

# GDP-ivi9 version: feature page

- [GDP-ivi9 Description](#)
- [GDP-ivi9 Release](#)
  - [Highlights](#)
  - [Download and run GDP-ivi9.](#)
    - [QEMU](#)
    - [RPI2/Minnowboard](#)
  - [What is new in GDP-ivi9?](#)
  - [Known Potential Problems?](#)
- [GDP-ivi9 QEMU RC1](#)
  - [Download and run GDP-ivi9 QEMU RC1](#)
  - [Build GDP-ivi9 QEMU RC1 from sources](#)
  - [What is new in GDP-ivi9 QEMU RC1 image?](#)
  - [Known Potential Problems?](#)
- [GDP-ivi9 QEMU Beta](#)
  - [Download and run GDP-ivi9 QEMU Beta](#)
  - [Build GDP-ivi9 QEMU Beta from sources](#)
  - [What is new in GDP-ivi9 QEMU Beta image?](#)
  - [Known-potential problems](#)

## GDP-ivi9 Description

GDP-ivi9 is the latest major release of the GENIVI Development Platform, based on [Baseline meta-ivi-9](#). It is designed to test the middleware developed by the GENIVI Alliance and to serve as a development platform for UI and IVI application developers interested in Open Source for automotive. The following pages are relevant to understand what is GDP in general and is new in this release, as well as download and run or build from scratch GDP-ivi9 on the different targets.

- The current page describes the main features that comes with GDP-ivi9 together with basic instructions on how to download it and run it or build it from scratch for those who are familiar with GDP.
- Those who are new to GDP are recommended to check the download and run or build from scratch instructions described in each of the target pages:
  - [QEMU target](#) page.
  - [Renesas Porter Board target](#) page.
  - [Raspberry Pi 2 target](#) page.
  - [Minnowboard target](#) page.
- To get further information about what is GDP, read carefully this page and check [GDP in Detail](#). If you are interested in what others have to say about GDP-ivi9 as well as our presence in events, check [GDP Out There](#).

## GDP-ivi9 Release

### Highlights

GDP-ivi9 introduces many updates and several new features. GDP-ivi9 targets QEMU, Renesas Porter and Raspberry Pi2, which is a new target. It has a branch in [genivi-dev-platform repository](#), and release artifacts on the [Download Page](#).

This new release brings newer versions of software. Of particular interest is moving wayland, weston and wayland-ivi-extension to version 1.9, dealing with the lack of backwards-compatibility in wayland-ivi-extension 1.9 compared to previous versions. The GENIVI Development Platform HMI has been updated to use the newer API. Several layers has been updated or modified in order to accommodate new features or changes needed. Please check the table below for details.

The RVI SOTA Client has also been added as an optional build package for the GDP, you can read more about this new software [here](#).

GDP-ivi9 has brought many changes in terms of the delivery process. The [management of the projects](#) is taking place in the open, external contributors has been helping the delivery team to improve GDP and there is a new maintainer who has joined the delivery team, [Changhyeok Bae](#). GDP-ivi9 is the first GDP version released under the new Release process, that is being documented in [this wiki](#). New tools has been added to the workflow like [JIRA](#), [Confluence](#) and [go.cd](#).

Beyond the presentation at [ELC 2016](#), GDP-ivi9 will be first shown at [14th GENIVI AMM](#), in Paris. Several hands on sessions will take place having GDP-ivi as base.

## Download and run GDP-ivi9.

### QEMU

- Download the rootfs and kernel from the [Download Page](#)
- Unzip the rootfs
- Using qemu (with kvm), run

```

sudo kvm -kernel gdp-ivi9.bzImage \
-net nic,vlan=0 \
-net tap,vlan=0,ifname=tap0,script=no,downscript=no \
-cpu core2duo \
-hda gdp-ivi9.rootfs.ext4 \
-vga vmware \
-no-reboot \
-soundhw ac97 \
-m 512 \
--append "vga=0 uvesafb.mode_option=640x480-32 root=/dev/hda rw mem=512M ip=192.168.7.2::192.168.7.1:255.255.255.0 oprofile.timer=1"

```

## RPi2/Minnowboard

- Download the SD image from the [Download Page](#)
- Flash the SD image to an SD card
- Insert the SD card into a Raspberry Pi 2/Minnowboard

## Build from scratch GDP-ivi9

Targets currently include: qemux86-64, porter, raspberrypi2 (\*note porter board requires EULA gfx binary installation)

- Clone the [genivi-dev-platform repository](#) repo:

```
$ git clone https://github.com/GENIVI/genivi-dev-platform.git -b gdp-ivi9
```

- source the **init.sh** file specifying \$target
- Run the command **bitbake genivi-dev-platform**

More verbose build instructions along with further specific target information can be found [here](#)

## What is new in GDP-ivi9?

This is the list of the major software updates that include GDP-ivi9 compared with the previous major release.

Software	GDP-ivi7	GDP-ivi9
weston	1.5.0	1.9.0
wayland	1.5.0	1.9.0
wayland-ivi-extension	1.3.0	1.9.1
mesa	10.4.4	10.6.3
libdrm	2.4.59	2.4.62
libinput	0.7.0	1.1.1
qt5	5.3.2	5.4.2

These are the layers that have experienced major updates in GDP-ivi9:

Layer	GDP-ivi7	GDP-ivi9
meta-ivi	7.0	9.0.1
meta-qt5	dizzy	fido
meta-openembedded	dizzy	fido
poky	dizzy	fido
meta-renesas	genivi-7.0-bsp-1.8.0	experimental-genivi-9-bsp-1.10.0-weston-1.9.0
meta-raspberrypi	N/A	master (519c387)

As GDP is built upon meta-ivi releases, the meta-ivi release documentation is useful for further information on [package changes](#). This is also applicable to non genivi layers, such as poky.

In addition:

- The Genivi Development Platform HMI has been updated to use the API change in wayland-ivi-extension 1.9.0
- Updated AudioManager Monitor to the latest commit

Information about GDP-ivi9 ports to different target boards, emulation and virtualization products/technologies:

1. GDP-ivi9 Renesas R-Car M2 [Porter](#)
2. GDP-ivi9 [RPI2](#)
3. [QEMU x86\\_64](#) GDP-ivi9 image.
4. GDP-ivi9 [MinnowBoard MAX](#)
5. [Renesas R-car Silk](#)
6. [RPI3](#)

## Known Potential Problems?

- [OSSINFR-30](#) - Getting issue details... STATUS The GENIVI git server is failing to clone git:// URLs for some users.
- [GDP-149](#) - Getting issue details... STATUS On the RPi2, the HMI doesn't show if a keyboard is plugged in.
- [GDP-110](#) - Getting issue details... STATUS In the GDP HMI, the pointer focus behaviour has changed. The first click onto a surface that does not already have pointer focus is now ignored, resulting on non-obvious extra clicking. This issue has not been detected when using a touchscreen.
- The configure flag `WITH_DATABASE_STORAGE` was disabled as the version of AudioManager provided by meta-ivi 9.0.1 failed to compile
- [GDP-166](#) - Getting issue details... STATUS On the qemu image, the graphics in the GDP HMI are running less smoothly than they did in previous versions.
- weston: The patch `browser_poc_hack` was removed because it no longer applied cleanly, and we couldn't find a justification for its existence which would help us identify whether it was necessary, and whether it was having the desired effect.
- The HMI doesn't show if neither a mouse nor a touchscreen are plugged in.

## GDP-ivi9 QEMU RC1

[GDP-ivi9 RC1](#) was released on March 8th 2016 by the GDP Delivery Team targetting QEMU. To download GDP-ivi9 RC1 please visit the [GDP Download page](#). This page also contains the artifacts and metadata for previous versions of the GDP. You may also be interested in the [R EADME file](#).

### Download and run GDP-ivi9 QEMU RC1

Check the instructions described on the [QEMU target page](#)

### Build GDP-ivi9 QEMU RC1 from sources

Check the instructions described on the [QEMU target page](#)

### What is new in GDP-ivi9 QEMU RC1 image?

The main updates from the previous version (GDP-ivi9 beta) are

Software	GDP-ivi9 beta	GDP-ivi RC1
weston	1.6.0	1.9.0
wayland	1.6.0	1.9.0
wayland-ivi-extension	1.3.0	1.9.0
mesa	10.4.4	10.6.3

libdrm	2.4.59	2.4.62
libinput	0.7.0	1.1.1

In addition, the genivi-demo-platform-hmi has been updated to handle the changes to the LayerManagement APIs when upgrading wayland-ivi-extension. Please check the [What is new section](#) of GDP-ivi9 beta version for further information about what has been updated from GDP-ivi7. As GDP is built upon meta-ivi releases, the meta-ivi release documentation is useful for further information on [package changes](#). This is also applicable to non genivi layers, such as poky.

## Known Potential Problems?

- ([GDP-110](#)) In the GDP HMI, the pointer focus behaviour has changed. The first click onto a surface that does not already have pointer focus is now ignored, resulting on non-obvious extra clicking.
- The graphics in the GDP HMI are running less smoothly than they did in previous versions.

## GDP-ivi9 QEMU Beta

[GDP-ivi9 Beta](#) was released on February 17th 2016 by the GDP Delivery Team targetting QEMU. To download GDP-ivi9 QEMU Beta image please do to the [GDP Download page](#). You will find there also links to artifacts and metadata together with previous versions of GDP available. It is also interesting to go through the [README file](#).

## Download and run GDP-ivi9 QEMU Beta

Check the instructions described on the [QEMU target page](#)

## Build GDP-ivi9 QEMU Beta from sources

Check the instructions described on the [QEMU target page](#)

## What is new in GDP-ivi9 QEMU Beta image?

Since meta-genivi-demo v7.0 , substantial changes are:

- Moved from meta-ivi 7 to [Meta-IVI 9.0.1](#)
  - Including the various fixes required to do this
- Updated AudioManager Monitor to the latest commit
- Upgraded to Qt 5.4.2
- Upgraded all support layers to Poky 1.8 'Fido' based branches

## Known-potential problems

Potential regressions:

- weston: The patch browser\_poc\_hack was removed because it no longer applied cleanly, and we couldn't find a justification for its existence which would help us identify whether it was necessary, and whether it was having the desired effect.
- audiomanager: The configure flag WITH\_DATABASE\_STORAGE was disabled as the version of AudioManager provided by meta-ivi 9.0.1 failed to compile