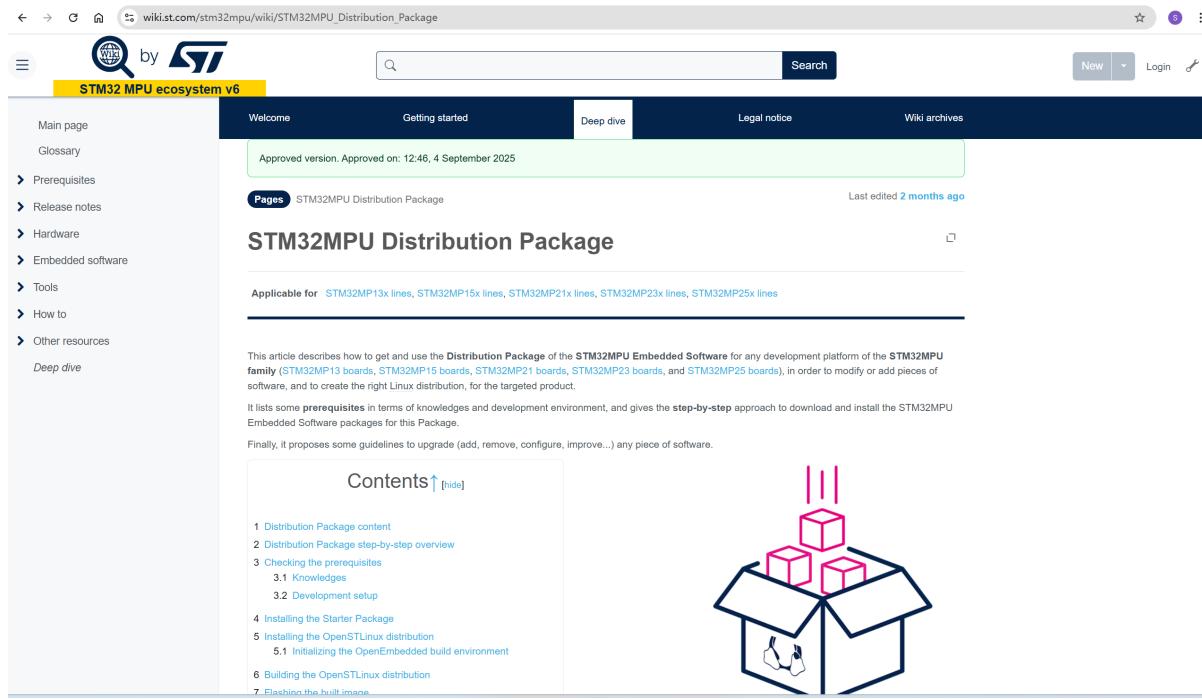


Yocto构建教程

官方wiki文档，强烈推荐！！！里面的内容几乎能解决任何问题！



The screenshot shows a web browser displaying the STM32MPU Distribution Package page from the official wiki. The page title is "STM32MPU Distribution Package". It includes a sidebar with navigation links like Main page, Glossary, Prerequisites, Release notes, Hardware, Embedded software, Tools, How to, and Other resources. The main content area has a green header bar indicating it's an approved version from September 2025. Below this, there's a section titled "Pages" showing the current page. The main text describes the distribution package for STM32MPU boards, listing prerequisites, step-by-step instructions for download and install, and upgrade guidelines. A sidebar on the left lists the table of contents, and a large icon of an open box with three cubes is on the right.

将官方repo仓库更新成github仓库(官方仓库需要访问google)

- 新增meta-st-develop
 - 增加u-boot补丁(meta-st-develop/meta-st-stm32mp-addons/recipes-extended/u-boot/u-boot-stm32mp/0001-support-panel-eth-phy.patch)
 - 增加kernel补丁和外部kernel配置(meta-st-develop/recipes-kernel/linux/ patch和external kernel config)
 - 增加mx仓库，完全兼容STM32CUBEMX工具

The screenshot shows the GitHub repository page for 'stm32mp1-yocto' by AcSully. The repository has 10 commits and a README file titled '正点原子STM32MP157 Yocto一键编译'. The 'Key Features' section lists various hardware and software support. The 'Languages' section shows BitBake as the primary language (42.0%). The 'Suggested workflows' section includes an SLSA Generic option.

mx项目目录

- 设备树
 - tf-a
 - optee
 - u-boot
 - kernel
- TODO
 - audio
 - beep
 - adc
 - RS232/RS485
 - FD CAN
 - 6 AIXS SENSOR
 - ALS&PS SENSOR
 - TF Card
 - HDMI
 - USB OTG - 待测试
 - SDIO WIFI&BT
 - TEMP&HUMI SENSOR

The screenshot shows the GitHub repository page for `AcSully/stm32mp1-yocto`. It displays a list of recent commits, including support for ov5640/fix uart bug and uboot fix ok. The README section contains hardware details for STM32MP157DAA1, such as UART, RCC, SDMMC2 - EMMC, BSEC, and PWR_REGULATORS. On the right side, there are sections for About (no description), Releases (no releases published), Packages (no packages published), Languages (C 99.2%, Other 0.8%), and Suggested workflows (SLSA Generic generator, MSBuild based projects, CMake based, multi-platform projects).

下载github代码

```
git clone --recurse-submodules https://github.com/AcSully/stm32mp1-yocto.git
cd stm32mp1-yocto
git submodule update --remote
```

下载Yocto下载包(里面包含需要联网下载的源码)

链接: https://pan.baidu.com/s/15_UaWHm3nBICPwpJyYhACw 提取码: 48h4

下载完成后解压，记住解压后的目录，我的放在`/home/niuke/Downloads/STM32MP1`，需要实际解压目录

```
7z x STM32MP1_Yocto.zip.001
/home/niuke/Downloads/temp/STM32MP1_Yocto
```

```
Everything is OK

Folders: 2375
Files: 5622
Size: 9006655167
Compressed: 8865681895
niuke@zhisome:~/Downloads/git$ ls
STM32MP1_Yocto      STM32MP1_Yocto.zip.002  STM32MP1_Yocto.zip.005  STM32MP1_Yocto.zip.008
STM32MP1_Yocto.tgz   STM32MP1_Yocto.zip.003  STM32MP1_Yocto.zip.006  STM32MP1_Yocto.zip.009
STM32MP1_Yocto.zip.001 STM32MP1_Yocto.zip.004  STM32MP1_Yocto.zip.007
niuke@zhisome:~/Downloads/git$ 7z x STM32MP1_Yocto.zip.001
```

声明环境变量

```
DISTRO=openstlinux-weston MACHINE=stm32mp1-develop source layers/meta-st-
develop/scripts/envsetup.sh build-stm32mp1-custom
```

两个都选择接受

The BSP for stm32mp1-develop depends on packages and firmware which are covered by an End User License Agreement (EULA). To have the right to use these binaries in your images, you need to read and accept the following...

<Read the EULA>

<EXIT>

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<Accept EULA>

<EXIT>

```
DISTRO      : openstlinux-weston
DISTRO_CODENAME : scarthgap
MACHINE     : stm32mp1-develop
BB_NUMBER_THREADS : <no-custom-config-set>
PARALLEL_MAKE : <no-custom-config-set>

BUILD_DIR   : build-stm32mp1-custom
DOWNLOAD_DIR : <disable>
SSTATE_DIR   : <disable>

SOURCE_MIRROR_URL : <no-custom-config-set>
SSTATE_MIRRORS  : <disable>

WITH_EULA_ACCEPTED: YES
=====
available images for OpenSTLinux layers are:
- Official OpenSTLinux images:
  st-image-weston      - OpenSTLinux weston image with basic Wayland support (if enable in distro)

- Other OpenSTLinux images:
  - Supported images:
    st-image-core        - OpenSTLinux core image

You can now run 'bitbake <image>'
```

vi conf/local.conf

找到DL_DIR, 修改路径为刚才解压的路径(STM32MP1_Yocto.zip.001), 保存

```

# connection is slow. These are all stored in DL_DIR. When wiping and rebuilding yo
# can preserve this directory to speed up this part of subsequent builds. This dire
# is safe to share between multiple builds on the same machine too.
#
# The default is a downloads directory under TOPDIR which is the build directory.
#
#DL_DIR ?= "${TOPDIR}/downloads"
DL_DIR ?= "/home/niuke/Downloads/STM32MP1"

#
# Where to place shared-state files
#
# BitBake has the capability to accelerate builds based on previously built output.
# This is done using "shared state" files which can be thought of as cache objects
# and this option determines where those files are placed.
#
# You can wipe out TMPDIR leaving this directory intact and the build would recompute

```

编译镜像

bitbake st-image-weston

```

niuke@zhihome:~/develop/github/stm32mp1-yocto/build-stm32mp1-custom$ bitbake st-image-weston
NOTE: Started PRServer with DBfile: /home/niuke/develop/github/stm32mp1-yocto/build-stm32mp1-custom/cache/prserv.sqlite3, Address: 127.0.0.1:37411,
PID: 1213260
Loading cache: 100% | ETA: --:--:--
Loaded 0 entries from dependency cache.
Parsing recipes:  1% |### | ETA: 0:02:03

/usr/lib/pipewire-0.3/libpipewire-module-netjack2-manager.so uses 32-bit api 'setsockopt'
Suppress with INSANE_SKIP = "32bit-time"
/usr/lib/pipewire-0.3/libpipewire-module-netjack2-driver.so uses 32-bit api 'setsockopt'
Suppress with INSANE_SKIP = "32bit-time"
/usr/lib/pipewire-0.3/libpipewire-module-pipe-tunnel.so uses 32-bit api 'fstat64'
Suppress with INSANE_SKIP = "32bit-time"
/usr/lib/pipewire-0.3/libpipewire-module-protocol-pulse.so uses 32-bit api 'fstat64'
/usr/lib/pipewire-0.3/libpipewire-module-protocol-pulse.so uses 32-bit api 'gettimeofday'
/usr/lib/pipewire-0.3/libpipewire-module-protocol-pulse.so uses 32-bit api 'getsockopt'
/usr/lib/pipewire-0.3/libpipewire-module-protocol-pulse.so uses 32-bit api 'stat64'
/usr/lib/pipewire-0.3/libpipewire-module-protocol-pulse.so uses 32-bit api 'setsockopt'
Suppress with INSANE_SKIP = "32bit-time"
/usr/lib/pipewire-0.3/libpipewire-module-vban-send.so uses 32-bit api 'setsockopt'
/usr/lib/pipewire-0.3/libpipewire-module-vban-send.so uses 32-bit api 'sendmsg'
Suppress with INSANE_SKIP = "32bit-time"
/usr/lib/pipewire-0.3/libpipewire-module-rtp-sink.so uses 32-bit api 'setsockopt'
/usr/lib/pipewire-0.3/libpipewire-module-rtp-sink.so uses 32-bit api 'sendmsg'
Suppress with INSANE_SKIP = "32bit-time"
/usr/lib/pipewire-0.3/libpipewire-module-access.so uses 32-bit api 'fstat64'
Suppress with INSANE_SKIP = "32bit-time"
/usr/lib/pipewire-0.3/libpipewire-module-client-node.so uses 32-bit api 'clock_gettime'
Suppress with INSANE_SKIP = "32bit-time"
/usr/lib/pipewire-0.3/libpipewire-module-protocol-simple.so uses 32-bit api 'setsockopt'
Suppress with INSANE_SKIP = "32bit-time"
/usr/lib/libpipewire-0.3.so.0.1203.0 uses 32-bit api 'fcntl64'
/usr/lib/libpipewire-0.3.so.0.1203.0 uses 32-bit api 'clock_gettime'
/usr/lib/libpipewire-0.3.so.0.1203.0 uses 32-bit api 'prctl'
/usr/lib/libpipewire-0.3.so.0.1203.0 uses 32-bit api 'fstat64'
/usr/lib/libpipewire-0.3.so.0.1203.0 uses 32-bit api 'stat64'
/usr/lib/libpipewire-0.3.so.0.1203.0 uses 32-bit api 'pthread_cond_timedwait'
Suppress with INSANE_SKIP = "32bit-time"
/usr/bin/pw-cat uses 32-bit api 'fstat64'
Suppress with INSANE_SKIP = "32bit-time"
/usr/bin/pw-mididump uses 32-bit api 'fstat64'
Suppress with INSANE_SKIP = "32bit-time"
/usr/bin/spa-json-dump uses 32-bit api 'fstat64'
Suppress with INSANE_SKIP = "32bit-time"
/usr/bin/pw-dot uses 32-bit api 'fstat64'
Suppress with INSANE_SKIP = "32bit-time" [32bit-time]
WARNING: netdata-1.44.3-r0 do_package_qa: QA Issue: File /usr/sbin/netdata in package netdata contains reference to TMPDIR [buildpaths]
NOTE: Tasks Summary: Attempted 10846 tasks of which 0 didn't need to be rerun and all succeeded.
NOTE: Writing buildhistory
NOTE: Writing buildhistory took: 45 seconds

Summary: There were 5 WARNING messages.
```

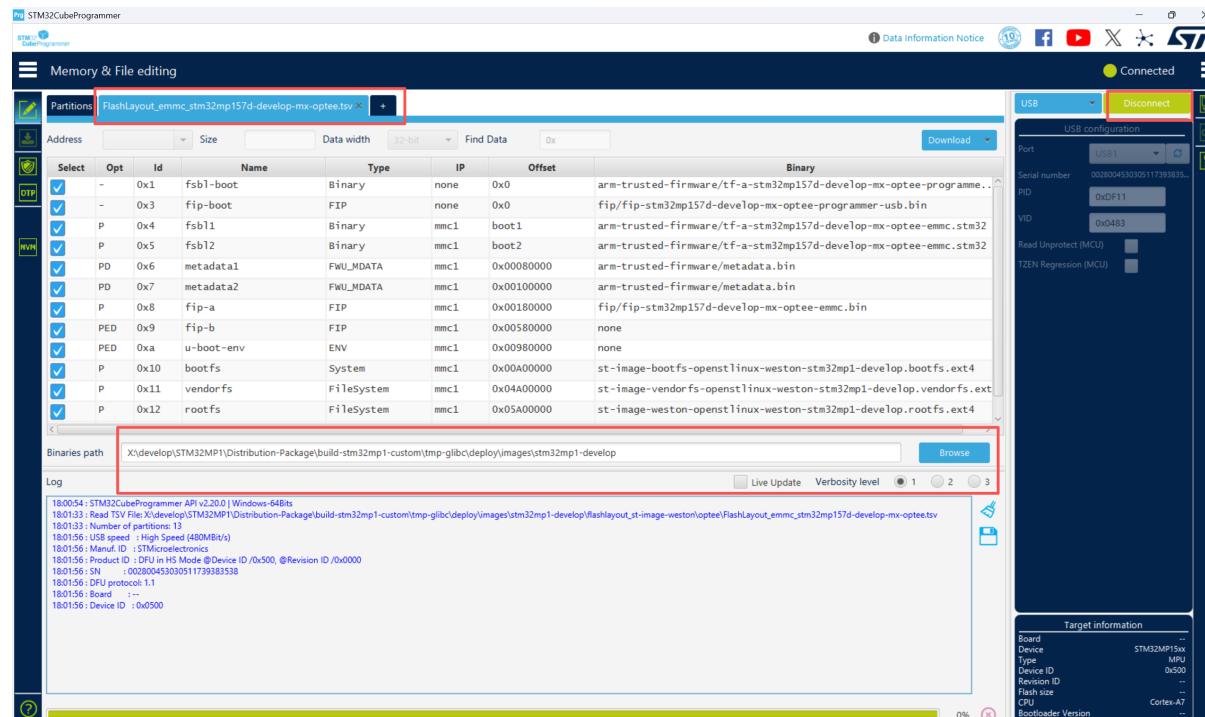
烧录镜像到开发板

镜像位置在build-stm32mp1-custom\tmp-glibc\deploy\images\stm32mp1-develop

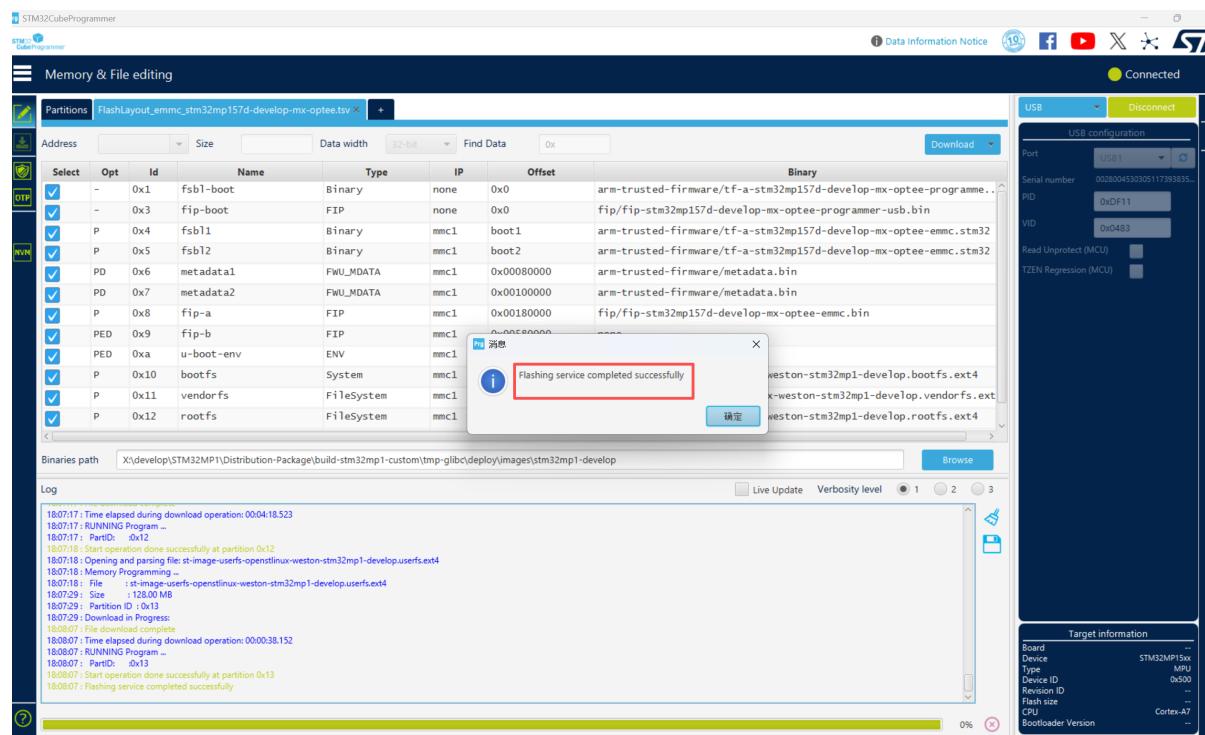
打开烧录软件

打开build-stm32mp1-custom\tmp-glibc\deploy\images\stm32mp1-develop\flashlayout_st-image-weston\optee\FlashLayout_emmc_stm32mp157d-develop-mx-optee.tsv

将拨码开关调整000到烧录模式，烧录器选择USB，connect，Download



出现"Flashing service completed successfully"，则烧录成功



开发板验证

将启动模式修改成EMMC启动，按RESET键，完美！！！



参考地址

[https://wiki.st.com/stm32mpu/wiki/STM32MPU Distribution Package](https://wiki.st.com/stm32mpu/wiki/STM32MPU_Distribution_Package)

<https://github.com/AcSully/stm32mp1-yocto>

<https://github.com/AcSully/mx>