

# Gstreamer / Gstreamer Videomixer Using

Gstreamervideobox, alpha, videomixer, demo.

## **videobox**

. videobox,top,bottom, leftright. . , , fill, alpha.

videobox:

<https://gstreamer.freedesktop.org/data/doc/gstreamer/head/gst-plugins-good/html/gst-plugins-good-plugins-videobox.html>

videoboxpipeline,

```

root@phyboard-mira-imx6-3:~# gst-launch-1.0 -v videotestsrc pattern=snow ! video/x-raw, width=600, height=400 !
videobox top=-50 left=-50 fill=blue ! fbdevsink
Setting pipeline to PAUSED ...
Pipeline is PREROLLING ...
/GstPipeline:pipeline0/GstVideoTestSrc:videotestsrc0.GstPad:src: caps = video/x-raw, format=(string)AYUV, width=
(int)600, height=(int)400, framerate=(fraction)30/1, multiview-mode=(string)mo
no, pixel-aspect-ratio=(fraction)1/1, interlace-mode=(string)progressive
/GstPipeline:pipeline0/GstCapsFilter:capsfilter0.GstPad:src: caps = video/x-raw, format=(string)AYUV, width=
(int)600, height=(int)400, framerate=(fraction)30/1, multiview-mode=(string)mono,
pixel-aspect-ratio=(fraction)1/1, interlace-mode=(string)progressive
/GstPipeline:pipeline0/GstVideoBox:videobox0.GstPad:src: caps = video/x-raw, format=(string)BGRx, width=(int)
650, height=(int)450, framerate=(fraction)30/1, multiview-mode=(string)mono, pxe
l-aspect-ratio=(fraction)1/1, interlace-mode=(string)progressive
/GstPipeline:pipeline0/GstFBDEVSink:fbdevsink0.GstPad:sink: caps = video/x-raw, format=(string)BGRx, width=(int)
650, height=(int)450, framerate=(fraction)30/1, multiview-mode=(string)mono, p
ixel-aspect-ratio=(fraction)1/1, interlace-mode=(string)progressive
/GstPipeline:pipeline0/GstVideoBox:videobox0.GstPad:sink: caps = video/x-raw, format=(string)AYUV, width=(int)
600, height=(int)400, framerate=(fraction)30/1, multiview-mode=(string)mono, pix
el-aspect-ratio=(fraction)1/1, interlace-mode=(string)progressive
/GstPipeline:pipeline0/GstCapsFilter:capsfilter0.GstPad:sink: caps = video/x-raw, format=(string)AYUV, width=
(int)600, height=(int)400, framerate=(fraction)30/1, multiview-mode=(string)mono,
pixel-aspect-ratio=(fraction)1/1, interlace-mode=(string)progressive
Pipeline is PREROLLED ...
Setting pipeline to PLAYING ...
New clock: GstSystemClock
^Chandling interrupt.
Interrupt: Stopping pipeline ...
Execution ended after 0:00:02.187046334
Setting pipeline to PAUSED ...
Setting pipeline to READY ...
Setting pipeline to NULL ...
Freeing pipeline ...
root@phyboard-mira-imx6-3:~# gst-launch-1.0 -v videotestsrc ! video/x-raw, width=600, height=400 ! videobox
top=50 left=50 ! fbdevsink
Setting pipeline to PAUSED ...
Pipeline is PREROLLING ...
/GstPipeline:pipeline0/GstVideoTestSrc:videotestsrc0.GstPad:src: caps = video/x-raw, format=(string)AYUV, width=
(int)600, height=(int)400, framerate=(fraction)30/1, multiview-mode=(string)mo
no, pixel-aspect-ratio=(fraction)1/1, interlace-mode=(string)progressive
/GstPipeline:pipeline0/GstCapsFilter:capsfilter0.GstPad:src: caps = video/x-raw, format=(string)AYUV, width=
(int)600, height=(int)400, framerate=(fraction)30/1, multiview-mode=(string)mono,
pixel-aspect-ratio=(fraction)1/1, interlace-mode=(string)progressive
/GstPipeline:pipeline0/GstVideoBox:videobox0.GstPad:src: caps = video/x-raw, format=(string)BGRx, width=(int)
550, height=(int)350, framerate=(fraction)30/1, multiview-mode=(string)mono, pxe
l-aspect-ratio=(fraction)1/1, interlace-mode=(string)progressive
/GstPipeline:pipeline0/GstFBDEVSink:fbdevsink0.GstPad:sink: caps = video/x-raw, format=(string)BGRx, width=(int)
550, height=(int)350, framerate=(fraction)30/1, multiview-mode=(string)mono, p
ixel-aspect-ratio=(fraction)1/1, interlace-mode=(string)progressive
/GstPipeline:pipeline0/GstVideoBox:videobox0.GstPad:sink: caps = video/x-raw, format=(string)AYUV, width=(int)
600, height=(int)400, framerate=(fraction)30/1, multiview-mode=(string)mono, pix
el-aspect-ratio=(fraction)1/1, interlace-mode=(string)progressive
/GstPipeline:pipeline0/GstCapsFilter:capsfilter0.GstPad:sink: caps = video/x-raw, format=(string)AYUV, width=
(int)600, height=(int)400, framerate=(fraction)30/1, multiview-mode=(string)mono,
pixel-aspect-ratio=(fraction)1/1, interlace-mode=(string)progressive
Pipeline is PREROLLED ...
Setting pipeline to PLAYING ...
New clock: GstSystemClock

```

## alpha

alpha, alpha0.0, 1.0.

gststreamer alpha: <https://gststreamer.freedesktop.org/documentation/alpha/index.html?gi-language=c>

```
gst-launch-1.0 \
  videomixer name=mix ! videoconvert ! autovideosink \
  -v videotestsrc pattern="snow" ! "video/x-raw,format=UYVY,width=640,height=480" ! alpha alpha=1.0 ! mix. \
  -v videotestsrc ! "video/x-raw,format=UYVY,width=320,height=240" ! alpha alpha=1.0 ! videobox top=-80 left=-80 border-alpha=0 ! mix.
```

## videomixer

gststreamer videomixer: <https://gststreamer.freedesktop.org/documentation/videomixer/index.html?gi-language=c>

videomixer,,.

Mirac4pipeline, :

```
gst-launch-1.0 \
videomixer name=mix sink_0::xpos=0 sink_0::ypos=0 sink_1::xpos=960 sink_1::ypos=0 sink_2::xpos=0 sink_2::ypos=540 sink_3::xpos=960 sink_3::ypos=540 ! videoconvert ! kmssink driver-name=imx-drm \
-v v4l2src device=/dev/video8 ! video/x-raw,format=UYVY,depth=8,interlace-mode=interleaved ! deinterlace ! videoscale ! video/x-raw,depth=8,width=960,height=540 ! mix.sink_0 \
-v v4l2src device=/dev/video9 ! video/x-raw,format=UYVY,depth=8,interlace-mode=interleaved ! deinterlace ! videoscale ! video/x-raw,depth=8,width=960,height=540 ! mix.sink_1 \
-v v4l2src device=/dev/video10 ! video/x-raw,format=UYVY,depth=8,interlace-mode=interleaved ! deinterlace ! videoscale ! video/x-raw,depth=8,width=960,height=540 ! mix.sink_2 \
-v v4l2src device=/dev/video11 ! video/x-raw,format=UYVY,depth=8,interlace-mode=interleaved ! deinterlace ! videoscale ! video/x-raw,depth=8,width=960,height=540 ! mix.sink_3
```



videomixer(interlace-mode)(progressive), (interleaved), gststreamer, ,deinterlace, .