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## Samsung Galaxy Tab review

By [Joanna Stern](#) posted Nov 1st 2010 1:15PM
REVIEW 📷 📄


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**SAMSUNG**  
**Galaxy Tab**  
**\$600**

**PROS**

- Compact and extremely solid build
- Great quality 7-inch, capacitive touchscreen
- Two cameras

**CONS**

- Not all apps scale to the screen
- Little support from Google
- No decent video calling software

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The story of the [Galaxy Tab](#) has been quite a saga, to say the least. In fact, it was actually [back in May](#) that we first heard rumblings of Samsung's plans to unleash a 7-inch Android tablet much like its Galaxy S phones, but it was only after months of [painful teasing](#) -- including a cruel look at just *its packaging* on [the Engadget Show](#) -- that Sammy finally unveiled the Galaxy Tab to the world at IFA. The Tab certainly packed the specs -- a 1GHz processor, full Flash support thanks to Android 2.2, dual cameras, support for up to 32GB of storage and WiFi / 3G connectivity -- to put other Android tablets to shame, and our [initial hands-on](#) with it only had us yearning for more. Without pricing and availability, however, the story was at a cliffhanger. Of course, those details trickled out over the next few months, and here in the US, Samsung finally announced that [all four major US carriers](#) would be getting Tabs to call their own. [Verizon](#) then finally took the lead in announcing pricing, and revealed that its Tab would hit contract-free for \$600 -- [Sprint followed](#) with the same no-contract pricing along with a \$400 two-year contract option.

Indeed, it's been quite a long journey, but even after all of that, some of the major questions are still left unanswered. Does the Tab provide a more complete and polished experience than all the other Android tablets out there? How are Samsung's specially tailored apps? And ultimately, has a tablet finally hit the market that can rival [Apple's iPad](#)? We think it's about time we answer those questions and finally open what might be the most important chapter of the Galaxy Tab story -- the official Engadget review. We knew you'd agree, so join us after the break.

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**Samsung Galaxy Tab (Sprint)**




**Hardware**





It's getting increasingly hard for manufacturers to differentiate the look of these all-screen gadgets, but Samsung's done a commendable job distinguishing the Tab from the others with its contrasting front and back surfaces. The back of the rounded-off device is coated in white shiny plastic (whether it will remain ghost white over time remains to be seen), while the front consists of a familiar flush black bezel and glass screen. (Note: we were sent the Sprint version of the Tab and there may be slight aesthetic differences amongst the carrier versions.) The screen and bezel do appear less glossy than the iPad -- you'll still want to keep the Windex (or [Brasso gadget polish](#)) and chamois close by, though. Speaking of clean, that's exactly how we'd describe the rest of the design -- there are four touch buttons on the front side, a headphone jack on the top edge and a volume rocker, microSD card slot and power button on the right edge. However, we don't see why Samsung couldn't have made room for a micro-USB port -- you have to charge it and sideload content using Samsung's proprietary charging cable.





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To be honest, our real appreciation for the device's design comes more in terms of its form factor. Unsurprisingly, 7-inch tablets are much better for one-handed use than larger-screened ones (i.e. the 9.7-inch iPad or 11.6-inch ExoPC), and the 7.4 x 4.7-inch Galaxy Tab is no different. [Steve Jobs may not think](#) the size is optimal, but we loved being able to wrap our smaller hand around the 0.83-pound / 0.47-inch thick Tab when reading a book or hold it like a phone and use our thumbs to type on the on-screen keyboard. Sure, it's not as light or thin as the 0.53-pound / 0.33-inch Kindle or 0.48-pound / 0.4-inch Dell Streak, but it's still light enough to hold up in bed without fearing that you'll drop it on your face.

The overall build of the device is top-notch, and though it may appear to some like an enlarged [Captivate](#) or [Fascinate](#), it feels more solid than those plastic phones. We're not saying it's a rugged device by any standard -- although it does have a Corning Gorilla Glass screen -- but it does feel incredibly durable, and we didn't worry too much when it mistakenly fell off the couch. By the way, the Tab's smooth back causes it to slide off things every so often -- so we'd suggest keeping this little guy in a case or nabbing a stand for it. We do wish the Tab had a built-in kickstand like the Evo 4G and Archos 7. Think about it, Samsung.

## Screen



The Tab doesn't have a [Super AMOLED](#) screen like its [Galaxy S smartphone](#) brothers, but the 1024 x 600-resolution LCD is still stunning. It's notably better than most other tablet screens we've seen of late, which, of course, means that the first thing we noticed was its stellar viewing angles. (You know us and our hang-up with viewing angles.) Tilting the screen off-axis doesn't cause color distortion and sharing it with a friend didn't require us to make any adjustments.

The display itself is extremely bright and colors appear extremely crisp. While some have complained that it looks a bit oversaturated, you can adjust the color saturation in the display settings to your liking. As with the iPad, it's hard to make out what's on the glossy display in the sun, but when we took to shooting some video around New York City on a sunny day we were still able to make out all the controls. While the Tab's resolution isn't as high as the iPad's 1024 x 768-resolution IPS panel, the screen does have better pixel density, which translate to a crisper e-book and webpage reading experience than the iPad. (You know how [some of us](#) feel about pixel density.)

Just like the Galaxy S phones, the capacitive screen is extremely responsive, and as we said in our preview, easily matches the iPad in terms of sensitivity. Not once in the last few days of testing did we have an issue making selections with a light tap or scrolling down the length of a long page with a light flicks. Similarly, the four-way accelerometer is quite responsive in most applications (it tends to be slower in the browser) and quick to adjust when turned. As with the iPad using OS 4.2, there's no physical button for turning it off, but you can do so within the screen settings menu. The two speakers on the bottom of the tablet are noticeably louder than your average smartphone (okay, maybe save for the [HTC Surround](#)), but if you're planning to have the Tab rock out a party you'll want to connect a set of speakers.

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## Software: TouchWiz and Android



As we've said throughout a number of our previous tablet reviews, that nice screen is only as good as the software that runs underneath it. And in the case of the Tab, the software is going to be extremely familiar to anyone that's ever used a Galaxy S phone with Samsung's [TouchWiz 3.0](#) Android layer. As you probably already know, we've never been particularly big fans of the cartoony design of the interface -- it just feels rather kiddie-like -- but it does provide some nice polish for average consumers and on a tablet it adds more to the generic Android smartphone experience.

"Android isn't ready for tablets." [Everyone's heard it](#), and while we'll get into some of that in the next few sections, the Tab's central UI -- the panes, app drawer, home screen, Swype keyboard -- lends itself nicely to the 7-inch screen. Similarly, the slightly re-skinned Android browser scales nicely to the 7-inch display. Is it just an enlarged version of Google's smartphone OS? Yes, but we've never seen anything wrong with that.

### Samsung apps



On the other hand, that doesn't mean there aren't core parts of the OS that require tweaks to take advantage of the added screen real estate, and unlike the many others making Android tablets, Samsung has done more than just throw on the stock applications. Below is a rundown of the core apps Samsung has developed specifically for the Tab.

**Email** -- The core of the email app looks like those on the Galaxy S phones, but when you flip the display into landscape mode you get a Microsoft Outlook-like pane that displays your Inbox on the left and the messages on the right. We preferred managing and responding to mail in this app over the Gmail app, which is just the smartphone version.



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**Calendar** -- The calendar app is equally as attractive. In landscape mode you can adjust it so your calendar takes up the entire screen or with a similar two pane view that shows a listing of upcoming events.

**Messaging, Contacts** -- These are pretty self-explanatory. Even though the Tab isn't technically a phone since all the US carriers have restricted its calling ability, you can use the messaging app to send SMS or MMS messages or e-mails to other contacts. Like the others, you've got a two pane view in landscape mode -- you can look at your contacts on the left side and message from the right.



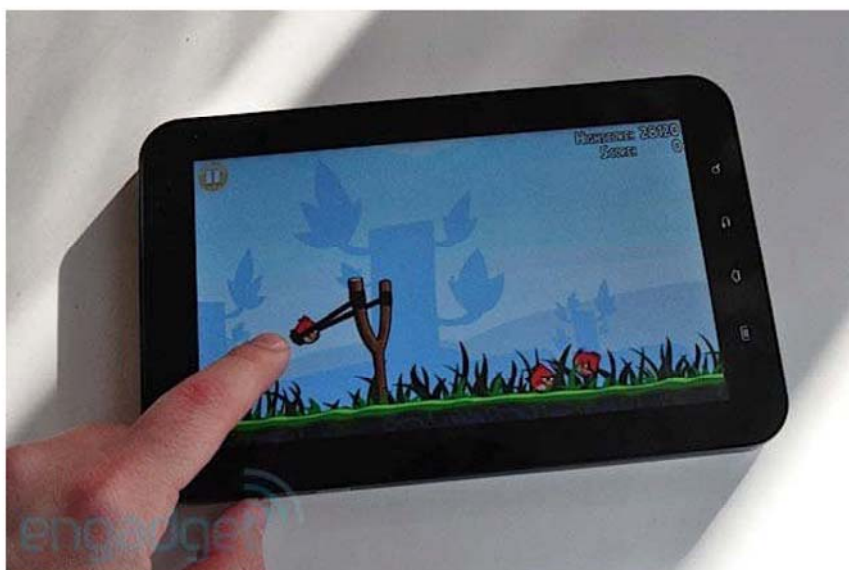
**Media Hub** - This one has started to pop up on [some Galaxy S phones](#) as well, but the Tab is perhaps the best suited to take advantage of Samsung's new movie and TV store / player. At this point there's over 1,000 videos from MTV, Universal and Paramount, and while there is a decent selection of current titles -- we downloaded the Jersey Shore episode of South Park for \$1.99 -- you'll come up empty when you start searching for older flicks. Nope, *E.T* nor *Terminator*, just to name a few, aren't available. Of course, everything here is DRM-protected so we had zero luck trying to drag it to our desktop. However, you will be able to log into your Media Hub account on up to five other Samsung devices to watch any previously purchased content. Media Hub isn't a bad over-the-air alternative, but at this point we'd recommend buying content through Amazon's Unbox and sideloading it for use on multiple devices.

*Note:* Samsung also has a Readers Hub app, which contains access to Kobo's e-book store and other reading content, but Sprint's decided not to preload it.



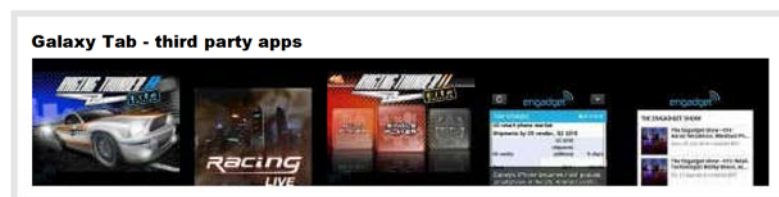
### Market and third-party apps

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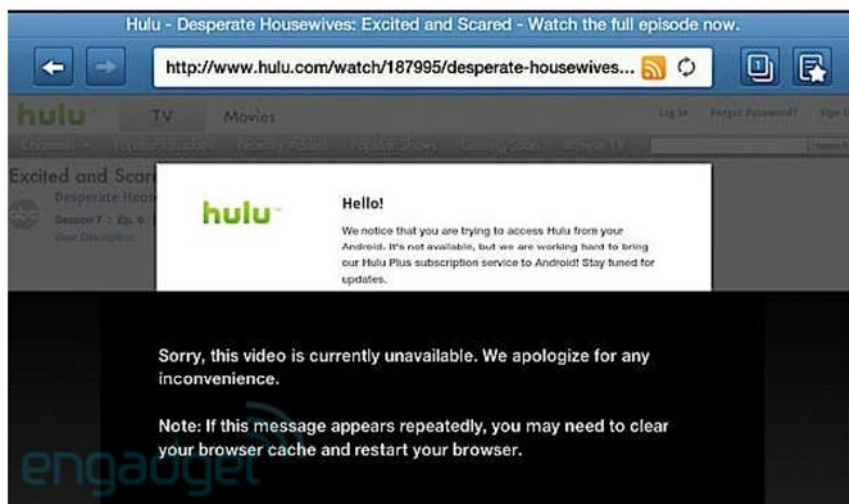
The Tab also comes preloaded with a handful of third-party applications, including Facebook, Amazon's Kindle, and Qik. (There's a "Free Games" shortcut on the main screen which is nothing but a link to Gameloft's site. Uh, not cool, Samsung.) All of those scaled the 7-inch display quite well -- there weren't any formatting issues or pixelation -- however, that experience really depends on the app at the moment. For instance, [Angry Birds](#) looked beautiful on the larger screen. Seriously, it looks so incredibly awesome on the larger display that we spent the last four days replaying the game! Apps like Pandora, Facebook, Twitter, TweetDeck, YouTube also scale well, but other apps like USA Today, Engadget, Raging Thunder 2 Lite, and Speed Test don't. The latter apps are still usable, but you've got to deal with an incredibly large border of blank screen around them.

Samsung claims that any app that abides by Google's coding and design standards should work just fine, but even the apps that do scale obviously weren't built or optimized for tablets, so the experience really is like having a larger smartphone. We don't need to tell you how many of these companies could build better tablet apps if given the right SDKs -- we've seen them all do it with the iPad. Of course, the iPad was in a better situation at its launch: Apple had rolled out development tools for creating larger screened apps and a few of them were already available in the iPad app store, but Google has provided no such direction yet. [We've heard](#) that engineers at the Googleplex are in fact working on optimizing apps for tablets with the [Honeycomb release](#) and possibly rolling out a separate section of the Market, but until that happens it really comes down to trial and error and living with smartphone-sized designed software on a larger display.



## Browsing and Flash

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For the most part, the browsing experience on the Tab is rock solid -- pages loaded quickly over WiFi and scrolling / zooming on most pages was snappy. When loading a few sites -- like this very technology site -- we did notice the scrolling to be a bit jittery and not as smooth as on the iPad. However, we do like that there's the ability to change the brightness within the browser. But, obviously, the Tab differs from that *other* tablet with its full Flash support. So, is it everything you've been waiting for? Thanks to its 1GHz processor, the experience isn't as slow as we've seen on other Android 2.2 devices, but we can't really say we took advantage of the feature all that much -- in fact we decided to disable it eventually to speed up browsing.

While it's nice to be able to load videos within sites and not have to battle that blue lego block, we were repeatedly given the "this video is not optimized for mobile" message when we hit play. Overall, videos played just fine, but Flash definitely slowed down the rest of the browsing experience. What about other Flash heavy sites? Well, as you can see above, Hulu is a dead end -- we got the same error message even when we logged into our Hulu plus account in the browser. (Hulu, please release a Plus app for Android ASAP!) On that same vein, we had no issues loading a Flash game site like Canabalt, but because it was built for mouse and keyboard environments we couldn't figure out how to jump and avoid death by bricks. What does it all mean? The Tab's Flash capability is a nice fallback, but if you've been thinking it's the killer tablet app you should think again. Not to sound like [Steve Jobs](#) or anything, but scaled-up smartphone apps and Flash compatibility alone don't create a well-rounded tablet platform -- it's going to take native apps for the Tab to be truly competitive.

**Scaled-up smartphone apps and Flash compatibility alone don't create a well-rounded tablet platform -- it's going to take native apps for the Tab to be truly competitive.**

## Camera(s)



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The Tab's dual cameras are a big differentiator against the iPad, and we do have to say they both came in pretty handy over the last few days. We warn you: people *will* look at you oddly when you pull it out and take shots with its giant viewfinder! The 3 megapixel cam with LED flash on the back aren't going to replace your point and shoot, but it did take some decent still shots. There's a few samples in the gallery below: the flash was helpful when nabbing some stills on a darkly lit street and the outdoor pics are quite sharp. The camera interface consists of the standard Android controls, and per usual it handled auto-focus and white balance. Oddly, there's no macro mode, but the panoramic mode was great for taking wide-angle shots -- just make sure to hold it extremely steady to avoid blur. There is also a continuous mode, which will take a sequence of nine shots -- it took us a while to figure out that you've got to hold down the camera button to get it snapping. We should note that the panoramic and continuous modes are limited to taking 800 x 600-resolution photos.

#### Samsung Galaxy Tab sample camera shots and camera UI



It's a bit of a bummer that there's no HD video recording -- the Tab shoots at 720x480 -- but motion capture is quite smooth, and there were no stuttering issues like we've seen on Galaxy S phones. We should mention here that the Galaxy Tab requires you have a micro SD card inserted to use the camera, so it's a good thing Sprint tosses in a 16GB card. Oddly, we couldn't save anything to the 2GB of internal memory or access it when mounted to our Mac or PC. (If you're interested in the European version, our UK review unit has 16GB of internal storage, which is accessible when mounted.)

The 1.3-megapixel front facing cam obviously doesn't take as crisp or detailed shots, but it's perfectly fine for video chatting, awkwardly posing with a friend, or checking your teeth for leftover lettuce. As you can see from the picture above, we were able to get a video call going using Qik over WiFi, although there was quite a lot of delay and in some cases a serious amount of pixelation. We did attempt to use Fring, but the app hasn't been optimized for the tablet yet, and we couldn't get two-way video calling working. Fring's audio was much better, however.

## Performance and battery life



Perhaps the best part about the Tab is that you don't have to worry about the sluggish performance we've seen on other Android and Windows tablets. The entire experience is snappy, and it kept up with us even when we had four or five applications open. Of course, there were times when it would freeze up -- notably when we had a game of Angry Birds running and we were attempting to test a 720p video -- but chances are you won't be taxing the 1GHz ARM Cortex A8 processor and 512MB of RAM that much. As we mentioned earlier, Flash videos within the browser took a few seconds to appear and did slow down the general browsing experience, but once we were able to hit the play button they ran smoothly. As we also mentioned, disabling Flash altogether speeds things up drastically. General video playback on the Tab was also quite smooth -- high quality YouTube videos and local 720p content played beautifully at full screen. Similarly, graphics heavy games like Raging Thunder 2 had no issues running and taking advantage of the accelerometer. If you're looking for how the Tab fares on Android benchmarks, it scored consistently over 14 MFLOPS in Linpack.

So, how about that battery life? It's pretty good. After periodically surfing the web and reading on the Tab for about a day and a half with just 3G on, the battery is at about 20 percent. On our taxing video rundown test, which loops a standard definition video at about 65 percent brightness and 3G off, but WiFi on, the Tab's 4000mAh battery lasted for 6 hours and 9 minutes. That's around the same as some of the other Android tablets we've tested, but not as long as the iPad's 9 hours and 33 minutes.

**Update:** Well, this is a bit crazy. It was brought to our attention that the Tab cannot be charged via a laptop or desktop. And that is in fact the case -- when plugged into a USB socket the Tab will maintain its charge, but won't be recharged.

## 3G speeds and pricing

We've been testing the Sprint version of the Tab in New York City and have been experiencing fairly standard upload and download speeds: download throughputs have averaged around 1,043kbps and the uplink around 521kbps. Of course, we're day dreaming that Samsung and Sprint are whipping up a 4G Tab as we speak, but for now you're stuck with 3G versions.

Sprint offers two 3G plans for the Tab: 2GB for \$29.99 a month and a 5GB option for \$59.99 a month,

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but is it worth attaching a 3G plan to this device? It certainly makes sense to have mobile broadband baked into the Tab, and the Sprint Hotspot feature, which adds an extra \$29.99 a month, could be useful for connecting other gadgets to the interwebs. However, we've always had a hard time recommending netbooks that require a two-year contract, and tablets are a similar beast, which is why the \$600 no contract version makes more sense in our minds. While it's more money to pay up front than the contract deal (the hardware is only \$400 when you commit two years of your life to Sprint), we think it's a better option than committing to paying a minimum of \$720 in data over two years. Compared to Apple's offering, the \$600 price is actually \$29 less than the 16GB / 3G version of the iPad. Those that don't need 3G connectivity whatsoever are better waiting for the WiFi version of the Tab, which we keep [hearing will arrive soon](#).

## Wrap-up



After spending the last couple of days with the Galaxy Tab, we can confidently say it's the best Android tablet on the market. Now, that's not saying much given the state of the Android competition, but we can also assuredly say that the Tab is the first true competitor to Apple's iPad. Its crisp display, compact form factor, touch-friendly software and dual cameras undoubtedly have what it takes to win over the average tablet seeker. However, we still have some reservations right now. Google hasn't yet provided any direction on Android as a tablet platform, which means that the Tab is held back by lagging application support and software that doesn't fully take advantage of the extra screen real estate. Remember, that when the iPad launched many developers were already working on tablet specific apps and Apple had an iPad app store in place. Put simply, without that ecosystem and support from Google, Samsung is left to



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its own devices -- literally. Just today Samsung rolled out an emulator for the Tab that uses the Android SDK and the company says it's working with Google and plans to use future [iterations of Android](#), so we'll have to see what happens -- but for now it looks like the saga of the Samsung Galaxy Tab still has several chapters to go.

*Richard Lai contributed to this review.*

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