
Application Specification for gplay

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About This Book

This document describes the application specification of the command-line player which is based on the Gstreamer architecture. Gstreamer is a powerful, versatile framework for creating streaming media applications.

Audience

This document is intended for software, hardware, and system engineers who are planning to use the Multimedia codecs with Gstreamer architecture, and for anyone who wants to understand more about the Multimedia codecs.

Organization

This document contains the following chapters.

- Chapter 1 Introduction to command-line player.
- Chapter 2 Describes the basic operations.
- Chapter 3 Describes the advanced operations.

Conventions

This document uses the following conventions:

- Courier* Is used to identify commands, explicit command parameters, code examples, expressions, data types, and directives.
- Italic* Is used for emphasis, to identify new terms, and for replaceable command parameters.

References

The following documents were referenced to build this document.

1. i.MX PDK Linux User's Guide
2. i.MX PDK Linux Multimedia Framework Release Notes
3. i.MX Advanced ToolKit Standard User's Guide

Definitions, Acronyms, and Abbreviations

The following list defines the abbreviations used in this document.

FSL	Freescale
Codec	Coder/Decoder
LTIB	Linux Target Image Builder
ARM	Advanced RISC Machine

Chapter 1

Introduction to Command-line player

The gplay supports not only one file playback but also a play list playback. It accepts a specified path and file name as the only input parameter or a list of file names separated by space.

For example, to play a multimedia file, "gplay <multimedia file path and name>"; to play several multimedia files, type "gplay <list of files >".

When the gplay is running, player status information (PSI) will display on the bottom of command-line. It looks like

```
[Status(Repeated Mode)] [Volume] [Elapsed Time/Duration Time]
```

```
root@ubuntu:gplay sample.avi  
[Stopped] [Vol=01] [00:00:00/00:06:12]
```

Here, "Status" represents the status of player, it has the following values:

- Playing
- Paused
- Stopped
- There is three repeated modes: none repeated mode; if "(List Repeated)" is displayed in "Status", that means player is in the play list repeated mode; if "(Current Repeated)" is displayed in "Status", that means player is in the current file repeated mode.

The "Volume" is a value between 0 and 10; the default value of "Volume" is 1.

The "Elapsed Time" will be increased to "Duration Time" every second when multimedia file is being played, the format of "<Elapsed Time/Duration Time>" is like "< hh:mm:ss / hh:mm:ss >".

Customers can operate the player through pressing keys from keyboard.

Chapter 2

Basic operations

Basic operations include:

- On-line help
- Play/Stop/Pause/Resume
- Seek
- Dump meta-data information
- Exit

Detailed operations are defined below.

- **'h'**: Press h to display the on-line help. Command-line looks like below after press 'h'.

```
root@ubuntu:gplay sample.avi
FSL_PLAYER_01.00_LINUX build on Dec 18 2009 02:48:33
'h': Display the operating help.
'p': Play the multimedia file.
's': Stop when in playing status.
'e': Seek to a specified position according the input seconds.
'a': Switch pause and resume.
'v': Volume control.
'm': Switch to mute or not.
'>': Play next file.
'<': Play previous file.
'r': Repeated mode setting.
'i': Display the metadata.
'f': Set full screen or not.
'z': Resize the width and height.
't': Rotate.
'x': Exit player.
[Stopped][Vol=01][00:00:00/00:06:12]
```

- **'p'**: Play the multimedia file. Change “Status” to “Playing”. Command-line looks like below after press 'p'.

```
root@ubuntu:gplay sample.avi
[Playing][Vol=01][00:00:36/00:06:12]
```

- **'s'**: Stop when in playing status. Change “Status” to “Stopped” and elapsed time to “00:00:00”. Command-line looks like below after press ‘s’.

```
root@ubuntu:gplay sample.avi
[Stopped][Vol=01][00:00:00/00:06:12]
```

- **'a'**: Switch between pause and playing. Pause when playing, and change “Status” to “Paused”. Resume when paused, and change “Status” to “Playing”. The display after press ‘a’ while player is in playing status is like below.

```
root@ubuntu:gplay sample.avi
[Paused][Vol=01][00:00:36/00:06:12]
```

- **'e'**: Seek to a specified time point in unit of second. Command-line looks like below after press ‘e’.

```
root@ubuntu:gplay sample.avi
[Playing][Vol=01][00:00:36/00:06:12]
Set seek point between [0,312] seconds:
```

Then player menu gets into the second level, please input an integer between [0, duration] to represent the seek position. The input of the second level menu will be displayed in the command-line. For example, input 186.

```
root@ubuntu:gplay sample.avi
[Playing][Vol=01][00:00:36/00:06:12]
Set seek point between [0,312] seconds: 186
```

Then after the seeking operation is executed,

```
root@ubuntu:gplay sample.avi
[Playing][Vol=01][00:03:06/00:06:12]
```

- **'i'**: Display the metadata of multimedia file. The display after press ‘i’ is like below.

```
root@ubuntu:./gplay sample.avi
File:
  Title:
  Artist:
  Album:
  Year:
  Genre:
  Duration:
Video:
  Width:
  Height:
  Frame rate:
  Bitrate:
  Codec:
Audio:
  Channels:
  Sample rate:
  Bitrate:
  Codec:
[Playing][Vol=01][00:00:36/00:06:12]
```

- 'x': Exit player.

Chapter 3

Advance operations

Advanced operations cover,

- Volume control / Mute
- Rotate
- Video displaying width and height
- Repeat mode
- Playlist

Detailed operations are specified below.

- **'v'**: Volume control. The maximal volume is 10. The display after press 'v' is like below.

```
root@ubuntu:gplay sample.avi
[Playing][Vol=01][00:00:36/00:06:12]Set volume[0,10]:
```

Then player menu gets into the second level, please input a value between [0, 10]. For example, after input the value 5, the menu will be displayed in the command-line as following.

```
root@ubuntu:gplay sample.avi
[Playing][Vol=05][00:00:36/00:06:12]
```

- **'m'**: Switch to mute or not. This means set volume 0 or not.
- **'t'**: Rotate video display. None rotated mode is default. The display after press 't' is like below.

```
root@ubuntu:gplay sample.avi
[Playing][Vol=01][00:00:36/00:06:12]
Set rotation(0,0),(4,-90),(3,180),(7,90):
```

Then player menu gets into the second level, please input a value in (0, 4, 3, 7). 0 means none rotation. 4 means counter-clockwise rotation with 90 degrees. 3 means clockwise rotation with 180 degrees. 7 means clockwise rotation with 90 degrees.

- **'f'**: Switch to full screen or not. None full screen is default.
- **'z'**: Resize width and height of video according seven factors (0.25, 0.5, 0.75, 1.0, 2, 3, 4).
- **'r'**: Repeated mode setting. None repeated mode is default. The display after press 'r' while player is not in repeated mode is like below.

```
root@ubuntu:gplay sample.avi
[Playing][Vol=01][00:00:36/00:06:12]
input repeated mode[0 for none repeated,1 for play list repeated,2 for
current file repeated]:
```

Then player menu gets into the second level, please input a value among 0, 1, 2. For example, after input the value 1, the menu will be displayed in the command-line as following.

```
root@ubuntu:gplay sample.avi
[Playing (List Repeated)][Vol=01][00:00:36/00:06:12]
```

Another example, after input the value 2, the menu will be displayed in the command-line as following.

```
root@ubuntu:gplay sample.avi
[Playing (Current Repeated)][Vol=01][00:00:36/00:06:12]
```

- '>': Play the next multimedia file.
- '<': Play the previous multimedia file.