

Tablet Buying Guide



Medscribber Requirements
Scriptnetics, Inc.
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www.medscribber.com

Important pre-cautions before buying:

1. A Tablet without a pointed computer pen included can **NOT** be used for medical forms, diagrams or freeform handwriting entry. Touch without a pointed pen is for screen navigation and item selection only.*



Analog
(replaces finger only)
(crayon like drawing)



Digitizer pen
(for digital handwriting
precision drawing &
navigation)



No pen
(use a finger)
(navigation only)

2. A Tablet without a swappable battery means several Tablets have to be purchased for all day medical office work. Batteries die quicker in medical office use, built in batteries mean replacing the whole Tablet if the battery dies.

*Some Tablets may work adequately with an analog pen purchased separately, usability in medical situations depends on many variables: Tablet quality, OS set-up and information that is being attempted for input.

Benefits and choices

There are many benefits in choosing Tablet PC technology. Mobility and touch technology provides a fast and intuitive interface for the user. Touchscreens on a Microsoft Windows Tablet PC allow handwriting and automatically activate the Microsoft handwriting conversion. Non Microsoft Windows Tablets are not robust enough to run the Medscribber apps. The Tablet chosen MUST be Windows, either Windows 7 or 8. Medscribber will run on Windows Vista but is not supported.

With Microsoft Windows, Medscribber users on a Tablet intuitively know how to use the electronic medical record without training. No keyboard is required, allowing for mobility. Voice can be used. The right touch technology is key for this ease of use as there are many types of touch technology products.



Analog touch technology includes resistive, optical and capacitive screens. Digital touch technology includes both passive and active screens. To complicate things analog and digital screens are often used in combination. In addition all need to work with other screen technologies that determine durability and brightness.

The right Tablet choice is imperative, choosing the wrong Tablet screen for a Medscribber application or task leads to software performance issues. For any touch and handwriting to be used in Medscribber the right Tablet and manufacturer must be chosen. Unfortunately hardware manufacturers change models quickly, complicating choice. Here are some things to look for:

Analog or digital Tablet screen?

There is almost no situation where an analog touch screen only will do. Analog screens allow Tablet PCs to be sold cheaply but they are difficult to use in creating documents and saving content. Digital touch screens are identified in the specifications by being called a digitizer or as using a digitizer pen. There is one analog screen exception that can give adequate use for a medical user if it also includes its own stylus or pen for handwriting, often called an active pen. It is a projected capacitive screen.

As digitizer touch screens are the top Tablet some questionable manufacturers will say theirs includes a “rubber tipped” pen. A rubber tipped pen is definitely analog. It is blunt in shape. Some analog projected capacitive screens will work well with a digitizer type pen but if the manufacturer does not include a digitizer type pen the screen is probably not suitable.



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The importance of Tablet weight

Any Tablet more than 3.8 lbs. will be difficult to carry all day long and becomes tiring to carry and to write on standing up. 4.4 lbs. is the maximum to consider if only moving from one writing surface to another. 3.1 lbs. and under is ideal and only achieved with slates or hybrids, lighter than this is usually sacrificed in features by manufacturers using weaker processors or non-swappable batteries. Personal body type can affect the Tablet weight decision.



Screen considerations

For medical use, the Tablet screen is competing with bright exam room lighting, an outdoor screen or a Tablet with good known brightness is best. This is usually where the difference between a quality Tablet and a mass market Tablet starts. Choosing an outdoor screen usually means the loss of finger touch navigation as the analog capacitive layer is removed for additional screen lighting. In most cases having

only the digitizer pen available is a plus because it eliminates false navigation clicks during use and gives a clearer screen.

Gorilla glass is helpful but most of the top end tablets are very durable without it.

A 13 inch screen gives the size of the used portion of sheet of paper with a half inch margin. A 12.5 inch screen is the same as the used portion of a paper sheet with a three quarter inch margin. An 11.3 inch screen is like paper with a one inch margin. Most applications screens add to the margin. Smaller 10 inch screens make the type very small. With only 10 inches anything but the simplest form will have too much detail to be easily readable without decreasing the screen resolution to make the image bigger and then scrolling to see the whole form. Twelve or 12.5 inch screens are the recommended.

Slate, convertible or hybrid Tablet?

If encounter forms (paper images written on) are mainly used a slate is light and very portable. Diagraming also works well on a slate. If some text is needed in the nature of only a few words than slates or convertibles are good. Typing large amounts requires a docking station for a slate.



If there are long typed narratives in text for letters or notes that need to be produced regularly then a convertible is best. Weight is generally heavier and battery life is generally shorter, a trade-off in mobility vs. versatility.

A hybrid adds some flexibility by allowing a portable keyboard to be instantly available. The keyboard may double as a cover for the screen. The pen and touch take the place of the mouse. Very mobile, very light and full featured.



Tablet Battery life determines mobility

Most top end Tablet PCs have a battery life of over 6 hours, new (some advertised as 10 hours.) Newer ones may have non-swappable batteries which means after 6 hours it must be charged, so a second Tablet is needed for a full day. Plus if a non-swappable battery is constantly running to zero it means the battery, and Tablet, will be dead in about two years and would need sending it into the manufacturer for service for a new battery. Batteries are not usually covered under warranty. Cheaper models, with analog screens, have as little as one and half hours of battery life new. It is recommended that a swappable

battery model be chosen with at least one extra battery and a charger purchased. Lithium batteries will last only if they are never discharged below one third power. Everyday use means batteries will need replacing and why batteries are not covered under most computer warranties.

Tablet recommendations

These are suggestions only as Tablet PC technology is rapidly changing, almost quarterly now. Check this document often. These are manufacturers with experience in the Tablet PC industry.

	<p>Sony VAIO Duo 13" Convertible Ultrabook</p> <p>Our number one choice. A “slider” attached keyboard still keeps it to a light 2.93 lbs. The slider makes the view angle a little odd in laptop mode. Ten hour internal battery life. A second “strap-on” battery is said to be in the works. Solidly built of carbon fiber. Biggest screen of a Tablet, 13.3 inches, for easy handwriting. Near field ready. Even chose a body color. Very popular.</p>
 <p><small>*English keyboard shown. *Closes angles (Black)</small></p>	<p>Sony VAIO Fit 15" Multi-flip PC</p> <p>The largest screen of any with a quality digitizer, which causes short battery life of 4.5 hours. The larger screen also adds considerable weight at 5.0 lbs. These two specifications make it difficult to carry and mean it needs mid-day recharging. For some medical practices with more desk work like psychiatry or ophthalmology these may work best.</p>
	<p>Fujitsu STYLISTIC® Q704</p> <p>Fujitsu is preferred by many in healthcare because of reliability. Slate with keyboard options. Sealed internal battery. Noisy fan and comparatively slow performance for the CPU. Slate 2.16 lbs, with keyboard 3.68 lbs. Get the Smart card shell and Windows 8.1 for better performance with a small weight increase. Almost 12 hours of battery. 12.5 inch digitizer and touch display. No tech support.</p>
 <p>12.5"</p>	<p>Fujitsu LIFESTYLE® Q734</p> <p>A 12.5 inch screen Tablet. Can be ordered without the touch option and just the digitizer which solves a lot of “false click” issues and improves handwriting recognition. Swappable battery life is 12 hours with the optional SSD. Weight is on the heavy side at 3.83</p>

	<p>Motion Computing J3600</p> <p>Very rugged slate at 3.6 lbs, 12.1 inch screen with Gorilla glass and an outdoor brightness screen. Short 3.5 hour battery life, but can swap batteries and has a second battery bay (for 4 lbs.) Many accessories including docks and a mobile keyboard. Very good customer service and warranty service.</p>
	<p>Sahara Slate PC® i500 by Tablet Kiosk</p> <p>12.1 inch screen. Loaded with features including smaller swappable dual batteries for 6 hour total and only 3.3 lbs. Lots of extras available. Good personal tech support.</p>
	<p>Panasonic Toughbook C2</p> <p>A 12.5 inch convertible at a little heavy 3.9 lbs and a swappable 10 hour battery (with added weight.) Only question mark is the capacitive screen with the digitizer as an option. Most expensive but very durable.</p>

Other Tablets to consider

The following Tablets have not been field tested by us and may have features we think limiting. They may be a solution for some but not others, ie. predominately working at a desk or in a chair means a few ounces extra weight makes no difference. They are made by reputable manufacturers.

	<p>Sony VAIO Tap 11</p> <p>A screen that is slightly small at 11.6 inches but only 1.7 lbs with a wireless keyboard cover. Battery life is about 5 hours. Near field ready for smartphone and other syncing. Make sure to choose the i5 or i7 with Windows 8.1 for best performance.</p>
	<p>Samsung® ATIV</p> <p>A mere half-inch thick and weighing less than 2 pounds with a non-swappable battery with only 3.5 hours of life meaning for a full day's work two are needed or it needs to be plugged in. The screen is 11.6 in, detachable keyboard. Reliability issues but good tech support and warranty care.</p>



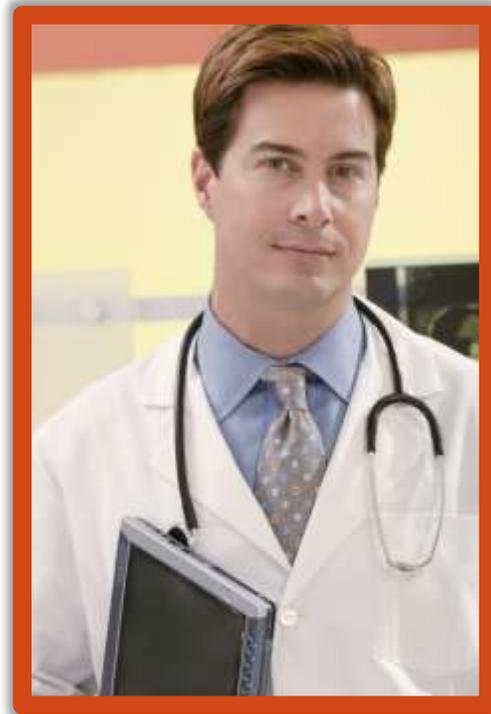
Fujitsu LIFEBOOK® T902

This is a very durable 13 inch screen Tablet with all the features and great swappable battery life. The only down side is the weight at a heavy and not very mobile 4.4 lbs.

Touch and Pen Considerations

Touch using a finger is perfectly good for selecting content, but for inputting content -- trying to draw a diagram, or add a note to a lab result – only a digitizer pen will be quick and efficient.

For non-mobile or places such as waiting room check-in where input will be limited, touch screens may use any analog technology. Tablets with analog screens only work well for older generation electronic medical records with pick list content creation. The new generation Medscribblers work best with a digitizer pen so content can be generated without the imposition and constraint of the computer. Some Tablets, like the Fujitsu's listed are available with both a digitizer for accurate handwriting, form filling and diagramming and analog touch for gestures. Some manufacturers make the analog touch an option. Medscribblers prefer a digitizer pen only without touch or multi-touch. Many have difficulty in avoiding activating the touch when using the pen on touch and active pen (digitizer) screens. With Windows 8 Microsoft removed the control setting to turn off touch on dual screen Tablets. Only by disabling device drivers can this be corrected for those having difficulties.



Summary

Satisfaction in using a Tablet computer for use with an electronic medical record depends on the quality of the Tablet. Medscribblers is best with any Tablet form factor that is light enough for the user, bright enough for an exam room, has a digital pen for pin point accuracy for content generation and with the user having a mobile power plan with batteries or extra Tablets.