

An iPad for £100? Well, Maybe Not Quite

The Apple iPad is a device that has taken the world by storm. Released in April 2010, it sold more than 15 million units in its first year. The second generation iPad 2, released in March 2011, is selling at an even faster rate. Although there are many competitors, the iPad easily outsells all of them added together and as such defines what makes a tablet computer: a portable, keyboard-less personal computing device with a touchscreen, internet access and access to thousands of applications (usually referred to as “apps”).

The market for tablet computers appears to be enormous and, whilst Apple can sell all it makes, there are tens of millions people more who would buy one if only they could afford to. Unfortunately for them, the iPad starts at £399 in the UK, which is quite a lot of money. Although the iPad has some competitors around the same price (for instance the Galaxy Tab, Blackberry PlayBook or Acer Iconia), most alternatives are priced around the £100 mark. What are they, why are they so cheap compared to the iPad and – most importantly – are they any good?

There are literally dozens of different cheap tablets around but in reality they are almost identical. They are manufactured by obscure Chinese manufacturers and mostly sold by companies you have never heard of (some are rebadged by companies such as Elonex and Binatone but they basically are the same devices). Build quality ranges from dodgy to acceptable, but is not comparable to products from big name manufacturers. What follows is how these products compare to the iPad.

Screens

Low cost tablets usually have a 7” screen, compared to the 10” screen of the iPad. This might not sound much of a difference, but means that the total viewing area is only around ½ that of the iPad and this affects the overall usability. However, it also means that the devices have a smaller form factor and can potentially fit in a handbag or deep pocket, which an iPad certainly can’t do.

Screens on tablets are touch-sensitive and there are two different type of technologies used to achieve this: capacitive and resistive. Capacitive screens recognise the presence of fingers, are considerably more sensitive and are able to handle ‘gestures’, for instance moving two fingers apart to zoom in on a picture. The iPad has such a screen. Resistive screens rely on physical pressure, meaning it is necessary to press the screen using a single finger or a mechanical stylus. These type of screens cannot recognise gestures, only whether a particular part of the screen is being ‘clicked’ upon.

Nearly all cheap tablets use resistive screens, which feel crude and unresponsive to anyone who has used an iPad. However, it is likely that capacitive screens will drop in price and eventually replace resistive touchscreens, even on £100 devices.

Operating System

It is the operating system that gives a computer its personality and defines its capabilities. Most desktop and laptop computers in the world use Windows but it was not really designed with tablets in mind (it is improving with time, though). The Apple iPad uses its own system known as iOS, specifically designed for the iPad, iPhone and iPad touch. Cheap tablets use Android, which was

initially developed by Google for use on mobile phones. One important consideration is that Android is effectively made available free of charge from Google, which helps ensure a low end user price for such tablets.

Android has a lot going for it, but as just stated was originally intended for mobile phones rather than tablets. The very latest versions of Android do have tablet-specific features, but you are unlikely to find a current version on a cheap tablet. Rather it will be an old version, such as 2.1 or even 1.6. Does this matter? Well yes, it does. One reason is that there are tens of thousands of apps for Android – most of them free - available from the ‘Android Market’. However, many of these will not run on old versions of Android, and indeed the Android Market itself may not even be accessible. To try and mitigate against this some tablet vendors provide their own alternative ‘app markets’, but typically these contain only a few hundred dated and rather limited apps, meaning they are dead ends. Early versions of Android do not support Flash, the most widely used system for videos on the internet, YouTube, or the Kindle ebook reader.

Storage

Low-cost tablets have only a small amount of storage, typically 2 Gbytes or maybe 4 Gbytes. By comparison, the cheapest iPad comes with 16 Gbytes, meaning it can hold many more apps, photos, videos and music tracks. However, memory is not expandable on iPads whereas the cheap tablets usually have a slot for SD or microSD memory cards, giving them potentially unlimited storage.

Processor

The iPad is smooth and responsive in use, partly due to its design but mainly because it has a relatively fast processor in the shape of Apple’s A5, a dual-core processor clocked at 1 GHz. Cheap tablets tend to have relatively anaemic processors, usually single core and maybe running as slow as 300 MHz. This simply doesn’t provide enough ‘oomph’, with the result that many activities are just too slow. For instance, when playing back a video it may miss frames and the sound might be out of sync, or a webpage may take an age to load.

Battery Life

Computer and mobile phone manufacturers can’t help exaggerating (some would say lying) when it comes to battery life. Rechargeable batteries represent a technology that becomes compromised at the low end (in other words, susceptible to penny pinching), with the consequence that claimed battery life usually bears little resemblance to actual battery life under real-world circumstances. As a rough rule of thumb, divide the claimed battery life in half to estimate what it really is. It depends what you are doing, but most cheap tablets will run for about two hours. In contrast, the iPad will run for about 8-10 hours.

An additional consideration, following on from the previous section about processors, is that some cheap tablets take a long time to startup (in the order of 1 ½ to 2 minutes). This greatly limits the spontaneity of using such a device, so it is usual to leave it in standby mode. However, this still drains the battery. It is not unheard of for people to fully charge the tablet, leave it in standby mode, but then find that the battery is dead when they come to use it later in the day.

Connectivity

Most tablets are used for browsing the internet and it is therefore important that they have good connectivity. Connectivity comes in two forms: 3G and wireless. To use 3G, you need a mobile phone SIM and a data contract – this pretty much allows you to get online anywhere. High-end tablets such as the iPad are available with 3G, although there is a price premium. Low-end tablets cannot take SIMs, although some of them are able to work with a limited selection of mobile broadband dongles. Of course, a plug-in USB dongle is not a particularly elegant solution and because of the limited compatibility it is important to do plenty of research on internet forums before investing.

Wireless is more straightforward, so configuring a tablet for use in the home, office or school is usually unproblematic. One consideration is that cheap tablets don't usually offer support for the current wireless standard (11n), but work on the older 11g/11b standards. However, given that large volumes of data are not being used this shouldn't be a big issue.

Of more concern is that many tablets are reported as having poor wireless performance, particularly with regards to range. Typically people will cite only being able to use the internet if they are in the same room as the wireless router/access point, rather than anywhere in the building. Again, research online is suggested to see what other people's experience is with particular models.

Conclusion

On the face of it, being able to buy something like an iPad for a quarter of the price might seem like a bargain, but basically you get what you pay for. In order to achieve a price of around £100, a lot of compromises are necessary. Such devices may be useful or fun to play with, for instance to get an idea of what tablets are about. The best of them offer a superior internet experience than a smartphone, in a cheaper and more convenient package than a laptop or netbook. However, if it's really an iPad you are after then you may well be disappointed.