Google Android Messenger Rich Card Specs

There's guidelines here (copied below): <https://developers.google.com/rcs-business-messaging/design/best-practices#vertical_rich_cards>

**Vertical rich cards**  
  
Vertical rich cards display horizontal media at the top of the card. Horizontal media should have an aspect ratio of 2:1, 16:9, or 7:3.  
  
When you send media to a user, you should be respectful of the user's resources. When horizontal media has a 2:1 ratio, the optimal resolution for the media is 1440x720 px with a maximum recommended file size of 2 MB for images and 10 MB for video. The optimal resolution for the media's thumbnail is 770x335 px with a file size of 40 kB.  
  
**Horizontal rich cards**  
  
Horizontal rich cards display vertical media on the left or right side of the card. Vertical media should have an aspect ratio of 3:4.  
  
When you send media to a user, you should be respectful of the user's resources. When vertical media has a 3:4 ratio, the optimal resolution for the media is 768x1024 px with a maximum recommended file size of 2 MB for images and 10 MB for video. The optimal resolution for the media's thumbnail is 250x330 px with a file size of 40 kB.

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It's important to note that the recommended aspect ratios and sizes in our documentation are approximations as the best aspect ratio and size vary based on screen size, pixel density, and screen orientation.

Generally, our recommendations will be in the neighborhood of being reasonable on most devices, but if there are certain devices you are prioritizing for demo purposes or based on user population, you can do better through experimentation.

For example, on a Pixel 2, the following aspect ratios and pixel sizes work well:

TALL card: aspect ratio of 15:9 (1320x792px),

MEDIUM card: aspect ratio of 16:9 (1440x810px)

SHORT card: aspect ratio of 2:1 (770x335px)

Some padding is generally a good idea as the image will have some rounded corners depending on the configuration of the card.

Unfortunately, due to so many variants of devices and densities and widths and user settings (such as font size and etc), it becomes difficult.

Other RCS Specs

Maximum 11 chips per single message

Maximum 10 rich cards per single message

Directory Header maximum 200 characters, 25 are visible before the “dot dot dot” e.g. “…” appears and user needs to click to see the rest of the text

The Directory Description has a maximum of 2,000 characters, maximum of 100 characters before it goes “…” to be in the View More drop down

You can check out the Screen Sizes and Densities distribution section in <https://developer.android.com/about/dashboards/>, and then choose devices which fit into the buckets you want to prioritize. To find some of the densities, you can use <https://material.io/tools/devices/>, although not all of the newer devices are there. There are other unofficial sites as well that will give some information about screen sizes.

Further Rich Card Information

Samsung Messenger Rich Card Specs

Here is what is actually in line with RCS-UP spec except that the dp-width that we support is more than that defined in UP.  The idea behind sharing following information is to let you gauge the aspect ratio to fit with following dp values so that you can pick right resolution image to fit in as media in rich card to avoid any cropping etc.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Rich Card Type | Rich Card Size | Image Width in dp | Image Height in dp | ImageFileSize limitation (if any) |
| Standalone | Short | 284 dp | 112 | - |
| Medium | 168 | - |
| Tall | 264 | - |
| Carousel (2-10 images) | Small | 120 dp | Short = 112 | Individual image file size must be <= 810,000 pixels. (e.g. 900x900 image) |
| Medium = 168 |
| - |
| Medium | 232 dp | Short  = 112 |
| Medium = 168 |
| Tall = 264 |

Moreover, point to be noted is even if not following the aspect ratio based on this dp values would crop some images when viewed within rich card. However, when user clicks on those images to view in full screen mode the whole image is shown without any cropping.

More Specs Testing on Samsung

Standalone Rich Card

3 card sizes: Short, Medium, Tall

ALL Width = 284px for all sizes (which means there is no standard aspect ratio)

Short Height = 112px  •••   aspect ratio = w/h = 284/112 = 2.535

Medium Height = 168px  •••   aspect ratio = w/h = 284/168 = 1.690

Tall Height = 264px  •••   aspect ratio = w/h = 284/264 = 1.075

Carousel Rich Card

2 card sizes: Small, Medium (why they don’t stick to the same naming conventions small/short, we’ll never know??)

Small Width = 120px

Short Height = 112px  •••   aspect ratio = w/h = 120/112 = 1.071

Medium Height = 168px  •••   aspect ratio = w/h = 120/168 = 0.714

Medium Width = 232px

Short Height = 112px  •••   aspect ratio = w/h = 232/112 = 2.071  
Medium Height = 168px  •••   aspect ratio = w/h = 232/168 = 1.380

Tall Height = 264px  •••   aspect ratio = w/h = 232/264 = 0.878

The figures in blue are potential image sizes ABOVE the dimensions listed in the specs above that match the corresponding card size aspect ratios.

Presumably we want larger, higher fidelity images in our chatbots—so, having some ballpark dimensions ought to help.

The red numbers in the table below indicate that we are starting to exceed the maximum recommended file size...

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Standalone Rich Card** | | |  | **Small Carousel Rich Card** | | |  | **Medium Carousel Rich Card** | | |
| **Card Height** | **Width** | **Height** | **Aspect Ratio** |  | **Width** | **Height** | **Aspect Ratio** |  | **Width** | **Height** | **Aspect Ratio** |
| **Short** | **284** | **112** | **2.536** |  | **120** | **112** | **1.071** |  | **232** | **112** | **2.071** |
| 406 | 160 | 2.536 |  | 171 | 160 | 1.071 |  | 331 | 160 | 2.071 |
| 507 | 200 | 2.536 |  | 214 | 200 | 1.071 |  | 414 | 200 | 2.071 |
| 609 | 240 | 2.536 |  | 257 | 240 | 1.071 |  | 497 | 240 | 2.071 |
| 710 | 280 | 2.536 |  | 300 | 280 | 1.071 |  | 580 | 280 | 2.071 |
| 812 | 320 | 2.536 |  | 343 | 320 | 1.071 |  | 663 | 320 | 2.071 |
| **913** | 360 | 2.536 |  | 386 | 360 | 1.071 |  | 746 | 360 | 2.071 |
|  |  |  |  | 428 | 400 | 1.071 |  | 828 | 400 | 2.071 |
|  |  |  |  | 536 | 500 | 1.071 |  | **1036** | 500 | 2.071 |
|  |  |  |  | 643 | 600 | 1.071 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **Medium** | **284** | **168** | **1.690** |  | **120** | **168** | **0.714** |  | **232** | **168** | **1.381** |
| 338 | 200 | 1.690 |  | 143 | 200 | 0.714 |  | 276 | 200 | 1.381 |
| 406 | 240 | 1.690 |  | 171 | 240 | 0.714 |  | 331 | 240 | 1.381 |
| 473 | 280 | 1.690 |  | 200 | 280 | 0.714 |  | 387 | 280 | 1.381 |
| 541 | 320 | 1.690 |  | 228 | 320 | 0.714 |  | 442 | 320 | 1.381 |
| 608 | 360 | 1.690 |  | 257 | 360 | 0.714 |  | 497 | 360 | 1.381 |
| 676 | 400 | 1.690 |  | 286 | 400 | 0.714 |  | 552 | 400 | 1.381 |
| 845 | 500 | 1.690 |  | 357 | 500 | 0.714 |  | 691 | 500 | 1.381 |
| **1014** | 600 | 1.690 |  | 428 | 600 | 0.714 |  | 829 | 600 | 1.381 |
|  |  |  |  | 500 | 700 | 0.714 |  | **967** | 700 | 1.381 |
|  |  |  |  | 571 | 800 | 0.714 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **Tall** | **284** | **264** | **1.076** |  | Small Carousel does not support Tall media dimensions. | | |  | **232** | **264** | **0.879** |
| 301 | 280 | 1.076 |  |  | 246 | 280 | 0.879 |
| 344 | 320 | 1.076 |  |  | 281 | 320 | 0.879 |
| 387 | 360 | 1.076 |  |  | 316 | 360 | 0.879 |
| 430 | 400 | 1.076 |  |  | 352 | 400 | 0.879 |
| 538 | 500 | 1.076 |  |  | 440 | 500 | 0.879 |
| 646 | 600 | 1.076 |  |  | 527 | 600 | 0.879 |
| 753 | 700 | 1.076 |  |  | 615 | 700 | 0.879 |
| 861 | 800 | 1.076 |  |  | 703 | 800 | 0.879 |
|  |  |  |  |  |  |  |  | 791 | **900** | 0.879 |

