

Android Cheatsheet for Graphic Designers

Graphic designers aren't programmers and sometimes don't know how to properly prepare graphic assets for developers. This simple cheatsheet should help them to do their job better, and to simplify developers' lives.

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Dimensions

Screen densities and icon dimensions

Qualifier	DPI	Scaling factor	Launcher icon	Action bar, tab icon	Notification icon (API 11)	Notification icon (API 9)	Notification icon (older)
ldpi	120	0.75	36 x 36 32 x 32	24 x 24 18 x 18	18 x 18 16 x 16	12 x 19 12 x 12	19 x 19 16 x 16
mdpi	160	1.0	48 x 48 42 x 42	32 x 32 24 x 24	24 x 24 22 x 22	16 x 25 16 x 16	25 x 25 21 x 21
hdpi	240	1.5	72 x 72 64 x 64	48 x 48 36 x 36	36 x 36 33 x 33	24 x 38 24 x 24	38 x 38 32 x 32
xhdpi	320	2.0	96 x 96 84 x 84	64 x 64 48 x 48	48 x 48 44 x 44	32 x 50 32 x 32	50 x 50 42 x 42
xxhdpi	480	3.0	144 x 144 126 x 126	96 x 96 72 x 72	72 x 72 66 x 66	48 x 75 48 x 48	75 x 75 63 x 63

Notice: the first icon dimension in table cell is **full asset size**, the second icon dimension is **optical square**. Dimension values are in **pixels**.

Tip: creating **ldpi** assets is not really needed anymore. The devices are rare and the platform will just scale down **mdpi**.

Sources and useful links: [Iconography](#), [Supporting Multiple Screens](#), [Icon Design Guidelines](#), [Dimension](#)

Google Play asset dimensions

Asset Type	Required	Image type	Dimension
Screenshot	yes	JPEG or 24-bit PNG (no alpha)	min length for any side: 320 px max length for any side: 3840 px
High-res app icon	yes	32-bit PNG (with alpha)	512 x 512 px
Feature graphic	yes	JPEG or 24-bit PNG (no alpha)	1024 x 500 px
Promotional graphic	no	JPEG or 24-bit PNG (no alpha)	180 x 120 px
Video link	no	URL of YouTube video	-

Sources and useful links: [Graphic and Image Assets](#), [Google Play Featured-Image Guidelines](#), [Iconography](#)

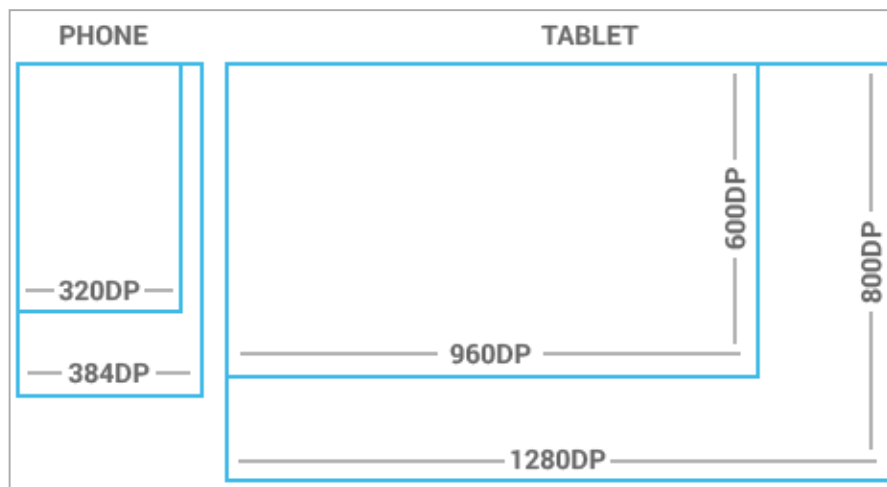
Dimension units

Unit	Units / physical inch	Density independent	Same physical size on every screen
px	varies	no	no
in	1	yes	yes
mm	25.4	yes	yes
pt	72	yes	yes
dp	~160	yes	no
sp	~160	yes	no

Sources and useful links: [Understanding Density Independence in Android](#)

Size buckets

Type	Dimension
Handset	smaller than 600 dp
Tablet	larger than or equal 600 dp



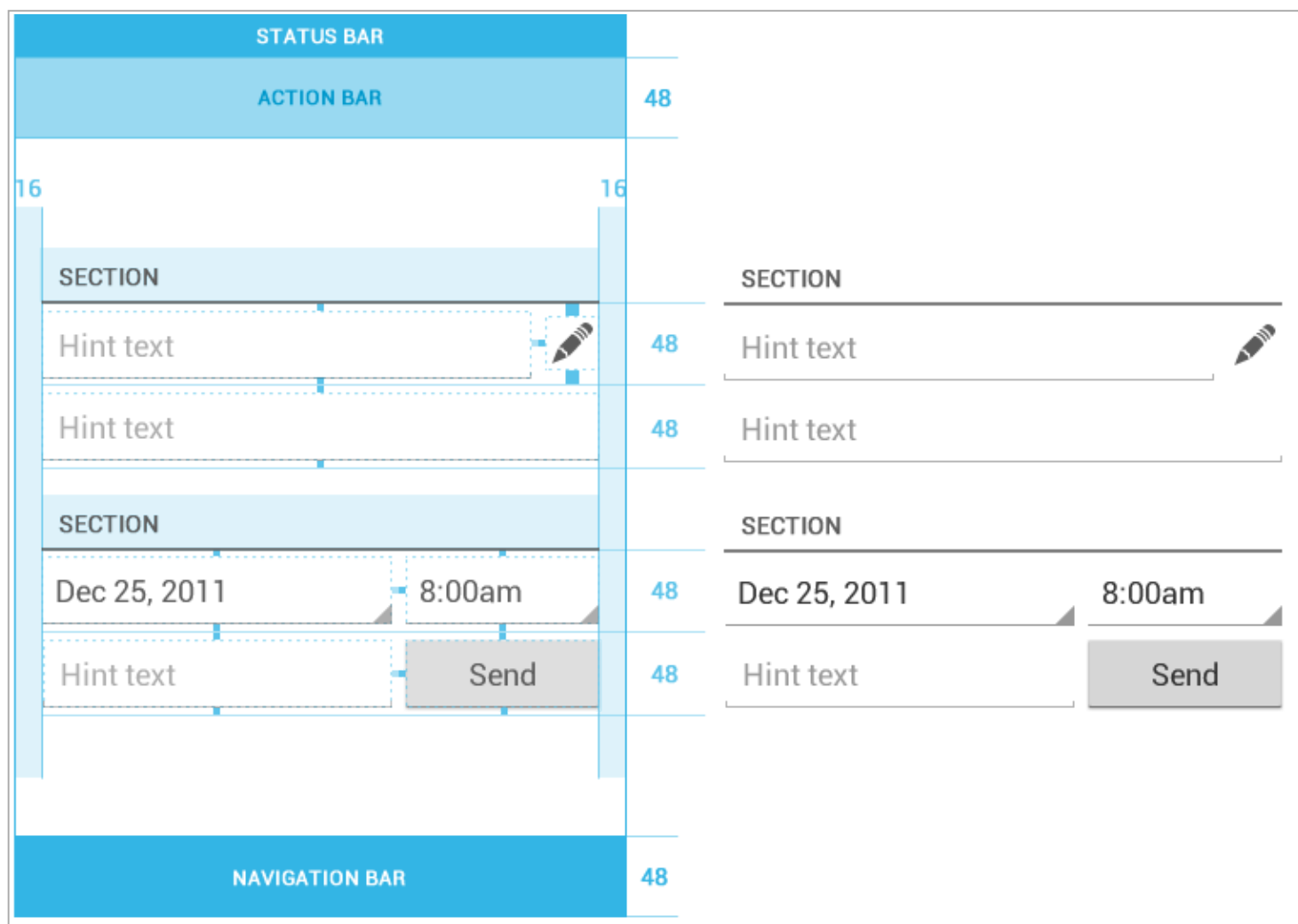
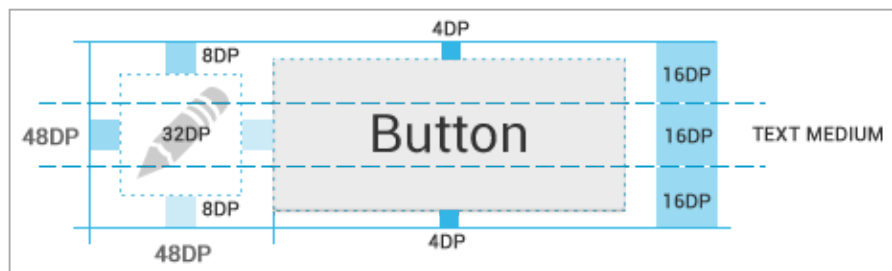
Notice: one dp (density-independent pixel) is one pixel on a 160 DPI screen.

Sources and useful links: [Metrics and Grids](#)

Views dimensions and spacing

Touchable UI components are generally laid out along **48 dp** units. **Spacing** between each UI element is **8 dp**.

48		Medium title	Single list item
		<i>single line item with avatar + text</i>	<i>single line item with text</i>



Sources and useful links: [Metrics and Grids](#)

Action bar height

Qualifier	Dimension
Portrait	48 dp
Landscape	40 dp

Tablet	56 dp
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Sources and useful links: [Action Bar](#)

Text size

Type	Dimension
Micro	12 sp
Small	14 sp
Medium	18 sp
Large	22 sp

Notice: one sp (scale-independent pixel) is one pixel on a 160 DPI screen if the user's global text scale is set to 100%.

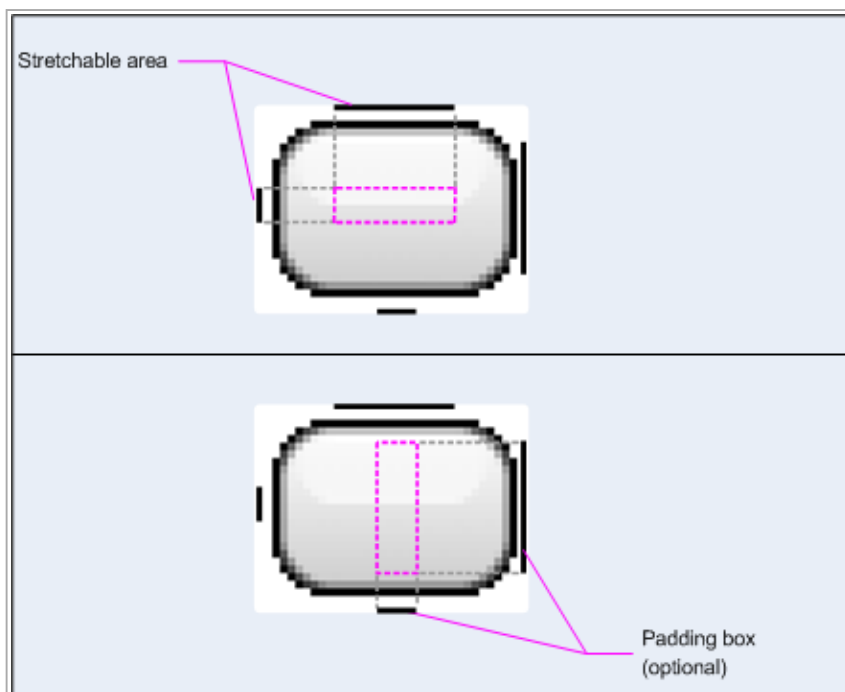
Sources and useful links: [Typography](#)

Images and themes

Nine-patch

A Nine-patch drawable is a **stretchable bitmap image**, which Android will **automatically resize** to accommodate the contents of the view in which you have placed it as the **background**, e.g. nine-patch background for button, which must stretch to accommodate strings of various lengths. The rules for nine-patch image are following:

- Standard PNG image with alpha
- Filename suffix is **".9.png"**, e.g. "btn_login_normal.9.png"
- Image has an extra **1 pixel wide border**, used to define the stretchable/static/padding areas
- **Stretchable** sections are indicated by 1 px wide **black** line(s) in the **left and top** part of the border
- **Static** sections are indicated by fully **transparent** or white pixels
- **Padding** area (optional) is indicated by 1 px wide **black** line in the **right and bottom** part of the border



Sources and useful links: [Canvas and Drawables](#), [Draw 9-patch](#), [Simple Nine-patch Generator](#)

Colors

Use color primarily for emphasis. Blue is the standard accent color in Android's color palette. Note that red and green may be indistinguishable to color-blind users. Primary colors are as follows:

#33B5E5

#AA66CC

#99CC00

#FFBB33

#FF4444

#0099CC

#9933CC

#669900

#FF8800

#CC0000

Sources and useful links: [Color](#)

Holo themes

Android provides three system themes:

- Holo Light
- Holo Dark
- Holo Light with dark action bar

Sources and useful links: [Themes](#), [Holo Everywhere](#)

Naming conventions

Naming conventions for drawables

File names must contain only lowercase **a-z**, **0-9**, or **_**.

Drawables for the specific views (ListView, TextView, EditText, ProgressBar, CheckBox etc.) should be named like this views keeping the naming rules, e.g. drawable for CheckBox should be named "checkbox_on_bg.png".

Asset Type	Prefix	Example
Action bar	ab_	ab_stacked.9.png
Button	btn_	btn_send_pressed.9.png
Dialog	dialog_	dialog_top.9.png
Divider	divider_	divider_horizontal.9.png
Icon	ic_	ic_star.png
Menu	menu_	menu_submenu_bg.9.png
Notification	notification_	notification_bg.9.png
Tabs	tab_	tab_pressed.9.png

Sources and useful links: naming conventions taken from the [Android SDK](#)

Naming conventions for icon assets

Asset Type	Prefix	Example
Icons	ic_	ic_star.png
Launcher icons	ic_launcher	ic_launcher_calendar.png
Action bar icons	ic_menu	ic_menu_archive.png
Status bar icons	ic_stat_notify	ic_stat_notify_msg.png
Tab icons	ic_tab	ic_tab_recent.png
Dialog icons	ic_dialog	ic_dialog_info.png

Sources and useful links: [Icon Design Guidelines](#)

Naming conventions for selector states

State	Suffix	Example
Normal	<code>_normal</code>	<code>btn_order_normal.9.png</code>
Pressed	<code>_pressed</code>	<code>btn_order_pressed.9.png</code>
Focused	<code>_focused</code>	<code>btn_order_focused.9.png</code>
Disabled	<code>_disabled</code>	<code>btn_order_disabled.9.png</code>
Selected	<code>_selected</code>	<code>btn_order_selected.9.png</code>

Sources and useful links: [Touch Feedback](#)

Organizing drawables to directories

One drawable must have **the same file name** for all screen densities (ldpi, mdpi, hdpi etc.) and all these files must be organized **according to density** into the following directories. Here's the resources directory structure for drawables:

- res
 - drawable-ldpi
 - drawable-mdpi
 - drawable-hdpi
 - drawable-xhdpi
 - drawable-xxhdpi

Resources

Graphic generators

- [Android Asset Resizer](#)
- [Android Asset Studio](#)
- [Android Button Maker](#)
- [Android Holo Colors IntelliJ Plugin](#)
- [Device Art Generator](#)
- [Google Play Badges](#)

Useful links for designers

- [Android Design Guidelines](#)
- [Android Design in Action](#)
- [Android DP / PX Converter](#)
- [Android DPI Calculator](#)
- [Android Niceties](#)
- [Android Views](#)
- [Android Views/UI Components](#)
- [App Patterns](#)
- [Design Tools](#)
- [Holo Everywhere](#)

Download

[Android Icon Templates Pack v4.0](#)

Source: [Android Developers](#)

[Android Design 11/2013](#)

Source: [Android Developers](#)

[Android UI Design Kit PSD 4.4](#)

Source: [Taylor Ling on Android UI & UX](#)

[Android Developer Icons – Photoshop Shapes](#)

Source: [Spiderfly Apps](#)

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Found some mistake? Something is missing? Let me know or [send pull request](#).

Thanks to Peter Kahoun for [KUCSS](#) and Google Android for great [documentation](#).

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