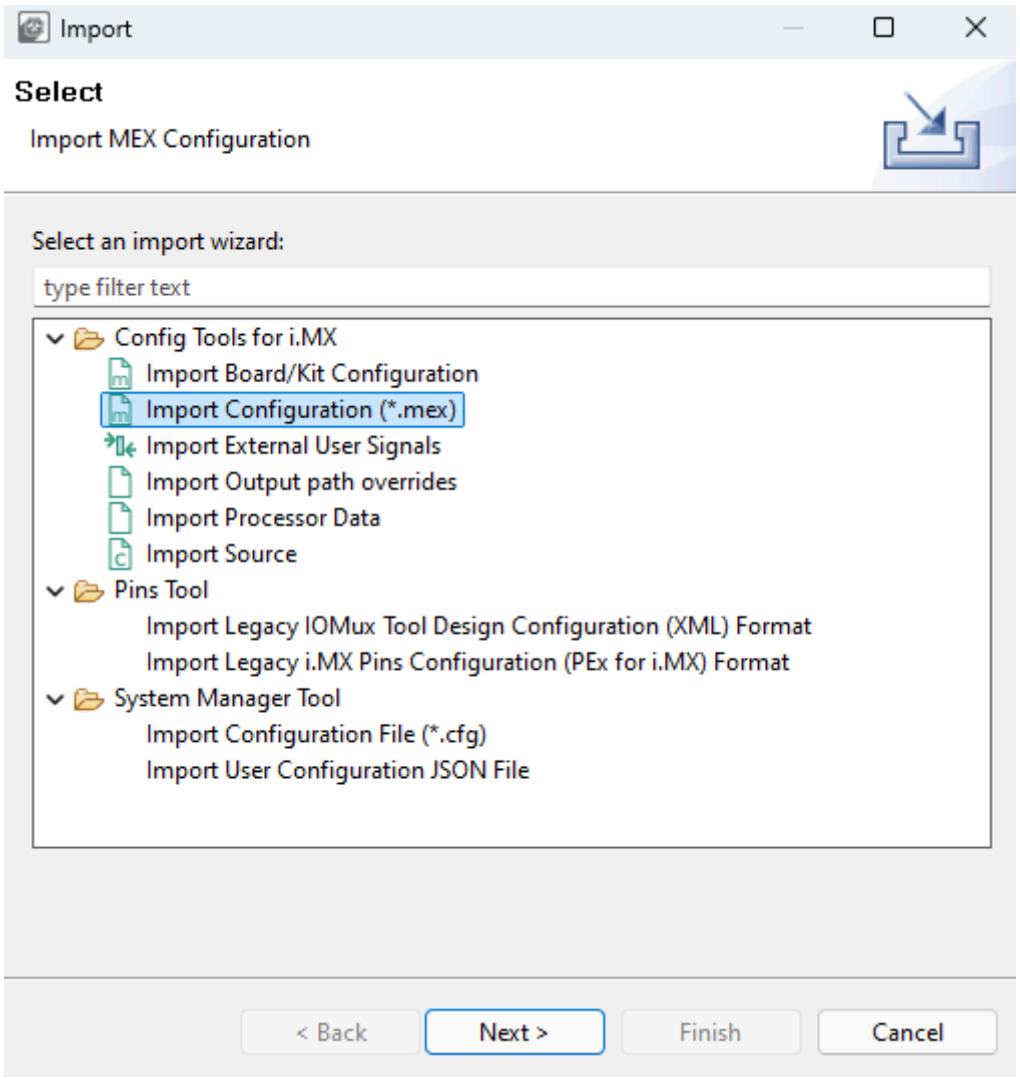

Figure 2. 导入

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4 引脚工具

在引脚工具中，您可以显示和配置所选处理器的引脚。基本配置可以在引脚、外设信号或封装 视图中完成。

更高级的设置（引脚电气特性和功能）可以在 路由引脚 视图中查看和配置。

此外，**i.MX** 配置工具 允许您在硬件级别验证给定功能组内来自不同电源轨（如果为给定处理器指定）的引脚配置可能存在的电压电平问题。支持的电源组的各个电压电平可以在 电源组 视图中为当前配置进行全局配置。

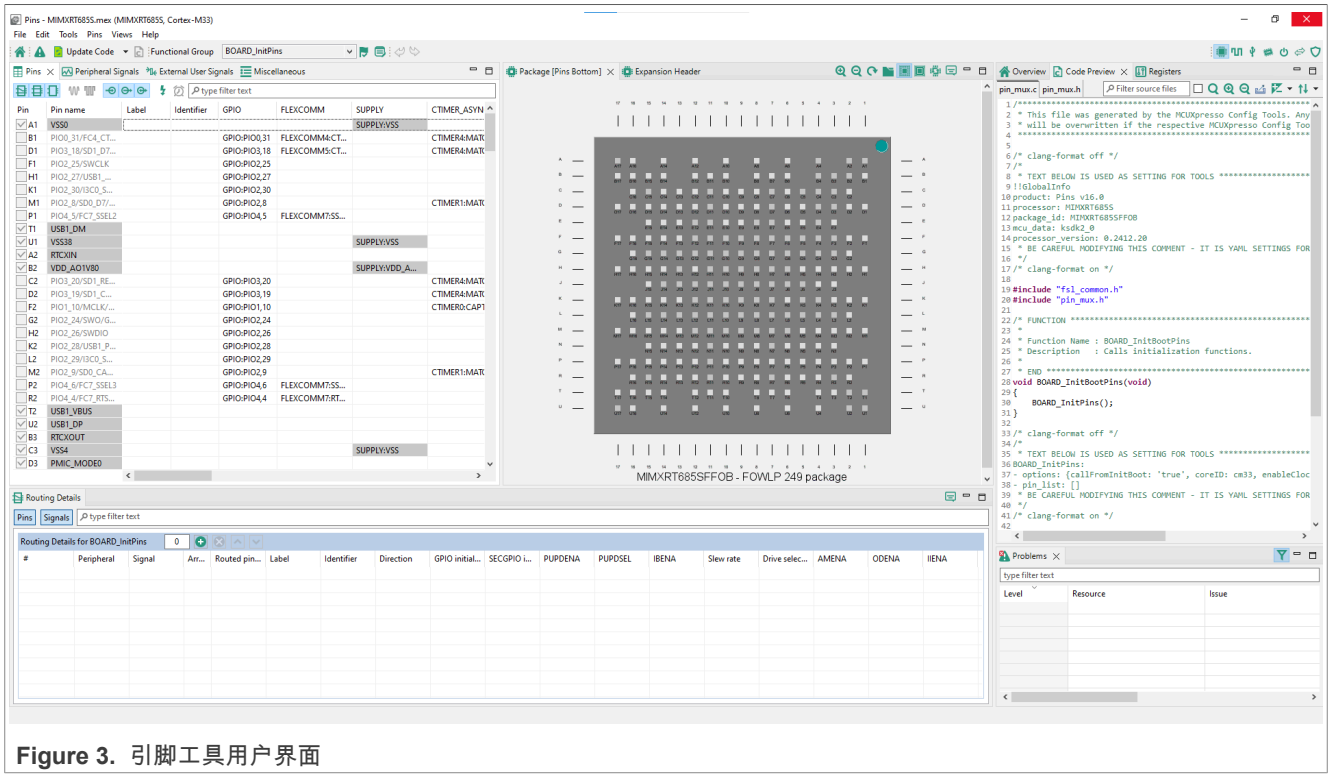

Figure 3. 引脚工具用户界面

5 DDR 工具

在 **DDR** 视图中，您可以查看和配置基本 DDR 属性，如内存类型、频率、通道数等。

在 验证 视图中，您可以将 DDR 配置提交给各种测试。指定连接类型后，您可以选择场景、在这些场景中运行的测试，并查看测试结果、日志和摘要。

6 可信执行环境工具

在 可信执行环境 或 **TEE** 工具中，您可以配置内存区域、总线主控和外设的安全策略，以隔离和保护应用程序的敏感区域。

您可以在 安全访问配置 及其子视图中设置应用程序不同部分的安全策略，并在 内存属性映射、访问概览 和 域概览 视图中查看这些策略。使用 用户内存区域 视图可以创建内存区域及其安全级别的便捷概览。

您还可以在 寄存器 视图中查看 **TEE** 工具处理的寄存器，并在 代码预览 工具中检查代码。

注意： 为了使您的配置生效，请确保您已在 安全访问配置 视图的 杂项 子视图中启用了相关的启用安全检查选项。

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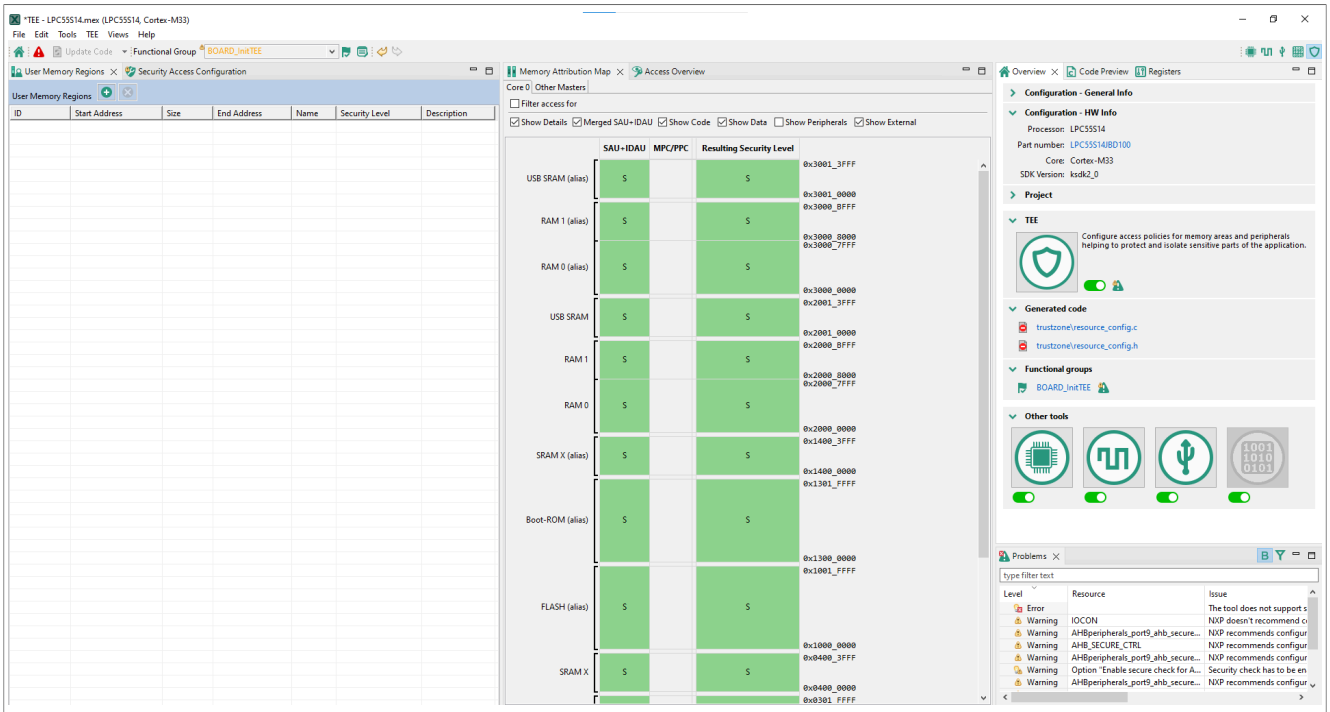

Figure 4. TEE 工具用户界面 (SAU+IDAU)

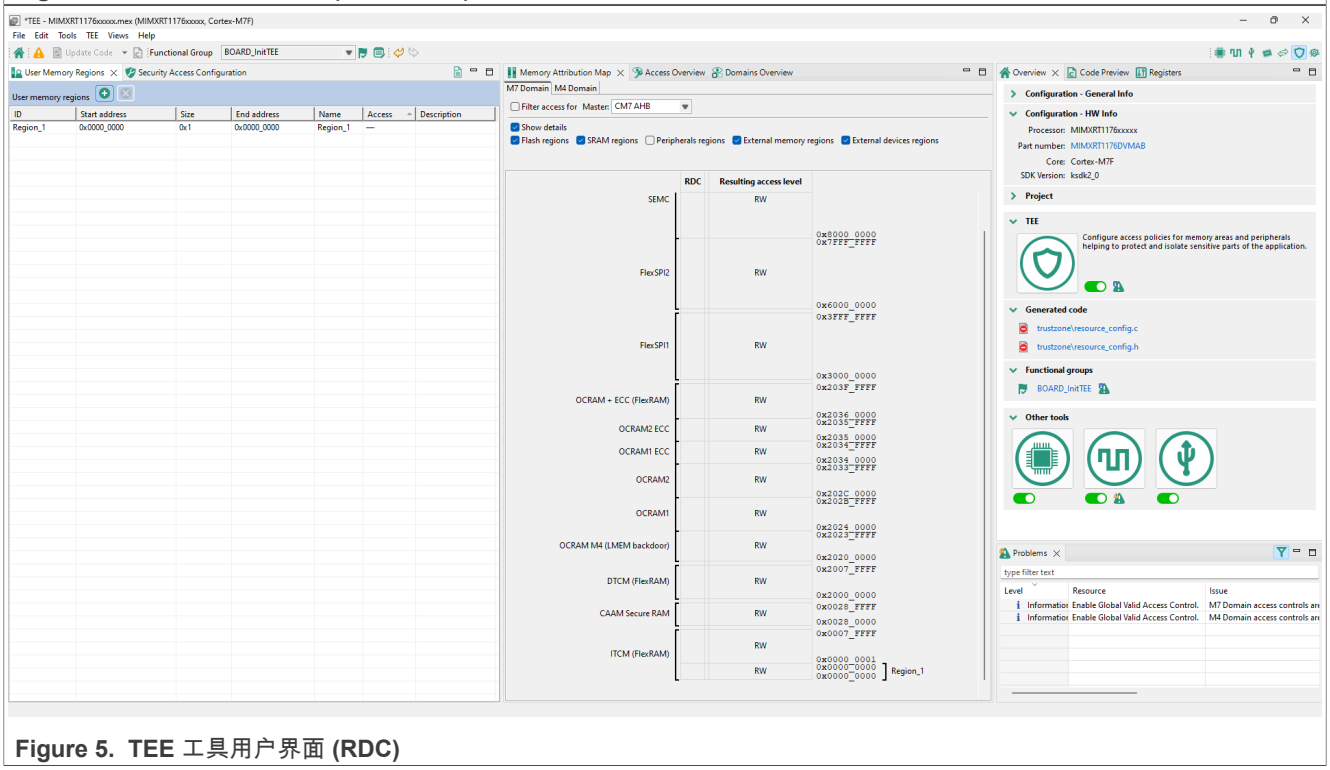

Figure 5. TEE 工具用户界面 (RDC)

7 生成代码

引脚工具会自动为当前配置生成输出代码。您也可以从 主菜单 选择 引脚 > 刷新 来手动更新代码。所有输出代码文件都显示在 代码预览 视图中。要复制代码，请执行复制/粘贴操作或单击 代码预览 视图右上角的 导出 图标。

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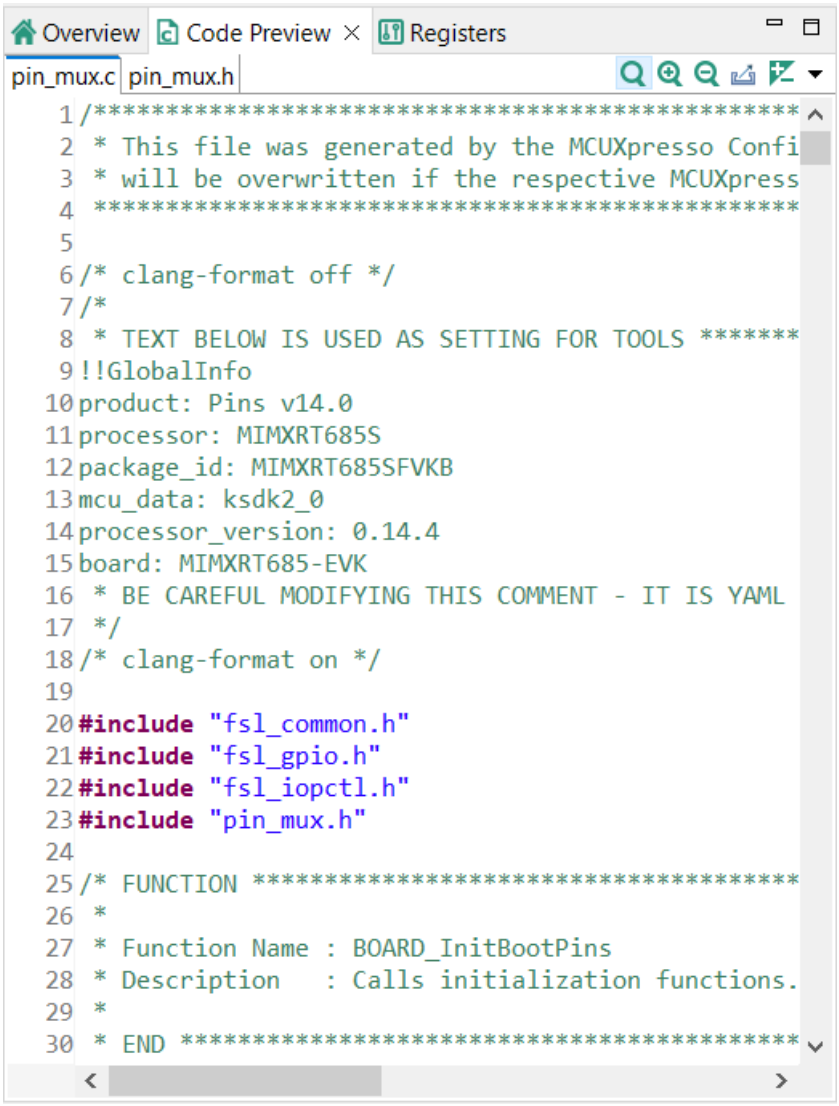

Figure 6. 生成代码

或者，您也可以导出各种类型的生成输出，如源文件、CSV 格式的纯引脚配置数据、修改的寄存器内容或 HTML 格式的引脚配置报告，可通过从 主菜单 的 文件 > 导出 中选择特定的导出向导。

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Table 1. 修订历史

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IMXQSUG_ZH v.15.0	2026年3月25日	为 v.26.03 更新
IMXQSUG_ZH v.14.0	2025年12月16日	为 v.25.12 更新
IMXQSUG_ZH v.13.0	2025年9月18日	为 v.25.09 更新
IMXQSUG_ZH v.12.0	2025年6月20日	为 v.25.06 更新
IMXQSUG_ZH v.11.0	2025年3月17日	为 v.25.03 更新
IMXQSUG_ZH v.10.0	2025年1月15日	为 v.24.12 更新
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IMXQSUG_ZH v.4.0	2023年1月2日	截图已更新，小幅更新
IMXQSUG_ZH v.3.0	2022年9月20日	为 v.12.1 更新
IMXQSUG_ZH v.2.0	2022年6月30日	为 v.12 更新
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