STM32MP1 Distribution Package - OpenSTLinux distribution

Contents

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Stable: 09.10.2019 - 13:15 / Revision: 09.10.2019 - 13:13

A quality version of this page, accepted on *9 October 2019*, was based off this revision.

This article aims to give the following information:

- How to download and install the **latest** OpenSTLinux distribution for the STM32 microprocessors Series
- Where to find the associated release note
- Where to find the previous releases (archives)

For more specific information, go through the Distribution Package article relative to your STM32 microprocessors Series: Category:Distribution Package

1 STM32MP15-Ecosystem-v1.1.0 release

- The STM32MP1 OpenSTLinux distribution is delivered through a manifest repository location and a manifest revision (**openstlinux-4.19-thud-mp1-19-10-09**).
- The installation relies on the *repo* command. In case the Repo tool (a Google-built repository management tool that runs on top of Git) is not yet installed and configured on the host PC, refer to the PC prerequisites article.
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- Install the STM32MP1 OpenSTLinux distribution

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.1.0 release
Installation	• Go to the host PC directory where to install the Distribution Package (*<Distribution Package installation directory>*). Example, if following the proposition to organize the working directory: `$ cd <working directory path>/Distribution-Package` • Create the OpenSTLinux distribution installation sub-directory: `$ mkdir openstlinux-4.19-thud-mp1-19-10-09` `$ cd openstlinux-4.19-thud-mp1-19-10-09` • Initialize repo in the current directory (More details on 'repo init' here). `$ repo init -u https://github.com/STMicroelectronics/oe-manifest.git -b refs/tags/openstlinux-4.19-thud-mp1-19-10-09`

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.1.0 release
	Note: "ERROR 404" may appear during "repo init" command without any impact on the process • Synchronize the local project directories with the remote repositories specified in the manifest (more details on 'repo sync' here) `$ repo sync` **Note:** *Distribution package* needs around 140MB to be installed (and around 25GB once *distribution package* is compiled).
Release note	Details about the content of this software package are available in the **associated** STM32MP15 ecosystem release note. If interested in previous releases, go through the archives of the ecosystem release note.

- The **OpenSTLinux distribution installation directory** is in the *<Distribution Package installation directory>, and is named* openstlinux-4.19-thud-mp1-19-10-09*:*

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openstlinux-4.19-thud-mp1-19-10-09  OpenSTLinux distribution
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the STM32CubeMX integration
│   │   └── scripts
│   │       ├── envsetup.sh              Environment setup script for Distribution
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Package
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│      ├── meta-timesys                    Timesys layer for OpenEmbedded (standard)
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2 Archives

2.1 STM32MP15-Ecosystem-v1.0.0 release

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OpenSTLinux distribution
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Open Source Software

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Pages in category "Distribution Package"

The following 6 pages are in this category, out of 6 total.

H

- How to add a customer application
- How to create your own machine
- How to cross-compile with the Distribution Package
- How to customize the Linux kernel

S

- STM32MP1 Distribution Package
- STM32MP1 Distribution Package for Android

STM32MP1 Distribution Package - OpenSTLinux distribution

Stable: 21.02.2020 - 08:23 / Revision: 14.02.2020 - 16:43

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	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.0.0 release
	• Go to the host PC directory where to install the Distribution Package (*<Distribution Package installation directory>*). Example, if following the proposition to organize the working directory:

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.0.0 release
Installation	`$ cd <working directory path>/Distribution-Package` • Create the OpenSTLinux distribution installation sub-directory: `$ mkdir openstlinux-4.19-thud-mp1-19-02-20` `$ cd openstlinux-4.19-thud-mp1-19-02-20` • Initialize repo in the current directory. Details: The below command downloads (in the *.repo* directory) the latest repo source code and a manifest file (*default.xml*) that describes the directory structure of the repositories for OpenSTLinux. The *-u* option specifies the manifest repository location, while the *-b* option specifies its branch. `$ repo init -u https://github.com/STMicroelectronics/oe-manifest.git -b refs/tags/openstlinux-4.19-thud-mp1-19-02-20` **Note:** "ERROR 404" may appear during "repo init" command without any impact on the process • Synchronize the local project directories with the remote repositories specified in the manifest Details: If a local project does not yet exist, the command clones a new local directory from the remote repository and sets up tracking branches as specified in the manifest. If the local project already exists, the command updates the remote branches and rebases any new local changes on top of the new remote changes. `$ repo sync`
Release note	Details about the content of this software package are available in the **associated** STM32MP15 ecosystem release note. If interested in previous releases, go through the archives of the ecosystem release note.

- The **OpenSTLinux distribution installation directory** is in the *<Distribution Package installation directory>, and is named* openstlinux-4.19-thud-mp1-19-02-20*:*

```
openstlinux-4.19-thud-mp1-19-02-20  OpenSTLinux distribution
├── layers
│   ├── meta-openembedded                Collection of layers for the OpenEmbedded-
Core universe (OpenEmbedded standard)
│   ├── meta-qt5                         QT5 layer for OpenEmbedded (standard)
│   ├── meta-st
│   │   ├── meta-st-openstlinux          STMicroelectronics layer that contains the
```

```
frameworks and images settings for the OpenSTLinux distribution
|       |   ├── meta-st-stm32mp              STMicroelectronics layer that contains the
description of the BSP for the STM32 MPU devices
|       |   |   ├── recipes-bsp
|       |   |   |   ├── alsa                 Recipes for ALSA control configuration
|       |   |   |   ├── drivers              Recipes for Vivante GCNANO GPU kernel drivers
|       |   |   |   ├── trusted-firmware-a   Recipes for TF-A
|       |   |   |   └── u-boot               Recipes for U-Boot
|       |   |   ├── recipes-extended
|       |   |   |   ├── m4projects           Recipes for STM32Cube MPU Package within the
OpenSTLinux distribution
|       |   |   |   └── stlink               Recipes for STLink
|       |   |   ├── recipes-graphics
|       |   |   |   ├── gcnano-userland      Recipes for Vivante libraries OpenGL ES, Open
VG and EGL (multi backend)
|       |   |   |   └── [...]
|       |   |   ├── recipes-kernel
|       |   |   |   ├── linux                Recipes for Linux kernel
|       |   |   |   └── linux-firmware       Recipes for Linux firmwares (example,
Bluetooth firmware)
|       |   |   ├── recipes-security
|       |   |   |   └── optee                Recipes for OPTEE
|       |   |   ├── recipes-st
|       |   |   |   └── images               Recipes for the bootfs and userfs partitions
binaries
|       |   |   └── [...]
|       |   ├── meta-st-stm32mp-addons       STMicroelectronics layer that helps managing
the STM32CubeMX integration
|       |   └── scripts
|       |       ├── envsetup.sh             Environment setup script for Distribution
Package
|       |       └── [...]
|       ├── meta-timesys                     Timesys layer for OpenEmbedded (standard)
|       └── openembedded-core                Core metadata for current versions of OpenEmb
edded (standard)
```

Open Source Software

Board support package

Microprocessor Unit

Advanced Linux sound architecture

Graphics Processing Units

Trusted Firmware for Arm Cortex-A

Das U-Boot -- the Universal Boot Loader (see U-Boot_overview)

Open Graphics Library (See http://www.opengl.org/ for more details)

Open Vector Graphics (See http://www.khronos.org/openvg/ for more details)

Khronos Native Platform Graphics Interface (See http://www.khronos.org/egl/ for more details)

ST in-circuit debugger and programmer for the STM8 and STM32 microcontroller families (See ST-LINK for more details)

STM32MP1 Distribution Package - OpenSTLinux distribution

Stable: 26.09.2019 - 13:27 / Revision: 26.09.2019 - 13:26

This article aims to give the following information:

- How to download and install the **latest** OpenSTLinux distribution for the STM32 microprocessors Series
- Where to find the associated release note
- Where to find the previous releases (archives)

For more specific information, go through the Distribution Package article relative to your STM32 microprocessors Series: Category:Distribution Package

1 STM32MP15-Ecosystem-v1.1.0 release

- The STM32MP1 OpenSTLinux distribution is delivered through a manifest repository location and a manifest revision (**openstlinux-4.19-thud-mp1-19-10-09**).
- The installation relies on the *repo* command. In case the Repo tool (a Google-built repository management tool that runs on top of Git) is not yet installed and configured on the host PC, refer to the PC prerequisites article.
- The OpenSTLinux distribution is massively using open source software (OSS) packages that are downloaded from a variety of open source repositories; so it is required that the IT infrastructure proxies do not forbid such accesses. If some proxy-related issues are suspected, refer to the How to avoid proxy issues article.
- Install the STM32MP1 OpenSTLinux distribution

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.1.0 release
Installation	• Go to the host PC directory where to install the Distribution Package (*<Distribution Package installation directory>*). Example, if following the proposition to organize the working directory: `$ cd <working directory path>/Distribution-Package` • Create the OpenSTLinux distribution installation sub-directory: `$ mkdir openstlinux-4.19-thud-mp1-19-10-09` `$ cd openstlinux-4.19-thud-mp1-19-10-09` • Initialize repo in the current directory (More details on 'repo init' here). `$ repo init -u https://github.com/STMicroelectronics/oe-manifest.git -b refs/tags/openstlinux-4.19-thud-mp1-19-10-09` **Note:** "ERROR 404" may appear during "repo init" command without any impact on the process • Synchronize the local project directories with the remote repositories specified in the manifest (more details on 'repo sync' here)

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.1.0 release
	`$ repo sync` **Note:** *Distribution package* needs around 140MB to be installed (and around 25GB once *distribution package* is compiled).
Release note	Details about the content of this software package are available in the **associated** STM32MP15 ecosystem release note. If interested in previous releases, go through the archives of the ecosystem release note.

- The **OpenSTLinux distribution installation directory** is in the *<Distribution Package installation directory>, and is named* openstlinux-4.19-thud-mp1-19-10-09*:*

```
openstlinux-4.19-thud-mp1-19-10-09  OpenSTLinux distribution
├── layers
│   ├── meta-openembedded                 Collection of layers for the OpenEmbedded-
Core universe (OpenEmbedded standard)
│   ├── meta-qt5                          QT5 layer for OpenEmbedded (standard)
│   ├── meta-st
│   │   ├── meta-st-openstlinux           STMicroelectronics layer that contains the
frameworks and images settings for the OpenSTLinux distribution
│   │   ├── meta-st-stm32mp               STMicroelectronics layer that contains the
description of the BSP for the STM32 MPU devices
│   │   │   ├── recipes-bsp
│   │   │   │   ├── alsa                  Recipes for ALSA control configuration
│   │   │   │   ├── drivers               Recipes for Vivante GCNANO GPU kernel drivers
│   │   │   │   ├── trusted-firmware-a    Recipes for TF-A
│   │   │   │   └── u-boot                Recipes for U-Boot
│   │   │   ├── recipes-extended
│   │   │   │   ├── linux-examples        Recipes for Linux examples for STM32 MPU
devices
│   │   │   │   ├── m4coredump            Recipes for script to manage coredump of
cortexM4
│   │   │   │   └── m4projects            Recipes for firmware examples for Cortex M4
│   │   │   ├── recipes-graphics
│   │   │   │   ├── gcnano-userland       Recipes for Vivante libraries OpenGL ES, Open
VG and EGL (multi backend)
│   │   │   │   └── [...]
│   │   │   ├── recipes-kernel
│   │   │   │   ├── linux                 Recipes for Linux kernel
│   │   │   │   └── linux-firmware        Recipes for Linux firmwares (example,
Bluetooth firmware)
│   │   │   ├── recipes-security
│   │   │   │   └── optee                 Recipes for OPTEE
│   │   │   ├── recipes-st
│   │   │   │   └── images                Recipes for the bootfs and userfs partitions
binaries
│   │   │   └── [...]
│   │   ├── meta-st-stm32mp-addons        STMicroelectronics layer that helps managing
the STM32CubeMX integration
│   │   └── scripts
│   │       ├── envsetup.sh               Environment setup script for Distribution
Package
│   │       └── [...]
│   ├── meta-timesys                      Timesys layer for OpenEmbedded (standard)
│   └── openembedded-core                 Core metadata for current versions of OpenEmb
edded (standard)
```

2 Archives

2.1 STM32MP15-Ecosystem-v1.0.0 release

- The STM32MP1 OpenSTLinux distribution is delivered through a manifest repository location and a manifest revision (**openstlinux-4.19-thud-mp1-19-02-20**).
- The installation relies on the *repo* command. In case the Repo tool (a Google-built repository management tool that runs on top of Git) is not yet installed and configured on the host PC, refer to the PC prerequisites article.
- The OpenSTLinux distribution is massively using open source software (OSS) packages that are downloaded from a variety of open source repositories; so it is required that the IT infrastructure proxies do not forbid such accesses. If some proxy-related issues are suspected, refer to the How to avoid proxy issues article.
- Install the STM32MP1 OpenSTLinux distribution

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.0.0 release
Installation	• Go to the host PC directory where to install the Distribution Package (*<Distribution Package installation directory>*). Example, if following the proposition to organize the working directory: `$ cd <working directory path>/Distribution-Package` • Create the OpenSTLinux distribution installation sub-directory: `$ mkdir openstlinux-4.19-thud-mp1-19-02-20` `$ cd openstlinux-4.19-thud-mp1-19-02-20` • Initialize repo in the current directory. Details: The below command downloads (in the *.repo* directory) the latest repo source code and a manifest file (*default.xml*) that describes the directory structure of the repositories for OpenSTLinux. The *-u* option specifies the manifest repository location, while the *-b* option specifies its branch. `$ repo init -u https://github.com/STMicroelectronics/oe-manifest.git -b refs/tags/openstlinux-4.19-thud-mp1-19-02-20` **Note:** "ERROR 404" may appear during "repo init" command without any impact on the process • Synchronize the local project directories with the remote repositories specified in the manifest Details:

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.0.0 release
	If a local project does not yet exist, the command clones a new local directory from the remote repository and sets up tracking branches as specified in the manifest. If the local project already exists, the command updates the remote branches and rebases any new local changes on top of the new remote changes. `$ repo sync`
Release note	Details about the content of this software package are available in the **associated** STM32MP15 ecosystem release note. If interested in previous releases, go through the archives of the ecosystem release note.

- The **OpenSTLinux distribution installation directory** is in the *<Distribution Package installation directory>, and is named* openstlinux-4.19-thud-mp1-19-02-20*:*

```
openstlinux-4.19-thud-mp1-19-02-20  OpenSTLinux distribution
├── layers
│   ├── meta-openembedded                Collection of layers for the OpenEmbedded-
Core universe (OpenEmbedded standard)
│   ├── meta-qt5                         QT5 layer for OpenEmbedded (standard)
│   ├── meta-st
│   │   ├── meta-st-openstlinux          STMicroelectronics layer that contains the
frameworks and images settings for the OpenSTLinux distribution
│   │   ├── meta-st-stm32mp              STMicroelectronics layer that contains the
description of the BSP for the STM32 MPU devices
│   │   │   ├── recipes-bsp
│   │   │   │   ├── alsa                 Recipes for ALSA control configuration
│   │   │   │   ├── drivers              Recipes for Vivante GCNANO GPU kernel drivers
│   │   │   │   ├── trusted-firmware-a   Recipes for TF-A
│   │   │   │   └── u-boot               Recipes for U-Boot
│   │   │   ├── recipes-extended
│   │   │   │   ├── m4projects           Recipes for STM32Cube MPU Package within the
OpenSTLinux distribution
│   │   │   │   └── stlink               Recipes for STLink
│   │   │   ├── recipes-graphics
│   │   │   │   ├── gcnano-userland      Recipes for Vivante libraries OpenGL ES, Open
VG and EGL (multi backend)
│   │   │   │   └── [...]
│   │   │   ├── recipes-kernel
│   │   │   │   ├── linux                Recipes for Linux kernel
│   │   │   │   └── linux-firmware       Recipes for Linux firmwares (example,
Bluetooth firmware)
│   │   │   ├── recipes-security
│   │   │   │   └── optee                Recipes for OPTEE
│   │   │   ├── recipes-st
│   │   │   │   └── images               Recipes for the bootfs and userfs partitions
binaries
│   │   │   └── [...]
│   │   ├── meta-st-stm32mp-addons       STMicroelectronics layer that helps managing
the STM32CubeMX integration
│   │   └── scripts
│   │       ├── envsetup.sh              Environment setup script for Distribution
```

```
Package
│       │       └── [...]
│       ├── meta-timesys                    Timesys layer for OpenEmbedded (standard)
│       └── openembedded-core               Core metadata for current versions of OpenEmb
edded (standard)
```

Open Source Software

Board support package

Microprocessor Unit

Advanced Linux sound architecture

Graphics Processing Units

Trusted Firmware for Arm Cortex-A

Das U-Boot -- the Universal Boot Loader (see U-Boot_overview)

Open Graphics Library (See http://www.opengl.org/ for more details)

Open Vector Graphics (See http://www.khronos.org/openvg/ for more details)

Khronos Native Platform Graphics Interface (See http://www.khronos.org/egl/ for more details)

ST in-circuit debugger and programmer for the STM8 and STM32 microcontroller families (See ST-LINK for more details)

STM32MP1 Distribution Package - OpenSTLinux distribution

Stable: 21.02.2020 - 08:27 / Revision: 19.02.2020 - 16:49

This article aims to give the following information:

- How to download and install the **latest** OpenSTLinux distribution for the STM32 microprocessors Series
- Where to find the associated release note
- Where to find the previous releases (archives)

For more specific information, go through the Distribution Package article relative to your STM32 microprocessors Series: Category:Distribution Package

1 STM32MP15-Ecosystem-v1.1.0 release

- The STM32MP1 OpenSTLinux distribution is delivered through a manifest repository location and a manifest revision (**openstlinux-4.19-thud-mp1-19-10-09**).
- The installation relies on the *repo* command. In case the Repo tool (a Google-built repository management tool that runs on top of Git) is not yet installed and configured on the host PC, refer to the PC prerequisites article.
- The OpenSTLinux distribution is massively using open source software (OSS) packages that are downloaded from a variety of open source repositories; so it is required that the IT infrastructure proxies do not forbid such accesses. If some proxy-related issues are suspected, refer to the How to avoid proxy issues article.
- Install the STM32MP1 OpenSTLinux distribution

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.1.0 release
Installation	• Go to the host PC directory where to install the Distribution Package (*<Distribution Package installation directory>*). Example, if following the proposition to organize the working directory: `$ cd <working directory path>/Distribution-Package` • Create the OpenSTLinux distribution installation sub-directory: `$ mkdir openstlinux-4.19-thud-mp1-19-10-09` `$ cd openstlinux-4.19-thud-mp1-19-10-09` • Initialize repo in the current directory (More details on 'repo init' here). `$ repo init -u https://github.com/STMicroelectronics/oe-manifest.git -b refs/tags/openstlinux-4.19-thud-mp1-19-10-09` **Note:** "ERROR 404" may appear during "repo init" command without any impact on the process • Synchronize the local project directories with the remote repositories specified in the manifest (more details on 'repo sync' here) `$ repo sync` **Note:** *Distribution package* needs around 140MB to be installed (and around 25GB once *distribution package* is compiled).
Release note	Details about the content of this software package are available in the **associated** STM32MP15 ecosystem release note. If interested in previous releases, go through the archives of the ecosystem release note.

- The **OpenSTLinux distribution installation directory** is in the *<Distribution Package installation directory>, and is named* openstlinux-4.19-thud-mp1-19-10-09*:*

```
openstlinux-4.19-thud-mp1-19-10-09  OpenSTLinux distribution
├── layers
│   ├── meta-openembedded                Collection of layers for the OpenEmbedded-
Core universe (OpenEmbedded standard)
│   ├── meta-qt5                         QT5 layer for OpenEmbedded (standard)
│   ├── meta-st
│   │   ├── meta-st-openstlinux          STMicroelectronics layer that contains the
frameworks and images settings for the OpenSTLinux distribution
│   │   ├── meta-st-stm32mp              STMicroelectronics layer that contains the
description of the BSP for the STM32 MPU devices
│   │   │   ├── recipes-bsp
│   │   │   │   ├── alsa                 Recipes for ALSA control configuration
│   │   │   │   ├── drivers              Recipes for Vivante GCNANO GPU kernel drivers
│   │   │   │   ├── trusted-firmware-a   Recipes for TF-A
```

```
|   |   |   |   └── u-boot                    Recipes for U-Boot
|   |   |   ├── recipes-extended
|   |   |   |   ├── linux-examples            Recipes for Linux examples for STM32 MPU
devices
|   |   |   |   ├── m4coredump                Recipes for script to manage coredump of
cortexM4
|   |   |   |   └── m4projects                Recipes for firmware examples for Cortex M4
|   |   |   ├── recipes-graphics
|   |   |   |   ├── gcnano-userland           Recipes for Vivante libraries OpenGL ES, Open
VG and EGL (multi backend)
|   |   |   |   └── [...]
|   |   |   ├── recipes-kernel
|   |   |   |   ├── linux                     Recipes for Linux kernel
|   |   |   |   └── linux-firmware            Recipes for Linux firmwares (example,
Bluetooth firmware)
|   |   |   ├── recipes-security
|   |   |   |   └── optee                     Recipes for OPTEE
|   |   |   ├── recipes-st
|   |   |   |   └── images                    Recipes for the bootfs and userfs partitions
binaries
|   |   |   └── [...]
|   |   ├── meta-st-stm32mp-addons            STMicroelectronics layer that helps managing
the STM32CubeMX integration
|   |   └── scripts
|   |       ├── envsetup.sh                   Environment setup script for Distribution
Package
|   |       └── [...]
|   ├── meta-timesys                          Timesys layer for OpenEmbedded (standard)
|   └── openembedded-core                     Core metadata for current versions of OpenEmb
edded (standard)
```

2 Archives

2.1 STM32MP15-Ecosystem-v1.0.0 release

- The STM32MP1 OpenSTLinux distribution is delivered through a manifest repository location and a manifest revision (**openstlinux-4.19-thud-mp1-19-02-20**).
- The installation relies on the *repo* command. In case the Repo tool (a Google-built repository management tool that runs on top of Git) is not yet installed and configured on the host PC, refer to the PC prerequisites article.
- The OpenSTLinux distribution is massively using open source software (OSS) packages that are downloaded from a variety of open source repositories; so it is required that the IT infrastructure proxies do not forbid such accesses. If some proxy-related issues are suspected, refer to the How to avoid proxy issues article.
- Install the STM32MP1 OpenSTLinux distribution

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.0.0 release
	• Go to the host PC directory where to install the Distribution Package (*<Distribution Package installation directory>*). Example, if following the proposition to organize the working directory:

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.0.0 release
Installation	`$ cd <working directory path>/Distribution-Package` • Create the OpenSTLinux distribution installation sub-directory: `$ mkdir openstlinux-4.19-thud-mp1-19-02-20` `$ cd openstlinux-4.19-thud-mp1-19-02-20` • Initialize repo in the current directory. Details: The below command downloads (in the *.repo* directory) the latest repo source code and a manifest file (*default.xml*) that describes the directory structure of the repositories for OpenSTLinux. The *-u* option specifies the manifest repository location, while the *-b* option specifies its branch. `$ repo init -u https://github.com/STMicroelectronics/oe-manifest.git -b refs/tags/openstlinux-4.19-thud-mp1-19-02-20` **Note:** "ERROR 404" may appear during "repo init" command without any impact on the process • Synchronize the local project directories with the remote repositories specified in the manifest Details: If a local project does not yet exist, the command clones a new local directory from the remote repository and sets up tracking branches as specified in the manifest. If the local project already exists, the command updates the remote branches and rebases any new local changes on top of the new remote changes. `$ repo sync`
Release note	Details about the content of this software package are available in the **associated** STM32MP15 ecosystem release note. If interested in previous releases, go through the archives of the ecosystem release note.

- The **OpenSTLinux distribution installation directory** is in the *<Distribution Package installation directory>, and is named* openstlinux-4.19-thud-mp1-19-02-20*:*

```
openstlinux-4.19-thud-mp1-19-02-20  OpenSTLinux distribution
├── layers
│   ├── meta-openembedded                Collection of layers for the OpenEmbedded-
Core universe (OpenEmbedded standard)
│   ├── meta-qt5                         QT5 layer for OpenEmbedded (standard)
│   ├── meta-st
│   │   ├── meta-st-openstlinux          STMicroelectronics layer that contains the
frameworks and images settings for the OpenSTLinux distribution
│   │   ├── meta-st-stm32mp              STMicroelectronics layer that contains the
```

```
description of the BSP for the STM32 MPU devices
|   |   |   ├── recipes-bsp
|   |   |   |   ├── alsa                    Recipes for ALSA control configuration
|   |   |   |   ├── drivers                 Recipes for Vivante GCNANO GPU kernel drivers
|   |   |   |   ├── trusted-firmware-a      Recipes for TF-A
|   |   |   |   └── u-boot                  Recipes for U-Boot
|   |   |   ├── recipes-extended
|   |   |   |   ├── m4projects              Recipes for STM32Cube MPU Package within the
OpenSTLinux distribution
|   |   |   |   └── stlink                  Recipes for STLink
|   |   |   ├── recipes-graphics
|   |   |   |   ├── gcnano-userland         Recipes for Vivante libraries OpenGL ES, Open
VG and EGL (multi backend)
|   |   |   |   └── [...]
|   |   |   ├── recipes-kernel
|   |   |   |   ├── linux                   Recipes for Linux kernel
|   |   |   |   └── linux-firmware          Recipes for Linux firmwares (example,
Bluetooth firmware)
|   |   |   ├── recipes-security
|   |   |   |   └── optee                   Recipes for OPTEE
|   |   |   ├── recipes-st
|   |   |   |   └── images                  Recipes for the bootfs and userfs partitions
binaries
|   |   |   └── [...]
|   |   ├── meta-st-stm32mp-addons          STMicroelectronics layer that helps managing
the STM32CubeMX integration
|   |   └── scripts
|   |       ├── envsetup.sh                 Environment setup script for Distribution
Package
|   |       └── [...]
|   ├── meta-timesys                        Timesys layer for OpenEmbedded (standard)
|   └── openembedded-core                   Core metadata for current versions of OpenEmb
edded (standard)
```

Open Source Software

Board support package

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Graphics Processing Units

Trusted Firmware for Arm Cortex-A

Das U-Boot -- the Universal Boot Loader (see U-Boot_overview)

Open Graphics Library (See http://www.opengl.org/ for more details)

Open Vector Graphics (See http://www.khronos.org/openvg/ for more details)

Khronos Native Platform Graphics Interface (See http://www.khronos.org/egl/ for more details)

ST in-circuit debugger and programmer for the STM8 and STM32 microcontroller families (See ST-LINK for more details)

STM32MP1 Distribution Package - OpenSTLinux distribution

Stable: 02.04.2020 - 09:29 / Revision: 02.04.2020 - 09:24

This article aims to give the following information:

- How to download and install the **latest** OpenSTLinux distribution for the STM32 microprocessors Series
- Where to find the associated release note
- Where to find the previous releases (archives)

For more specific information, go through the Distribution Package article relative to your STM32 microprocessors Series: Category:Distribution Package

1 STM32MP15-Ecosystem-v1.1.0 release

- The STM32MP1 OpenSTLinux distribution is delivered through a manifest repository location and a manifest revision (**openstlinux-4.19-thud-mp1-19-10-09**).
- The installation relies on the *repo* command. In case the Repo tool (a Google-built repository management tool that runs on top of Git) is not yet installed and configured on the host PC, refer to the PC prerequisites article.
- The OpenSTLinux distribution is massively using open source software (OSS) packages that are downloaded from a variety of open source repositories; so it is required that the IT infrastructure proxies do not forbid such accesses. If some proxy-related issues are suspected, refer to the How to avoid proxy issues article.
- Install the STM32MP1 OpenSTLinux distribution

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.1.0 release
Installation	• Go to the host PC directory where to install the Distribution Package (*<Distribution Package installation directory>*). Example, if following the proposition to organize the working directory: `$ cd <working directory path>/Distribution-Package` • Create the OpenSTLinux distribution installation sub-directory: `$ mkdir openstlinux-4.19-thud-mp1-19-10-09` `$ cd openstlinux-4.19-thud-mp1-19-10-09` • Initialize repo in the current directory (More details on 'repo init' here). `$ repo init -u https://github.com/STMicroelectronics/oe-manifest.git -b refs/tags/openstlinux-4.19-thud-mp1-19-10-09` **Note:** "ERROR 404" may appear during "repo init" command without any impact on the process • Synchronize the local project directories with the remote repositories specified in the manifest (more details on 'repo sync' here)

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.1.0 release
	`$ repo sync` **Note:** *Distribution package* needs around 140MB to be installed (and around 25GB once *distribution package* is compiled).
Release note	Details about the content of this software package are available in the **associated** STM32MP15 ecosystem release note. If interested in previous releases, go through the archives of the ecosystem release note.

- The **OpenSTLinux distribution installation directory** is in the *<Distribution Package installation directory>, and is named* openstlinux-4.19-thud-mp1-19-10-09*:*

```
openstlinux-4.19-thud-mp1-19-10-09  OpenSTLinux distribution
├── layers
│   ├── meta-openembedded                 Collection of layers for the OpenEmbedded-
Core universe (OpenEmbedded standard)
│   ├── meta-qt5                          QT5 layer for OpenEmbedded (standard)
│   ├── meta-st
│   │   ├── meta-st-openstlinux           STMicroelectronics layer that contains the
frameworks and images settings for the OpenSTLinux distribution
│   │   ├── meta-st-stm32mp               STMicroelectronics layer that contains the
description of the BSP for the STM32 MPU devices
│   │   │   ├── recipes-bsp
│   │   │   │   ├── alsa                  Recipes for ALSA control configuration
│   │   │   │   ├── drivers               Recipes for Vivante GCNANO GPU kernel drivers
│   │   │   │   ├── trusted-firmware-a    Recipes for TF-A
│   │   │   │   └── u-boot                Recipes for U-Boot
│   │   │   ├── recipes-extended
│   │   │   │   ├── linux-examples        Recipes for Linux examples for STM32 MPU
devices
│   │   │   │   ├── m4coredump            Recipes for script to manage coredump of
cortexM4
│   │   │   │   └── m4projects            Recipes for firmware examples for Cortex M4
│   │   │   ├── recipes-graphics
│   │   │   │   ├── gcnano-userland       Recipes for Vivante libraries OpenGL ES, Open
VG and EGL (multi backend)
│   │   │   │   └── [...]
│   │   │   ├── recipes-kernel
│   │   │   │   ├── linux                 Recipes for Linux kernel
│   │   │   │   └── linux-firmware        Recipes for Linux firmwares (example,
Bluetooth firmware)
│   │   │   ├── recipes-security
│   │   │   │   └── optee                 Recipes for OPTEE
│   │   │   ├── recipes-st
│   │   │   │   └── images                Recipes for the bootfs and userfs partitions
binaries
│   │   │   └── [...]
│   │   ├── meta-st-stm32mp-addons        STMicroelectronics layer that helps managing
the STM32CubeMX integration
│   │   └── scripts
│   │       ├── envsetup.sh               Environment setup script for Distribution
Package
│   │       └── [...]
│   ├── meta-timesys                      Timesys layer for OpenEmbedded (standard)
│   └── openembedded-core                 Core metadata for current versions of OpenEmb
edded (standard)
```

2 Archives

2.1 STM32MP15-Ecosystem-v1.0.0 release

- The STM32MP1 OpenSTLinux distribution is delivered through a manifest repository location and a manifest revision (**openstlinux-4.19-thud-mp1-19-02-20**).
- The installation relies on the *repo* command. In case the Repo tool (a Google-built repository management tool that runs on top of Git) is not yet installed and configured on the host PC, refer to the PC prerequisites article.
- The OpenSTLinux distribution is massively using open source software (OSS) packages that are downloaded from a variety of open source repositories; so it is required that the IT infrastructure proxies do not forbid such accesses. If some proxy-related issues are suspected, refer to the How to avoid proxy issues article.
- Install the STM32MP1 OpenSTLinux distribution

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.0.0 release
Installation	• Go to the host PC directory where to install the Distribution Package (*<Distribution Package installation directory>*). Example, if following the proposition to organize the working directory: `$ cd <working directory path>/Distribution-Package` • Create the OpenSTLinux distribution installation sub-directory: `$ mkdir openstlinux-4.19-thud-mp1-19-02-20` `$ cd openstlinux-4.19-thud-mp1-19-02-20` • Initialize repo in the current directory. Details: The below command downloads (in the *.repo* directory) the latest repo source code and a manifest file (*default.xml*) that describes the directory structure of the repositories for OpenSTLinux. The *-u* option specifies the manifest repository location, while the *-b* option specifies its branch. `$ repo init -u https://github.com/STMicroelectronics/oe-manifest.git -b refs/tags/openstlinux-4.19-thud-mp1-19-02-20` **Note:** "ERROR 404" may appear during "repo init" command without any impact on the process • Synchronize the local project directories with the remote repositories specified in the manifest Details:

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.0.0 release
	If a local project does not yet exist, the command clones a new local directory from the remote repository and sets up tracking branches as specified in the manifest. If the local project already exists, the command updates the remote branches and rebases any new local changes on top of the new remote changes. `$ repo sync`
Release note	Details about the content of this software package are available in the **associated** STM32MP15 ecosystem release note. If interested in previous releases, go through the archives of the ecosystem release note.

- The **OpenSTLinux distribution installation directory** is in the *<Distribution Package installation directory>, and is named* openstlinux-4.19-thud-mp1-19-02-20*:*

```
openstlinux-4.19-thud-mp1-19-02-20  OpenSTLinux distribution
├── layers
│   ├── meta-openembedded                Collection of layers for the OpenEmbedded-
Core universe (OpenEmbedded standard)
│   ├── meta-qt5                         QT5 layer for OpenEmbedded (standard)
│   ├── meta-st
│   │   ├── meta-st-openstlinux          STMicroelectronics layer that contains the
frameworks and images settings for the OpenSTLinux distribution
│   │   ├── meta-st-stm32mp              STMicroelectronics layer that contains the
description of the BSP for the STM32 MPU devices
│   │   │   ├── recipes-bsp
│   │   │   │   ├── alsa                 Recipes for ALSA control configuration
│   │   │   │   ├── drivers              Recipes for Vivante GCNANO GPU kernel drivers
│   │   │   │   ├── trusted-firmware-a   Recipes for TF-A
│   │   │   │   └── u-boot               Recipes for U-Boot
│   │   │   ├── recipes-extended
│   │   │   │   ├── m4projects           Recipes for STM32Cube MPU Package within the
OpenSTLinux distribution
│   │   │   │   └── stlink               Recipes for STLink
│   │   │   ├── recipes-graphics
│   │   │   │   ├── gcnano-userland      Recipes for Vivante libraries OpenGL ES, Open
VG and EGL (multi backend)
│   │   │   │   └── [...]
│   │   │   ├── recipes-kernel
│   │   │   │   ├── linux                Recipes for Linux kernel
│   │   │   │   └── linux-firmware       Recipes for Linux firmwares (example,
Bluetooth firmware)
│   │   │   ├── recipes-security
│   │   │   │   └── optee                Recipes for OPTEE
│   │   │   ├── recipes-st
│   │   │   │   └── images               Recipes for the bootfs and userfs partitions
binaries
│   │   │   └── [...]
│   │   ├── meta-st-stm32mp-addons       STMicroelectronics layer that helps managing
the STM32CubeMX integration
│   │   └── scripts
│   │       ├── envsetup.sh              Environment setup script for Distribution
```

```
Package
│       │       └── [...]
│       ├── meta-timesys                    Timesys layer for OpenEmbedded (standard)
│       └── openembedded-core               Core metadata for current versions of OpenEmb
edded (standard)
```

Open Source Software

Board support package

Microprocessor Unit

Advanced Linux sound architecture

Graphics Processing Units

Trusted Firmware for Arm Cortex-A

Das U-Boot -- the Universal Boot Loader (see U-Boot_overview)

Open Graphics Library (See http://www.opengl.org/ for more details)

Open Vector Graphics (See http://www.khronos.org/openvg/ for more details)

Khronos Native Platform Graphics Interface (See http://www.khronos.org/egl/ for more details)

ST in-circuit debugger and programmer for the STM8 and STM32 microcontroller families (See ST-LINK for more details)

STM32MP1 Distribution Package - OpenSTLinux distribution

Stable: 21.02.2020 - 13:34 / Revision: 21.02.2020 - 13:03

This article aims to give the following information:

- How to download and install the **latest** OpenSTLinux distribution for the STM32 microprocessors Series
- Where to find the associated release note
- Where to find the previous releases (archives)

For more specific information, go through the Distribution Package article relative to your STM32 microprocessors Series: Category:Distribution Package

1 STM32MP15-Ecosystem-v1.1.0 release

- The STM32MP1 OpenSTLinux distribution is delivered through a manifest repository location and a manifest revision (**openstlinux-4.19-thud-mp1-19-10-09**).
- The installation relies on the *repo* command. In case the Repo tool (a Google-built repository management tool that runs on top of Git) is not yet installed and configured on the host PC, refer to the PC prerequisites article.
- The OpenSTLinux distribution is massively using open source software (OSS) packages that are downloaded from a variety of open source repositories; so it is required that the IT infrastructure proxies do not forbid such accesses. If some proxy-related issues are suspected, refer to the How to avoid proxy issues article.
- Install the STM32MP1 OpenSTLinux distribution

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.1.0 release
Installation	• Go to the host PC directory where to install the Distribution Package (*<Distribution Package installation directory>*). Example, if following the proposition to organize the working directory: `$ cd <working directory path>/Distribution-Package` • Create the OpenSTLinux distribution installation sub-directory: `$ mkdir openstlinux-4.19-thud-mp1-19-10-09` `$ cd openstlinux-4.19-thud-mp1-19-10-09` • Initialize repo in the current directory (More details on 'repo init' here). `$ repo init -u https://github.com/STMicroelectronics/oe-manifest.git -b refs/tags/openstlinux-4.19-thud-mp1-19-10-09` **Note:** "ERROR 404" may appear during "repo init" command without any impact on the process • Synchronize the local project directories with the remote repositories specified in the manifest (more details on 'repo sync' here) `$ repo sync` **Note:** *Distribution package* needs around 140MB to be installed (and around 25GB once *distribution package* is compiled).
Release note	Details about the content of this software package are available in the **associated** STM32MP15 ecosystem release note. If interested in previous releases, go through the archives of the ecosystem release note.

- The **OpenSTLinux distribution installation directory** is in the *<Distribution Package installation directory>, and is named* openstlinux-4.19-thud-mp1-19-10-09*:*

```
openstlinux-4.19-thud-mp1-19-10-09  OpenSTLinux distribution
├── layers
│   ├── meta-openembedded                Collection of layers for the OpenEmbedded-
Core universe (OpenEmbedded standard)
│   ├── meta-qt5                         QT5 layer for OpenEmbedded (standard)
│   ├── meta-st
│   │   ├── meta-st-openstlinux          STMicroelectronics layer that contains the
frameworks and images settings for the OpenSTLinux distribution
│   │   ├── meta-st-stm32mp              STMicroelectronics layer that contains the
description of the BSP for the STM32 MPU devices
│   │   │   ├── recipes-bsp
│   │   │   │   ├── alsa                 Recipes for ALSA control configuration
│   │   │   │   ├── drivers              Recipes for Vivante GCNANO GPU kernel drivers
│   │   │   │   ├── trusted-firmware-a   Recipes for TF-A
```

```
│   │   │   │   └── u-boot                    Recipes for U-Boot
│   │   │   ├── recipes-extended
│   │   │   │   ├── linux-examples           Recipes for Linux examples for STM32 MPU
devices
│   │   │   │   ├── m4coredump               Recipes for script to manage coredump of
cortexM4
│   │   │   │   └── m4projects               Recipes for firmware examples for Cortex M4
│   │   │   ├── recipes-graphics
│   │   │   │   ├── gcnano-userland          Recipes for Vivante libraries OpenGL ES, Open
VG and EGL (multi backend)
│   │   │   │   └── [...]
│   │   │   ├── recipes-kernel
│   │   │   │   ├── linux                    Recipes for Linux kernel
│   │   │   │   └── linux-firmware           Recipes for Linux firmwares (example,
Bluetooth firmware)
│   │   │   ├── recipes-security
│   │   │   │   └── optee                    Recipes for OPTEE
│   │   │   ├── recipes-st
│   │   │   │   └── images                   Recipes for the bootfs and userfs partitions
binaries
│   │   │   └── [...]
│   │   ├── meta-st-stm32mp-addons           STMicroelectronics layer that helps managing
the STM32CubeMX integration
│   │   └── scripts
│   │       ├── envsetup.sh                  Environment setup script for Distribution
Package
│   │       └── [...]
│   ├── meta-timesys                         Timesys layer for OpenEmbedded (standard)
│   └── openembedded-core                    Core metadata for current versions of OpenEmb
edded (standard)
```

2 Archives

2.1 STM32MP15-Ecosystem-v1.0.0 release

- The STM32MP1 OpenSTLinux distribution is delivered through a manifest repository location and a manifest revision (**openstlinux-4.19-thud-mp1-19-02-20**).
- The installation relies on the *repo* command. In case the Repo tool (a Google-built repository management tool that runs on top of Git) is not yet installed and configured on the host PC, refer to the PC prerequisites article.
- The OpenSTLinux distribution is massively using open source software (OSS) packages that are downloaded from a variety of open source repositories; so it is required that the IT infrastructure proxies do not forbid such accesses. If some proxy-related issues are suspected, refer to the How to avoid proxy issues article.
- Install the STM32MP1 OpenSTLinux distribution

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.0.0 release
	• Go to the host PC directory where to install the Distribution Package (*<Distribution Package installation directory>*). Example, if following the proposition to organize the working directory:

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.0.0 release
Installation	`$ cd <working directory path>/Distribution-Package` • Create the OpenSTLinux distribution installation sub-directory: `$ mkdir openstlinux-4.19-thud-mp1-19-02-20` `$ cd openstlinux-4.19-thud-mp1-19-02-20` • Initialize repo in the current directory. Details: The below command downloads (in the *.repo* directory) the latest repo source code and a manifest file (*default.xml*) that describes the directory structure of the repositories for OpenSTLinux. The *-u* option specifies the manifest repository location, while the *-b* option specifies its branch. `$ repo init -u https://github.com/STMicroelectronics/oe-manifest.git -b refs/tags/openstlinux-4.19-thud-mp1-19-02-20` **Note:** "ERROR 404" may appear during "repo init" command without any impact on the process • Synchronize the local project directories with the remote repositories specified in the manifest Details: If a local project does not yet exist, the command clones a new local directory from the remote repository and sets up tracking branches as specified in the manifest. If the local project already exists, the command updates the remote branches and rebases any new local changes on top of the new remote changes. `$ repo sync`
Release note	Details about the content of this software package are available in the **associated** STM32MP15 ecosystem release note. If interested in previous releases, go through the archives of the ecosystem release note.

- The **OpenSTLinux distribution installation directory** is in the *<Distribution Package installation directory>, and is named* openstlinux-4.19-thud-mp1-19-02-20*:*

```
openstlinux-4.19-thud-mp1-19-02-20  OpenSTLinux distribution
├── layers
│   ├── meta-openembedded                Collection of layers for the OpenEmbedded-
Core universe (OpenEmbedded standard)
│   ├── meta-qt5                         QT5 layer for OpenEmbedded (standard)
│   ├── meta-st
│   │   ├── meta-st-openstlinux          STMicroelectronics layer that contains the
frameworks and images settings for the OpenSTLinux distribution
│   │   ├── meta-st-stm32mp              STMicroelectronics layer that contains the
```

```
description of the BSP for the STM32 MPU devices
│   │   │   ├── recipes-bsp
│   │   │   │   ├── alsa                    Recipes for ALSA control configuration
│   │   │   │   ├── drivers                 Recipes for Vivante GCNANO GPU kernel drivers
│   │   │   │   ├── trusted-firmware-a      Recipes for TF-A
│   │   │   │   └── u-boot                  Recipes for U-Boot
│   │   │   ├── recipes-extended
│   │   │   │   ├── m4projects              Recipes for STM32Cube MPU Package within the
OpenSTLinux distribution
│   │   │   │   └── stlink                  Recipes for STLink
│   │   │   ├── recipes-graphics
│   │   │   │   ├── gcnano-userland         Recipes for Vivante libraries OpenGL ES, Open
VG and EGL (multi backend)
│   │   │   │   └── [...]
│   │   │   ├── recipes-kernel
│   │   │   │   ├── linux                   Recipes for Linux kernel
│   │   │   │   └── linux-firmware          Recipes for Linux firmwares (example,
Bluetooth firmware)
│   │   │   ├── recipes-security
│   │   │   │   └── optee                   Recipes for OPTEE
│   │   │   ├── recipes-st
│   │   │   │   └── images                  Recipes for the bootfs and userfs partitions
binaries
│   │   │   └── [...]
│   │   ├── meta-st-stm32mp-addons          STMicroelectronics layer that helps managing
the STM32CubeMX integration
│   │   └── scripts
│   │       ├── envsetup.sh                 Environment setup script for Distribution
Package
│   │       └── [...]
│   ├── meta-timesys                        Timesys layer for OpenEmbedded (standard)
│   └── openembedded-core                   Core metadata for current versions of OpenEmb
edded (standard)
```

Open Source Software

Board support package

Microprocessor Unit

Advanced Linux sound architecture

Graphics Processing Units

Trusted Firmware for Arm Cortex-A

Das U-Boot -- the Universal Boot Loader (see U-Boot_overview)

Open Graphics Library (See http://www.opengl.org/ for more details)

Open Vector Graphics (See http://www.khronos.org/openvg/ for more details)

Khronos Native Platform Graphics Interface (See http://www.khronos.org/egl/ for more details)

ST in-circuit debugger and programmer for the STM8 and STM32 microcontroller families (See ST-LINK for more details)

STM32MP1 Distribution Package - OpenSTLinux distribution

Stable: 29.01.2020 - 16:07 / Revision: 29.01.2020 - 16:06

This article aims to give the following information:

- How to download and install the **latest** OpenSTLinux distribution for the STM32 microprocessors Series
- Where to find the associated release note
- Where to find the previous releases (archives)

For more specific information, go through the Distribution Package article relative to your STM32 microprocessors Series: Category:Distribution Package

1 STM32MP15-Ecosystem-v1.1.0 release

- The STM32MP1 OpenSTLinux distribution is delivered through a manifest repository location and a manifest revision (**openstlinux-4.19-thud-mp1-19-10-09**).
- The installation relies on the *repo* command. In case the Repo tool (a Google-built repository management tool that runs on top of Git) is not yet installed and configured on the host PC, refer to the PC prerequisites article.
- The OpenSTLinux distribution is massively using open source software (OSS) packages that are downloaded from a variety of open source repositories; so it is required that the IT infrastructure proxies do not forbid such accesses. If some proxy-related issues are suspected, refer to the How to avoid proxy issues article.
- Install the STM32MP1 OpenSTLinux distribution

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.1.0 release
Installation	• Go to the host PC directory where to install the Distribution Package (*<Distribution Package installation directory>*). Example, if following the proposition to organize the working directory: `$ cd <working directory path>/Distribution-Package` • Create the OpenSTLinux distribution installation sub-directory: `$ mkdir openstlinux-4.19-thud-mp1-19-10-09` `$ cd openstlinux-4.19-thud-mp1-19-10-09` • Initialize repo in the current directory (More details on 'repo init' here). `$ repo init -u https://github.com/STMicroelectronics/oe-manifest.git -b refs/tags/openstlinux-4.19-thud-mp1-19-10-09` **Note:** "ERROR 404" may appear during "repo init" command without any impact on the process • Synchronize the local project directories with the remote repositories specified in the manifest (more details on 'repo sync' here)

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.1.0 release
	`$ repo sync` **Note:** *Distribution package* needs around 140MB to be installed (and around 25GB once *distribution package* is compiled).
Release note	Details about the content of this software package are available in the **associated** STM32MP15 ecosystem release note. If interested in previous releases, go through the archives of the ecosystem release note.

- The **OpenSTLinux distribution installation directory** is in the *<Distribution Package installation directory>, and is named* openstlinux-4.19-thud-mp1-19-10-09*:*

```
openstlinux-4.19-thud-mp1-19-10-09  OpenSTLinux distribution
├── layers
│   ├── meta-openembedded                 Collection of layers for the OpenEmbedded-
Core universe (OpenEmbedded standard)
│   ├── meta-qt5                          QT5 layer for OpenEmbedded (standard)
│   ├── meta-st
│   │   ├── meta-st-openstlinux           STMicroelectronics layer that contains the
frameworks and images settings for the OpenSTLinux distribution
│   │   ├── meta-st-stm32mp               STMicroelectronics layer that contains the
description of the BSP for the STM32 MPU devices
│   │   │   ├── recipes-bsp
│   │   │   │   ├── alsa                  Recipes for ALSA control configuration
│   │   │   │   ├── drivers               Recipes for Vivante GCNANO GPU kernel drivers
│   │   │   │   ├── trusted-firmware-a    Recipes for TF-A
│   │   │   │   └── u-boot                Recipes for U-Boot
│   │   │   ├── recipes-extended
│   │   │   │   ├── linux-examples        Recipes for Linux examples for STM32 MPU
devices
│   │   │   │   ├── m4coredump            Recipes for script to manage coredump of
cortexM4
│   │   │   │   └── m4projects            Recipes for firmware examples for Cortex M4
│   │   │   ├── recipes-graphics
│   │   │   │   ├── gcnano-userland       Recipes for Vivante libraries OpenGL ES, Open
VG and EGL (multi backend)
│   │   │   │   └── [...]
│   │   │   ├── recipes-kernel
│   │   │   │   ├── linux                 Recipes for Linux kernel
│   │   │   │   └── linux-firmware        Recipes for Linux firmwares (example,
Bluetooth firmware)
│   │   │   ├── recipes-security
│   │   │   │   └── optee                 Recipes for OPTEE
│   │   │   ├── recipes-st
│   │   │   │   └── images                Recipes for the bootfs and userfs partitions
binaries
│   │   │   └── [...]
│   │   ├── meta-st-stm32mp-addons        STMicroelectronics layer that helps managing
the STM32CubeMX integration
│   │   └── scripts
│   │       ├── envsetup.sh               Environment setup script for Distribution
Package
│   │       └── [...]
│   ├── meta-timesys                      Timesys layer for OpenEmbedded (standard)
│   └── openembedded-core                 Core metadata for current versions of OpenEmb
edded (standard)
```

2 Archives

2.1 STM32MP15-Ecosystem-v1.0.0 release

- The STM32MP1 OpenSTLinux distribution is delivered through a manifest repository location and a manifest revision (**openstlinux-4.19-thud-mp1-19-02-20**).
- The installation relies on the *repo* command. In case the Repo tool (a Google-built repository management tool that runs on top of Git) is not yet installed and configured on the host PC, refer to the PC prerequisites article.
- The OpenSTLinux distribution is massively using open source software (OSS) packages that are downloaded from a variety of open source repositories; so it is required that the IT infrastructure proxies do not forbid such accesses. If some proxy-related issues are suspected, refer to the How to avoid proxy issues article.
- Install the STM32MP1 OpenSTLinux distribution

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.0.0 release
Installation	• Go to the host PC directory where to install the Distribution Package (*<Distribution Package installation directory>*). Example, if following the proposition to organize the working directory: `$ cd <working directory path>/Distribution-Package` • Create the OpenSTLinux distribution installation sub-directory: `$ mkdir openstlinux-4.19-thud-mp1-19-02-20` `$ cd openstlinux-4.19-thud-mp1-19-02-20` • Initialize repo in the current directory. Details: The below command downloads (in the *.repo* directory) the latest repo source code and a manifest file (*default.xml*) that describes the directory structure of the repositories for OpenSTLinux. The *-u* option specifies the manifest repository location, while the *-b* option specifies its branch. `$ repo init -u https://github.com/STMicroelectronics/oe-manifest.git -b refs/tags/openstlinux-4.19-thud-mp1-19-02-20` **Note:** "ERROR 404" may appear during "repo init" command without any impact on the process • Synchronize the local project directories with the remote repositories specified in the manifest Details:

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.0.0 release
	If a local project does not yet exist, the command clones a new local directory from the remote repository and sets up tracking branches as specified in the manifest. If the local project already exists, the command updates the remote branches and rebases any new local changes on top of the new remote changes. `$ repo sync`
Release note	Details about the content of this software package are available in the **associated** STM32MP15 ecosystem release note. If interested in previous releases, go through the archives of the ecosystem release note.

- The **OpenSTLinux distribution installation directory** is in the *<Distribution Package installation directory>, and is named* openstlinux-4.19-thud-mp1-19-02-20*:*

```
openstlinux-4.19-thud-mp1-19-02-20  OpenSTLinux distribution
├── layers
│   ├── meta-openembedded                Collection of layers for the OpenEmbedded-
Core universe (OpenEmbedded standard)
│   ├── meta-qt5                         QT5 layer for OpenEmbedded (standard)
│   ├── meta-st
│   │   ├── meta-st-openstlinux          STMicroelectronics layer that contains the
frameworks and images settings for the OpenSTLinux distribution
│   │   ├── meta-st-stm32mp              STMicroelectronics layer that contains the
description of the BSP for the STM32 MPU devices
│   │   │   ├── recipes-bsp
│   │   │   │   ├── alsa                 Recipes for ALSA control configuration
│   │   │   │   ├── drivers              Recipes for Vivante GCNANO GPU kernel drivers
│   │   │   │   ├── trusted-firmware-a   Recipes for TF-A
│   │   │   │   └── u-boot               Recipes for U-Boot
│   │   │   ├── recipes-extended
│   │   │   │   ├── m4projects           Recipes for STM32Cube MPU Package within the
OpenSTLinux distribution
│   │   │   │   └── stlink               Recipes for STLink
│   │   │   ├── recipes-graphics
│   │   │   │   ├── gcnano-userland      Recipes for Vivante libraries OpenGL ES, Open
VG and EGL (multi backend)
│   │   │   │   └── [...]
│   │   │   ├── recipes-kernel
│   │   │   │   ├── linux                Recipes for Linux kernel
│   │   │   │   └── linux-firmware       Recipes for Linux firmwares (example,
Bluetooth firmware)
│   │   │   ├── recipes-security
│   │   │   │   └── optee                Recipes for OPTEE
│   │   │   ├── recipes-st
│   │   │   │   └── images               Recipes for the bootfs and userfs partitions
binaries
│   │   │   └── [...]
│   │   ├── meta-st-stm32mp-addons       STMicroelectronics layer that helps managing
the STM32CubeMX integration
│   │   └── scripts
│   │       ├── envsetup.sh              Environment setup script for Distribution
```

```
Package
│       │       └── [...]
│       ├── meta-timesys                    Timesys layer for OpenEmbedded (standard)
│       └── openembedded-core               Core metadata for current versions of OpenEmb
edded (standard)
```

Open Source Software

Board support package

Microprocessor Unit

Advanced Linux sound architecture

Graphics Processing Units

Trusted Firmware for Arm Cortex-A

Das U-Boot -- the Universal Boot Loader (see U-Boot_overview)

Open Graphics Library (See http://www.opengl.org/ for more details)

Open Vector Graphics (See http://www.khronos.org/openvg/ for more details)

Khronos Native Platform Graphics Interface (See http://www.khronos.org/egl/ for more details)

ST in-circuit debugger and programmer for the STM8 and STM32 microcontroller families (See ST-LINK for more details)

STM32MP1 Distribution Package - OpenSTLinux distribution

Stable: 02.04.2020 - 09:50 / Revision: 02.04.2020 - 09:49

This article aims to give the following information:

- How to download and install the **latest** OpenSTLinux distribution for the STM32 microprocessors Series
- Where to find the associated release note
- Where to find the previous releases (archives)

For more specific information, go through the Distribution Package article relative to your STM32 microprocessors Series: Category:Distribution Package

1 STM32MP15-Ecosystem-v1.1.0 release

- The STM32MP1 OpenSTLinux distribution is delivered through a manifest repository location and a manifest revision (**openstlinux-4.19-thud-mp1-19-10-09**).
- The installation relies on the *repo* command. In case the Repo tool (a Google-built repository management tool that runs on top of Git) is not yet installed and configured on the host PC, refer to the PC prerequisites article.
- The OpenSTLinux distribution is massively using open source software (OSS) packages that are downloaded from a variety of open source repositories; so it is required that the IT infrastructure proxies do not forbid such accesses. If some proxy-related issues are suspected, refer to the How to avoid proxy issues article.
- Install the STM32MP1 OpenSTLinux distribution

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.1.0 release
Installation	• Go to the host PC directory where to install the Distribution Package (*<Distribution Package installation directory>*). Example, if following the proposition to organize the working directory: `$ cd <working directory path>/Distribution-Package` • Create the OpenSTLinux distribution installation sub-directory: `$ mkdir openstlinux-4.19-thud-mp1-19-10-09` `$ cd openstlinux-4.19-thud-mp1-19-10-09` • Initialize repo in the current directory (More details on 'repo init' here). `$ repo init -u https://github.com/STMicroelectronics/oe-manifest.git -b refs/tags/openstlinux-4.19-thud-mp1-19-10-09` **Note:** "ERROR 404" may appear during "repo init" command without any impact on the process • Synchronize the local project directories with the remote repositories specified in the manifest (more details on 'repo sync' here) `$ repo sync` **Note:** *Distribution package* needs around 140MB to be installed (and around 25GB once *distribution package* is compiled).
Release note	Details about the content of this software package are available in the **associated** STM32MP15 ecosystem release note. If interested in previous releases, go through the archives of the ecosystem release note.

- The **OpenSTLinux distribution installation directory** is in the *<Distribution Package installation directory>, and is named* openstlinux-4.19-thud-mp1-19-10-09*:*

```
openstlinux-4.19-thud-mp1-19-10-09  OpenSTLinux distribution
├── layers
│   ├── meta-openembedded                Collection of layers for the OpenEmbedded-
Core universe (OpenEmbedded standard)
│   ├── meta-qt5                         QT5 layer for OpenEmbedded (standard)
│   ├── meta-st
│   │   ├── meta-st-openstlinux          STMicroelectronics layer that contains the
frameworks and images settings for the OpenSTLinux distribution
│   │   ├── meta-st-stm32mp              STMicroelectronics layer that contains the
description of the BSP for the STM32 MPU devices
│   │   │   ├── recipes-bsp
│   │   │   │   ├── alsa                 Recipes for ALSA control configuration
│   │   │   │   ├── drivers              Recipes for Vivante GCNANO GPU kernel drivers
│   │   │   │   ├── trusted-firmware-a   Recipes for TF-A
```

```
|   |   |   |   └── u-boot                  Recipes for U-Boot
|   |   |   ├── recipes-extended
|   |   |   |   ├── linux-examples          Recipes for Linux examples for STM32 MPU
devices
|   |   |   |   ├── m4coredump              Recipes for script to manage coredump of
cortexM4
|   |   |   |   └── m4projects              Recipes for firmware examples for Cortex M4
|   |   |   ├── recipes-graphics
|   |   |   |   ├── gcnano-userland         Recipes for Vivante libraries OpenGL ES, Open
VG and EGL (multi backend)
|   |   |   |   └── [...]
|   |   |   ├── recipes-kernel
|   |   |   |   ├── linux                   Recipes for Linux kernel
|   |   |   |   └── linux-firmware          Recipes for Linux firmwares (example,
Bluetooth firmware)
|   |   |   ├── recipes-security
|   |   |   |   └── optee                   Recipes for OPTEE
|   |   |   ├── recipes-st
|   |   |   |   └── images                  Recipes for the bootfs and userfs partitions
binaries
|   |   |   └── [...]
|   |   ├── meta-st-stm32mp-addons          STMicroelectronics layer that helps managing
the STM32CubeMX integration
|   |   └── scripts
|   |       ├── envsetup.sh                 Environment setup script for Distribution
Package
|   |       └── [...]
|   ├── meta-timesys                        Timesys layer for OpenEmbedded (standard)
|   └── openembedded-core                   Core metadata for current versions of OpenEmb
edded (standard)
```

2 Archives

2.1 STM32MP15-Ecosystem-v1.0.0 release

- The STM32MP1 OpenSTLinux distribution is delivered through a manifest repository location and a manifest revision (**openstlinux-4.19-thud-mp1-19-02-20**).
- The installation relies on the *repo* command. In case the Repo tool (a Google-built repository management tool that runs on top of Git) is not yet installed and configured on the host PC, refer to the PC prerequisites article.
- The OpenSTLinux distribution is massively using open source software (OSS) packages that are downloaded from a variety of open source repositories; so it is required that the IT infrastructure proxies do not forbid such accesses. If some proxy-related issues are suspected, refer to the How to avoid proxy issues article.
- Install the STM32MP1 OpenSTLinux distribution

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.0.0 release
	• Go to the host PC directory where to install the Distribution Package (*<Distribution Package installation directory>*). Example, if following the proposition to organize the working directory:

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.0.0 release
Installation	`$ cd <working directory path>/Distribution-Package` • Create the OpenSTLinux distribution installation sub-directory: `$ mkdir openstlinux-4.19-thud-mp1-19-02-20` `$ cd openstlinux-4.19-thud-mp1-19-02-20` • Initialize repo in the current directory. Details: The below command downloads (in the *.repo* directory) the latest repo source code and a manifest file (*default.xml*) that describes the directory structure of the repositories for OpenSTLinux. The *-u* option specifies the manifest repository location, while the *-b* option specifies its branch. `$ repo init -u https://github.com/STMicroelectronics/oe-manifest.git -b refs/tags/openstlinux-4.19-thud-mp1-19-02-20` **Note:** "ERROR 404" may appear during "repo init" command without any impact on the process • Synchronize the local project directories with the remote repositories specified in the manifest Details: If a local project does not yet exist, the command clones a new local directory from the remote repository and sets up tracking branches as specified in the manifest. If the local project already exists, the command updates the remote branches and rebases any new local changes on top of the new remote changes. `$ repo sync`
Release note	Details about the content of this software package are available in the **associated** STM32MP15 ecosystem release note. If interested in previous releases, go through the archives of the ecosystem release note.

- The **OpenSTLinux distribution installation directory** is in the *<Distribution Package installation directory>, and is named* openstlinux-4.19-thud-mp1-19-02-20*:*

```
openstlinux-4.19-thud-mp1-19-02-20  OpenSTLinux distribution
├── layers
│   ├── meta-openembedded                Collection of layers for the OpenEmbedded-
Core universe (OpenEmbedded standard)
│   ├── meta-qt5                         QT5 layer for OpenEmbedded (standard)
│   ├── meta-st
│   │   ├── meta-st-openstlinux          STMicroelectronics layer that contains the
frameworks and images settings for the OpenSTLinux distribution
│   │   ├── meta-st-stm32mp              STMicroelectronics layer that contains the
```

```
description of the BSP for the STM32 MPU devices
│   │   │   ├── recipes-bsp
│   │   │   │   ├── alsa                    Recipes for ALSA control configuration
│   │   │   │   ├── drivers                 Recipes for Vivante GCNANO GPU kernel drivers
│   │   │   │   ├── trusted-firmware-a      Recipes for TF-A
│   │   │   │   └── u-boot                  Recipes for U-Boot
│   │   │   ├── recipes-extended
│   │   │   │   ├── m4projects              Recipes for STM32Cube MPU Package within the
OpenSTLinux distribution
│   │   │   │   └── stlink                  Recipes for STLink
│   │   │   ├── recipes-graphics
│   │   │   │   ├── gcnano-userland         Recipes for Vivante libraries OpenGL ES, Open
VG and EGL (multi backend)
│   │   │   │   └── [...]
│   │   │   ├── recipes-kernel
│   │   │   │   ├── linux                   Recipes for Linux kernel
│   │   │   │   └── linux-firmware          Recipes for Linux firmwares (example,
Bluetooth firmware)
│   │   │   ├── recipes-security
│   │   │   │   └── optee                   Recipes for OPTEE
│   │   │   ├── recipes-st
│   │   │   │   └── images                  Recipes for the bootfs and userfs partitions
binaries
│   │   │   └── [...]
│   │   ├── meta-st-stm32mp-addons          STMicroelectronics layer that helps managing
the STM32CubeMX integration
│   │   └── scripts
│   │       ├── envsetup.sh                 Environment setup script for Distribution
Package
│   │       └── [...]
│   ├── meta-timesys                        Timesys layer for OpenEmbedded (standard)
│   └── openembedded-core                   Core metadata for current versions of OpenEmb
edded (standard)
```

Open Source Software

Board support package

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Graphics Processing Units

Trusted Firmware for Arm Cortex-A

Das U-Boot -- the Universal Boot Loader (see U-Boot_overview)

Open Graphics Library (See http://www.opengl.org/ for more details)

Open Vector Graphics (See http://www.khronos.org/openvg/ for more details)

Khronos Native Platform Graphics Interface (See http://www.khronos.org/egl/ for more details)

ST in-circuit debugger and programmer for the STM8 and STM32 microcontroller families (See ST-LINK for more details)

STM32MP1 Distribution Package - OpenSTLinux distribution

Stable: 23.01.2020 - 13:52 / Revision: 23.01.2020 - 13:46

This article aims to give the following information:

- How to download and install the **latest** OpenSTLinux distribution for the STM32 microprocessors Series
- Where to find the associated release note
- Where to find the previous releases (archives)

For more specific information, go through the Distribution Package article relative to your STM32 microprocessors Series: Category:Distribution Package

1 STM32MP15-Ecosystem-v1.1.0 release

- The STM32MP1 OpenSTLinux distribution is delivered through a manifest repository location and a manifest revision (**openstlinux-4.19-thud-mp1-19-10-09**).
- The installation relies on the *repo* command. In case the Repo tool (a Google-built repository management tool that runs on top of Git) is not yet installed and configured on the host PC, refer to the PC prerequisites article.
- The OpenSTLinux distribution is massively using open source software (OSS) packages that are downloaded from a variety of open source repositories; so it is required that the IT infrastructure proxies do not forbid such accesses. If some proxy-related issues are suspected, refer to the How to avoid proxy issues article.
- Install the STM32MP1 OpenSTLinux distribution

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.1.0 release
Installation	• Go to the host PC directory where to install the Distribution Package (*<Distribution Package installation directory>*). Example, if following the proposition to organize the working directory: `$ cd <working directory path>/Distribution-Package` • Create the OpenSTLinux distribution installation sub-directory: `$ mkdir openstlinux-4.19-thud-mp1-19-10-09` `$ cd openstlinux-4.19-thud-mp1-19-10-09` • Initialize repo in the current directory (More details on 'repo init' here). `$ repo init -u https://github.com/STMicroelectronics/oe-manifest.git -b refs/tags/openstlinux-4.19-thud-mp1-19-10-09` **Note:** "ERROR 404" may appear during "repo init" command without any impact on the process • Synchronize the local project directories with the remote repositories specified in the manifest (more details on 'repo sync' here)

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.1.0 release
	`$ repo sync` **Note:** *Distribution package* needs around 140MB to be installed (and around 25GB once *distribution package* is compiled).
Release note	Details about the content of this software package are available in the **associated** STM32MP15 ecosystem release note. If interested in previous releases, go through the archives of the ecosystem release note.

- The **OpenSTLinux distribution installation directory** is in the *<Distribution Package installation directory>, and is named* openstlinux-4.19-thud-mp1-19-10-09*:*

```
openstlinux-4.19-thud-mp1-19-10-09  OpenSTLinux distribution
├── layers
│   ├── meta-openembedded                 Collection of layers for the OpenEmbedded-
Core universe (OpenEmbedded standard)
│   ├── meta-qt5                          QT5 layer for OpenEmbedded (standard)
│   ├── meta-st
│   │   ├── meta-st-openstlinux           STMicroelectronics layer that contains the
frameworks and images settings for the OpenSTLinux distribution
│   │   ├── meta-st-stm32mp               STMicroelectronics layer that contains the
description of the BSP for the STM32 MPU devices
│   │   │   ├── recipes-bsp
│   │   │   │   ├── alsa                  Recipes for ALSA control configuration
│   │   │   │   ├── drivers               Recipes for Vivante GCNANO GPU kernel drivers
│   │   │   │   ├── trusted-firmware-a    Recipes for TF-A
│   │   │   │   └── u-boot                Recipes for U-Boot
│   │   │   ├── recipes-extended
│   │   │   │   ├── linux-examples        Recipes for Linux examples for STM32 MPU
devices
│   │   │   │   ├── m4coredump            Recipes for script to manage coredump of
cortexM4
│   │   │   │   └── m4projects            Recipes for firmware examples for Cortex M4
│   │   │   ├── recipes-graphics
│   │   │   │   ├── gcnano-userland       Recipes for Vivante libraries OpenGL ES, Open
VG and EGL (multi backend)
│   │   │   │   └── [...]
│   │   │   ├── recipes-kernel
│   │   │   │   ├── linux                 Recipes for Linux kernel
│   │   │   │   └── linux-firmware        Recipes for Linux firmwares (example,
Bluetooth firmware)
│   │   │   ├── recipes-security
│   │   │   │   └── optee                 Recipes for OPTEE
│   │   │   ├── recipes-st
│   │   │   │   └── images                Recipes for the bootfs and userfs partitions
binaries
│   │   │   └── [...]
│   │   ├── meta-st-stm32mp-addons        STMicroelectronics layer that helps managing
the STM32CubeMX integration
│   │   └── scripts
│   │       ├── envsetup.sh               Environment setup script for Distribution
Package
│   │       └── [...]
│   ├── meta-timesys                      Timesys layer for OpenEmbedded (standard)
│   └── openembedded-core                 Core metadata for current versions of OpenEmb
edded (standard)
```

2 Archives

2.1 STM32MP15-Ecosystem-v1.0.0 release

- The STM32MP1 OpenSTLinux distribution is delivered through a manifest repository location and a manifest revision (**openstlinux-4.19-thud-mp1-19-02-20**).
- The installation relies on the *repo* command. In case the Repo tool (a Google-built repository management tool that runs on top of Git) is not yet installed and configured on the host PC, refer to the PC prerequisites article.
- The OpenSTLinux distribution is massively using open source software (OSS) packages that are downloaded from a variety of open source repositories; so it is required that the IT infrastructure proxies do not forbid such accesses. If some proxy-related issues are suspected, refer to the How to avoid proxy issues article.
- Install the STM32MP1 OpenSTLinux distribution

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.0.0 release
Installation	• Go to the host PC directory where to install the Distribution Package (*<Distribution Package installation directory>*). Example, if following the proposition to organize the working directory: `$ cd <working directory path>/Distribution-Package` • Create the OpenSTLinux distribution installation sub-directory: `$ mkdir openstlinux-4.19-thud-mp1-19-02-20` `$ cd openstlinux-4.19-thud-mp1-19-02-20` • Initialize repo in the current directory. Details: The below command downloads (in the *.repo* directory) the latest repo source code and a manifest file (*default.xml*) that describes the directory structure of the repositories for OpenSTLinux. The *-u* option specifies the manifest repository location, while the *-b* option specifies its branch. `$ repo init -u https://github.com/STMicroelectronics/oe-manifest.git -b refs/tags/openstlinux-4.19-thud-mp1-19-02-20` **Note:** "ERROR 404" may appear during "repo init" command without any impact on the process • Synchronize the local project directories with the remote repositories specified in the manifest Details:

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.0.0 release
	If a local project does not yet exist, the command clones a new local directory from the remote repository and sets up tracking branches as specified in the manifest. If the local project already exists, the command updates the remote branches and rebases any new local changes on top of the new remote changes. `$ repo sync`
Release note	Details about the content of this software package are available in the **associated** STM32MP15 ecosystem release note. If interested in previous releases, go through the archives of the ecosystem release note.

- The **OpenSTLinux distribution installation directory** is in the *<Distribution Package installation directory>, and is named* openstlinux-4.19-thud-mp1-19-02-20*:*

```
openstlinux-4.19-thud-mp1-19-02-20  OpenSTLinux distribution
├── layers
│   ├── meta-openembedded                Collection of layers for the OpenEmbedded-
Core universe (OpenEmbedded standard)
│   ├── meta-qt5                         QT5 layer for OpenEmbedded (standard)
│   ├── meta-st
│   │   ├── meta-st-openstlinux          STMicroelectronics layer that contains the
frameworks and images settings for the OpenSTLinux distribution
│   │   ├── meta-st-stm32mp              STMicroelectronics layer that contains the
description of the BSP for the STM32 MPU devices
│   │   │   ├── recipes-bsp
│   │   │   │   ├── alsa                 Recipes for ALSA control configuration
│   │   │   │   ├── drivers              Recipes for Vivante GCNANO GPU kernel drivers
│   │   │   │   ├── trusted-firmware-a   Recipes for TF-A
│   │   │   │   └── u-boot               Recipes for U-Boot
│   │   │   ├── recipes-extended
│   │   │   │   ├── m4projects           Recipes for STM32Cube MPU Package within the
OpenSTLinux distribution
│   │   │   │   └── stlink               Recipes for STLink
│   │   │   ├── recipes-graphics
│   │   │   │   ├── gcnano-userland      Recipes for Vivante libraries OpenGL ES, Open
VG and EGL (multi backend)
│   │   │   │   └── [...]
│   │   │   ├── recipes-kernel
│   │   │   │   ├── linux                Recipes for Linux kernel
│   │   │   │   └── linux-firmware       Recipes for Linux firmwares (example,
Bluetooth firmware)
│   │   │   ├── recipes-security
│   │   │   │   └── optee                Recipes for OPTEE
│   │   │   ├── recipes-st
│   │   │   │   └── images               Recipes for the bootfs and userfs partitions
binaries
│   │   │   └── [...]
│   │   ├── meta-st-stm32mp-addons       STMicroelectronics layer that helps managing
the STM32CubeMX integration
│   │   └── scripts
│   │       ├── envsetup.sh              Environment setup script for Distribution
```

```
Package
│      │       └── [...]
│      ├── meta-timesys                    Timesys layer for OpenEmbedded (standard)
│      └── openembedded-core                Core metadata for current versions of OpenEmb
edded (standard)
```

Open Source Software

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Das U-Boot -- the Universal Boot Loader (see U-Boot_overview)

Open Graphics Library (See http://www.opengl.org/ for more details)

Open Vector Graphics (See http://www.khronos.org/openvg/ for more details)

Khronos Native Platform Graphics Interface (See http://www.khronos.org/egl/ for more details)

ST in-circuit debugger and programmer for the STM8 and STM32 microcontroller families (See ST-LINK for more details)

STM32MP1 Distribution Package - OpenSTLinux distribution

Stable: 20.12.2019 - 15:12 / Revision: 12.12.2019 - 12:53

This article aims to give the following information:

- How to download and install the **latest** OpenSTLinux distribution for the STM32 microprocessors Series
- Where to find the associated release note
- Where to find the previous releases (archives)

For more specific information, go through the Distribution Package article relative to your STM32 microprocessors Series: Category:Distribution Package

1 STM32MP15-Ecosystem-v1.1.0 release

- The STM32MP1 OpenSTLinux distribution is delivered through a manifest repository location and a manifest revision (**openstlinux-4.19-thud-mp1-19-10-09**).
- The installation relies on the *repo* command. In case the Repo tool (a Google-built repository management tool that runs on top of Git) is not yet installed and configured on the host PC, refer to the PC prerequisites article.
- The OpenSTLinux distribution is massively using open source software (OSS) packages that are downloaded from a variety of open source repositories; so it is required that the IT infrastructure proxies do not forbid such accesses. If some proxy-related issues are suspected, refer to the How to avoid proxy issues article.
- Install the STM32MP1 OpenSTLinux distribution

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.1.0 release
Installation	• Go to the host PC directory where to install the Distribution Package (*<Distribution Package installation directory>*). Example, if following the proposition to organize the working directory: `$ cd <working directory path>/Distribution-Package` • Create the OpenSTLinux distribution installation sub-directory: `$ mkdir openstlinux-4.19-thud-mp1-19-10-09` `$ cd openstlinux-4.19-thud-mp1-19-10-09` • Initialize repo in the current directory (More details on 'repo init' here). `$ repo init -u https://github.com/STMicroelectronics/oe-manifest.git -b refs/tags/openstlinux-4.19-thud-mp1-19-10-09` **Note:** "ERROR 404" may appear during "repo init" command without any impact on the process • Synchronize the local project directories with the remote repositories specified in the manifest (more details on 'repo sync' here) `$ repo sync` **Note:** *Distribution package* needs around 140MB to be installed (and around 25GB once *distribution package* is compiled).
Release note	Details about the content of this software package are available in the **associated** STM32MP15 ecosystem release note. If interested in previous releases, go through the archives of the ecosystem release note.

- The **OpenSTLinux distribution installation directory** is in the *<Distribution Package installation directory>, and is named* openstlinux-4.19-thud-mp1-19-10-09*:*

```
openstlinux-4.19-thud-mp1-19-10-09  OpenSTLinux distribution
├── layers
│   ├── meta-openembedded                Collection of layers for the OpenEmbedded-
Core universe (OpenEmbedded standard)
│   ├── meta-qt5                         QT5 layer for OpenEmbedded (standard)
│   ├── meta-st
│   │   ├── meta-st-openstlinux          STMicroelectronics layer that contains the
frameworks and images settings for the OpenSTLinux distribution
│   │   ├── meta-st-stm32mp              STMicroelectronics layer that contains the
description of the BSP for the STM32 MPU devices
│   │   │   ├── recipes-bsp
│   │   │   │   ├── alsa                 Recipes for ALSA control configuration
│   │   │   │   ├── drivers              Recipes for Vivante GCNANO GPU kernel drivers
│   │   │   │   ├── trusted-firmware-a   Recipes for TF-A
```

```
│   │   │   │   └── u-boot                    Recipes for U-Boot
│   │   │   ├── recipes-extended
│   │   │   │   ├── linux-examples           Recipes for Linux examples for STM32 MPU
devices
│   │   │   │   ├── m4coredump               Recipes for script to manage coredump of
cortexM4
│   │   │   │   └── m4projects               Recipes for firmware examples for Cortex M4
│   │   │   ├── recipes-graphics
│   │   │   │   ├── gcnano-userland          Recipes for Vivante libraries OpenGL ES, Open
VG and EGL (multi backend)
│   │   │   │   └── [...]
│   │   │   ├── recipes-kernel
│   │   │   │   ├── linux                    Recipes for Linux kernel
│   │   │   │   └── linux-firmware           Recipes for Linux firmwares (example,
Bluetooth firmware)
│   │   │   ├── recipes-security
│   │   │   │   └── optee                    Recipes for OPTEE
│   │   │   ├── recipes-st
│   │   │   │   └── images                   Recipes for the bootfs and userfs partitions
binaries
│   │   │   └── [...]
│   │   ├── meta-st-stm32mp-addons           STMicroelectronics layer that helps managing
the STM32CubeMX integration
│   │   └── scripts
│   │       ├── envsetup.sh                  Environment setup script for Distribution
Package
│   │       └── [...]
│   ├── meta-timesys                         Timesys layer for OpenEmbedded (standard)
│   └── openembedded-core                    Core metadata for current versions of OpenEmb
edded (standard)
```

2 Archives

2.1 STM32MP15-Ecosystem-v1.0.0 release

- The STM32MP1 OpenSTLinux distribution is delivered through a manifest repository location and a manifest revision (**openstlinux-4.19-thud-mp1-19-02-20**).
- The installation relies on the *repo* command. In case the Repo tool (a Google-built repository management tool that runs on top of Git) is not yet installed and configured on the host PC, refer to the PC prerequisites article.
- The OpenSTLinux distribution is massively using open source software (OSS) packages that are downloaded from a variety of open source repositories; so it is required that the IT infrastructure proxies do not forbid such accesses. If some proxy-related issues are suspected, refer to the How to avoid proxy issues article.
- Install the STM32MP1 OpenSTLinux distribution

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.0.0 release
	• Go to the host PC directory where to install the Distribution Package (*<Distribution Package installation directory>*). Example, if following the proposition to organize the working directory:

	STM32MP1 Distribution Package OpenSTLinux distribution - STM32MP15-Ecosystem-v1.0.0 release
Installation	`$ cd <working directory path>/Distribution-Package` • Create the OpenSTLinux distribution installation sub-directory: `$ mkdir openstlinux-4.19-thud-mp1-19-02-20` `$ cd openstlinux-4.19-thud-mp1-19-02-20` • Initialize repo in the current directory. Details: The below command downloads (in the *.repo* directory) the latest repo source code and a manifest file (*default.xml*) that describes the directory structure of the repositories for OpenSTLinux. The *-u* option specifies the manifest repository location, while the *-b* option specifies its branch. `$ repo init -u https://github.com/STMicroelectronics/oe-manifest.git -b refs/tags/openstlinux-4.19-thud-mp1-19-02-20` **Note:** "ERROR 404" may appear during "repo init" command without any impact on the process • Synchronize the local project directories with the remote repositories specified in the manifest Details: If a local project does not yet exist, the command clones a new local directory from the remote repository and sets up tracking branches as specified in the manifest. If the local project already exists, the command updates the remote branches and rebases any new local changes on top of the new remote changes. `$ repo sync`
Release note	Details about the content of this software package are available in the **associated** STM32MP15 ecosystem release note. If interested in previous releases, go through the archives of the ecosystem release note.

- The **OpenSTLinux distribution installation directory** is in the *<Distribution Package installation directory>, and is named* openstlinux-4.19-thud-mp1-19-02-20*:*

```
openstlinux-4.19-thud-mp1-19-02-20  OpenSTLinux distribution
├── layers
│   ├── meta-openembedded                Collection of layers for the OpenEmbedded-
Core universe (OpenEmbedded standard)
│   ├── meta-qt5                         QT5 layer for OpenEmbedded (standard)
│   ├── meta-st
│   │   ├── meta-st-openstlinux          STMicroelectronics layer that contains the
frameworks and images settings for the OpenSTLinux distribution
│   │   ├── meta-st-stm32mp              STMicroelectronics layer that contains the
```

```
description of the BSP for the STM32 MPU devices
│   │   │   ├── recipes-bsp
│   │   │   │   ├── alsa                    Recipes for ALSA control configuration
│   │   │   │   ├── drivers                 Recipes for Vivante GCNANO GPU kernel drivers
│   │   │   │   ├── trusted-firmware-a      Recipes for TF-A
│   │   │   │   └── u-boot                  Recipes for U-Boot
│   │   │   ├── recipes-extended
│   │   │   │   ├── m4projects              Recipes for STM32Cube MPU Package within the
OpenSTLinux distribution
│   │   │   │   └── stlink                  Recipes for STLink
│   │   │   ├── recipes-graphics
│   │   │   │   ├── gcnano-userland         Recipes for Vivante libraries OpenGL ES, Open
VG and EGL (multi backend)
│   │   │   │   └── [...]
│   │   │   ├── recipes-kernel
│   │   │   │   ├── linux                   Recipes for Linux kernel
│   │   │   │   └── linux-firmware          Recipes for Linux firmwares (example,
Bluetooth firmware)
│   │   │   ├── recipes-security
│   │   │   │   └── optee                   Recipes for OPTEE
│   │   │   ├── recipes-st
│   │   │   │   └── images                  Recipes for the bootfs and userfs partitions
binaries
│   │   │   └── [...]
│   │   ├── meta-st-stm32mp-addons          STMicroelectronics layer that helps managing
the STM32CubeMX integration
│   │   └── scripts
│   │       ├── envsetup.sh                 Environment setup script for Distribution
Package
│   │       └── [...]
│   ├── meta-timesys                        Timesys layer for OpenEmbedded (standard)
│   └── openembedded-core                   Core metadata for current versions of OpenEmb
edded (standard)
```

Open Source Software

Board support package

Microprocessor Unit

Advanced Linux sound architecture

Graphics Processing Units

Trusted Firmware for Arm Cortex-A

Das U-Boot -- the Universal Boot Loader (see U-Boot_overview)

Open Graphics Library (See http://www.opengl.org/ for more details)

Open Vector Graphics (See http://www.khronos.org/openvg/ for more details)

Khronos Native Platform Graphics Interface (See http://www.khronos.org/egl/ for more details)

ST in-circuit debugger and programmer for the STM8 and STM32 microcontroller families (See ST-LINK for more details)