



## >\_ LINUX ESSENTIALS

### NAVIGATION

- **pwd** ..... Current path
- **ls -lah** ..... List all
- **cd <dir>** ..... Enter dir
- **cd ..** ..... Go up
- **cd -** ..... Last dir
- **mkdir -p** ..... Create folders

### FILES

- **touch f** ..... Create empty
- **cp a b** ..... Copy file
- **cp -r** ..... Copy dir
- **mv a b** ..... Move/rename
- **rm f** ..... Delete file
- **rm -r** ..... Delete dir

### VIEW / SEARCH

- **cat** ..... Quick view
- **less** ..... Scroll view
- **grep -R** ..... Find text
- **find .** ..... Find file

### SYSTEM

- **htop** ..... Processes
- **df -h** ..... Disk space
- **du -sh** ..... Folder size
- **chmod +x** ..... Make exec

## Q XSCHM VIEW

### ZOOM / NAV

- **f** ..... Fit all
- **Shift + z** ..... Zoom in
- **Ctrl + z** ..... Zoom out
- **Arrows** ..... Pan view

### HIERARCHY

- **e** ..... Descend sch
- **i** ..... Descend sym
- **Ctrl + e** ..... Return up

### SIMULATION

- **s** ..... Simulate
- **a** ..... Cursor A
- **b** ..... Cursor B
- **f** ..... Graph fit

## ✎ XSCHM EDIT

### TOOLS

- **Ins** ..... Insert part
- **w** ..... Wire
- **Shift + w** ..... Wire+snap
- **&** ..... Join/break
- **t** ..... Text
- **Alt + Shift + 1** ..... Wire label
- **Alt + 1** ..... Pin label

### BASIC ACTIONS

- **m** ..... Move
- **c** ..... Copy
- **Del** ..... Delete
- **Esc** ..... Cancel
- **u** ..... Undo
- **q** ..... Properties

## ✎ XSCHM ADV

### MANIPULATION

- **Shift + r** ..... Rotate
- **Shift + f** ..... Mirror
- **Shift + i** ..... Ignore
- **Ctrl + 4** ..... Fix names

### SYMBOLS

- **A** ..... Make symbol
- **Alt + s** ..... Reload sym

### FILE

- **Ctrl + s** ..... Save
- **Ctrl + o** ..... Open



## MAGIC VLSI

### MOUSE ACTIONS

- **Mid** ..... Paint (on color)
- **Mid** ..... Erase (on void)

### SELECTION

- **s** ..... Select net
- **S** ..... Select +
- **a** ..... Select box
- **A** ..... Select box +
- **C** ..... Clear

### COMMANDS

- **t** ..... Move
- **c** ..... Copy
- **d** ..... Delete
- **u** ..... Undo
- **Ctrl + d** ..... Erase under

### ZOOM / VIEW

- **z** ..... Zoom box
- **B** ..... Center box
- **v** ..... Fit all

## KLAYOUT NAV

### ZOOM

- **F** ..... Fit all
- **Ctrl + F** ..... Fit select
- **Enter** ..... Zoom in
- **Shift + Enter** ..... Zoom out

### HIERARCHY

- **Shift + F** ..... Full hier
- **E** ..... Descend
- **Ctrl + E** ..... Ascend
- **Shift + T** ..... New top

### MOTION

- **Ctrl + R** ..... Redraw
- **Ctrl + G** ..... Goto pos

## KLAYOUT TOOLS

### TOOLBAR

- **Esc** ..... Cancel
- **M** ..... Move
- **R** ..... Ruler
- **B** ..... Box
- **X** ..... Text
- **I** ..... Instance
- **S** ..... Partial
- **P** ..... Path
- **Shift + P** ..... Polygon

### LAYERS

- **1** ..... Show all
- **2** ..... Show sel
- **3** ..... Toggle
- **Shift + C** ..... Crosshair

## KLAYOUT EDIT

### MANIPULATION

- **Q** ..... Properties
- **Del** ..... Delete
- **Ctrl + C** ..... Copy
- **Ctrl + X** ..... Cut
- **Ctrl + B** ..... Duplicate
- **Ctrl + Z** ..... Undo

### FILE

- **Ctrl + N** ..... New
- **Ctrl + O** ..... Open
- **Ctrl + S** ..... Save
- **Ctrl + Shift + S** ..... Save as
- **Ctrl + Shift + R** ..... Reload
- **Ctrl + W** ..... Close