xrandr X11 display layout

CONCEPTS

Run plain xrandr first: output names (HDMI-1, eDP-1, ...) differ per driver, and * marks the active mode.

Output HDMI-1, eDP-1
↓ `--mode`
Mode size + rate
↓ `--pos`
Position in the screen
↓ `--fb`
Screen one big canvas

Outputs are placed on one shared canvas (the screen); a position is the output's top-left corner on it.

X11 only. Under Wayland, Xwayland's RandR is read-only; use the compositor's own tool (e.g. wlr-randr, swaymsg output).

Changes last until the X server restarts: put your command in a startup script (.xprofile, i3 config) to keep it.

QUERY

`xrandr`
Show outputs, modes, active mode

`xrandr --current`
Show state without re-probing hardware

`xrandr --verbose`
Detail incl. properties, gamma, transform

`xrandr --listmonitors`
List defined monitors

`xrandr --dryrun` *<options>*
Check a command without applying it

ENABLE AND MODE

`xrandr --output` *<out>* **`--auto`**
Enable at its preferred mode

`xrandr --output` *<out>* **`--off`**
Disable the output

`xrandr --output` *<out>* **`--mode`** *<WxH>*
Set resolution

`xrandr --output` *<out>* **`--mode`** *<WxH>* **`--rate`** *<Hz>*
Set resolution and refresh rate

ENABLE AND MODE (cont.)

`xrandr --output` *<out>* **`--primary`**
Make this the primary output

LAYOUT

`xrandr --output` *<out>* **`--pos`** *<X>*`x`*<Y>*
Place at exact pixel position

`xrandr --output` *<out>* **`--left-of`** *<other>*
Put to the left

`xrandr --output` *<out>* **`--right-of`** *<other>*
Put to the right

`xrandr --output` *<out>* **`--above`** *<other>*
Put above

`xrandr --output` *<out>* **`--below`** *<other>*
Put below

`xrandr --output` *<out>* **`--same-as`** *<other>*
Mirror another output

`xrandr --output` *<a>* **`--auto --output`** *<b>* **`--auto --right-of`** *<a>*
Configure two outputs in one call

ROTATE, SCALE, TRANSFORM

`xrandr --output` *<out>* **`--rotate normal`**
Reset rotation

`xrandr --output` *<out>* **`--rotate left`**
Rotate counter-clockwise

`xrandr --output` *<out>* **`--rotate right`**
Rotate clockwise

`xrandr --output` *<out>* **`--rotate inverted`**
Rotate 180 degrees

`xrandr --output` *<out>* **`--scale`** *<X>*`x`*<Y>*
Scale the output's picture

COLOUR AND MODES

`xrandr --addmode` *<out>* *<name>*
Add a mode to an output