

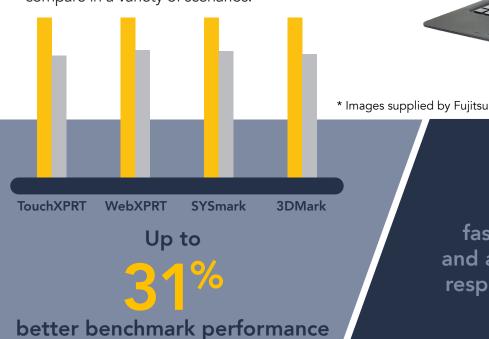
A 2-in-1 with better performance can save time and effort in the office or on the go

The Fujitsu STYLISTIC R726 offers a responsive, complete desktop-like experience

Raquel and Eliza are both mid-level executives at large companies. They both travel a lot for work. Even while they're in the office, Raquel and Eliza spend a significant amount of time in meetings and going to and from those meetings. Being able to work on the go—whether that means sending a quick email, doing research for a project, or creating or editing documents—is a must for both of them. On the go and in the office, Raquel and Eliza use 2-in-1 devices to do their work.

Raquel uses the Fujitsu STYLISTIC R726, while Eliza uses the Lenovo ThinkPad X1 Tablet. When we compared the two devices in our facilities, the Lenovo ThinkPad got the job done, but lagged behind the Fujitsu STYLISTIC in all of our tests. In business, time is money, and every second counts. Gains of a second here and there could benefit Raquel and her company.

Follow Raquel and Eliza with us to see how their 2-in-1 devices compare in a variety of scenarios.



Up to 48% faster system and application responsiveness

Windows 10 Pro

Boost your productivity at the office or on the go

9:00 AM

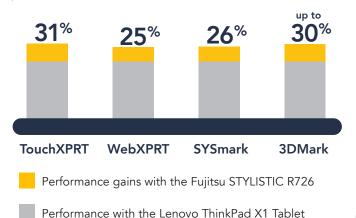
Raquel

Raquel is in a cab on the way to the airport for a business trip. She pulls her new Fujitsu STYLISTIC R726 out of her carry-on bag, turns it on, and starts checking email. She breathes a sigh of relief as everything runs smoothly. Of course there's no Wi-Fi in the cab, but Raquel connects to her LTE data network so she can continue to work uninterrupted.

When Raquel is traveling for work, or just running from meeting to meeting on a busy day, she needs her everyday apps to work quickly on her 2-in-1. If the apps Raquel uses every day aren't as responsive as possible, it holds her back.

Each second matters as Raquel launches Microsoft® Word, performs tasks in Excel®, and then jumps to other applications such as PowerPoint® and Adobe® Photoshop®. Finally, Raquel finishes catching up on email while she's in the cab. By the time she arrives at the airport, she's packed up her 2-in-1 and is ready to check in and face the security line without worrying about work.

PT uses benchmark tests to measure the general system performance—or everyday work capabilities—of all kinds of client devices. These benchmarks measure the performance of Windows® 10 and other office productivity apps, web browsers, graphics, and more. The graphs below show the results of our system performance tests.



Eliza

Eliza is also in a cab, heading to the airport to go on a business trip. She, too, needs every second of productivity she can squeeze out of her travel time. She is also connected to data and working in many of the same apps as Raquel. To the naked eye, it looks like Eliza's device functions just as well as Raquel's. But she doesn't know that she's falling behind. The cumulative toll on her productivity is greater than you might think. When Eliza doesn't accomplish as much work as she'd like to, she may not attribute that to her 2-in-1—but the Lenovo ThinkPad X1 Tablet lagged slightly behind the Fujitsu tablet in our testing. Eliza is losing work time without even realizing it.

Take advantage of the latest Microsoft OS, Windows 10 Pro

Both veteran Windows users and those new to Windows may enjoy Windows 10 Pro features on the STYLISTIC R726. Seasoned Windows users will recognize the familiar features of the user interface, like the Start menu and Live tiles. The Microsoft Office Suite comes pre-installed on the STYLISTIC R726. To use these apps, purchase a software license. Windows 10 Pro also includes more specialized business functions, like built-in Mobile Device Management. Additionally, Windows 10 Pro offers Enterprise Data Protection and the Microsoft Edge browser.

Choose the fastest device

11:00 AM

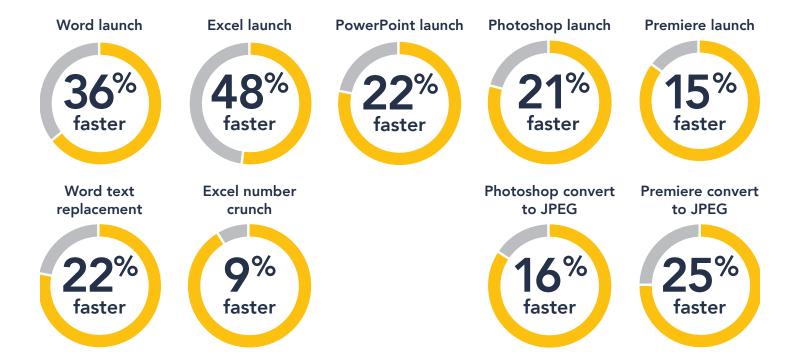
Raquel

When Raquel gets to her gate, she settles in and continues working on a presentation. Her deadline is coming up soon after she returns from her trip, so she needs to be able to focus. She first has to review data in Microsoft Excel, view and edit documents in Microsoft Word, and then put together a PowerPoint presentation. She also must edit photos and videos in Adobe Photoshop and Adobe Premiere®, respectively, to go along with her presentation.

While waiting for her flight to board, Raquel enjoys a smooth and responsive experience with her Fujitsu STYLISTIC. Raquel completes a final draft of her presentation while she waits for her flight, so she can relax from takeoff to landing. Check out the results of our system and application responsiveness testing below.

Eliza

Eliza also uses the wait time at her gate to work on her presentation. She doesn't finish everything she wants to while she waits to board the plane, but Eliza doesn't attribute that to the slower responsiveness of her device. Maybe she should: When documents or apps take time to load, it causes Eliza to get distracted. The more Eliza waits for her device, the less productive she is able to be and the more time she loses. That time adds up. If she got a chance to try it, the app responsiveness of the STYLISTIC might help Eliza stay on task and increase her productivity.



A more comfortable, convenient workspace

3:00 PM

Raquel

Raquel gets to her hotel room. She wants to finalize the current draft of her presentation and send it to stakeholders for review by the end of the business day. She takes out her STYLISTIC and its keyboard; easily connects the flat, comfortable keyboard to the device; and begins working.

At the office, the STYLISTIC cradle enhances Raquel's workspace. It's a cable-free solution, so it doesn't increase clutter on her desk, and it has plenty of ports. Plus, all you have to do is set the STYLISTIC in the cradle, and it's connected.

But in the interest of packing light, Raquel doesn't usually bring the STYLISTIC cradle on business trips. The STYLISTIC itself has all the interface connection options she needs for her work on the road.

The 2-in-1 also comes with an easy-to-connect keyboard, which Raquel does bring on her trips. The flat setup makes it easy for her to type as she would on any laptop or desktop.

Cradle ports	Built-in ports
• VGA	• USB 3.0
• HDMI	 Mini DisplayPort
 DisplayPort 	 Headphone/microphone
• Ethernet	• microSD
• USB 3.0 (2)	• micro SIM
 Audio in 	
 Audio out 	
 Kensington lock support 	

Eliza

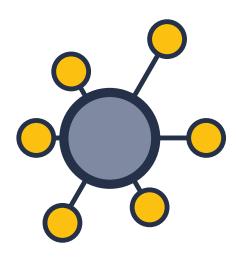
When Eliza gets to her hotel room, she also resumes working. Eliza's company purchased the Lenovo OneLink+ dock and the ThinkPad X1 Tablet Productivity Module for her. However, Eliza doesn't bring them on business trips. They only add to the clutter of her already full briefcase.

In order to connect the ThinkPad to the OneLink+ dock, users must also purchase the ThinkPad X1 Tablet Productivity Module. Both the OneLink+ dock and the Productivity Module are sold separately.

View the table below for a complete list of ports included on the dock, Productivity Module, and the device itself.

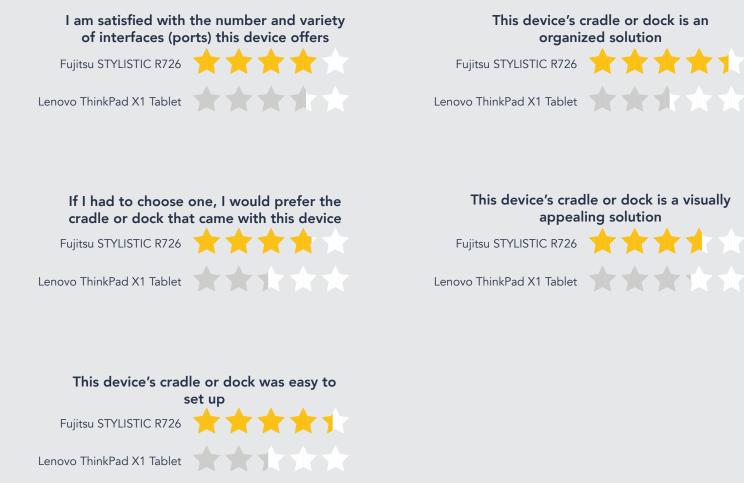
Dock ports	Built-in ports	Productivity Module
 Ethernet USB 2.0 (2) USB 3.0 (4) Headphone/microphone VGA DisplayPort (2) Kensington lock 	 USB 3.0 USB 3.1 Type C Mini DisplayPort microSD Audio out Nano SIM 	• HDMI • USB 3.0 • OneLink

The Lenovo ThinkPad X1 Tablet connects to the dock via OneLink.



Working on your 2-in-1 doesn't have to be a chore

We brought in a number of impartial users to compare the user experiences of the Fujitsu STYLISTIC R726 and the Lenovo ThinkPad X1 Tablet. Each of the five participants weighed in on the overall experience and quality of each device. We asked them to rate each statement from 1 to 5, where 1 means "strongly disagree" and 5 means "strongly agree." The stars represent the average ratings the jury gave the devices for a variety of usability metrics. View the chart below to find out how the STYLISTIC R726 and the ThinkPad X1 Tablet compared.



A look inside

Here's a quick reference to compare some of the capabilities and features business users look for when choosing a 2-in-1 device.

	Fujitsu STYLISTIC R726	Lenovo ThinkPad X1 Tablet
6th generation Intel® Core™ i5 processor	✓	(Intel Core M5-6Y57)
Allows for easy on-site serviceability	✓	✓
Offers self-encrypting drive feature	✓	✓
Supports Intel Pro Wireless display (WiDi)	✓	✓
Supports TPM	✓	✓
Supports NFC	✓	X (in the configuration we tested)
Mobile broadband	✓	X (in the configuration we tested)
Intel HD Graphics 520	✓	(Intel HD Graphics 515)
12.5" screen (1,920 x 1,080)	✓	X (12.0" – 2,160 × 1,440)
WLAN: Intel Dual Band Wireless-AC 8260	✓	✓
No-cables cradle solution	✓	(cable-based Lenovo ThinkPad X1 Tablet Productivity Module and Lenovo OneLink+ USB Port Replicator—sold separately)

Connect however you want, wherever you are

The Fujitsu STYLISTIC R726 offers important connectivity features, including 4G/LTE, Near Field Communication (NFC), and Intel Pro Wireless display functionality. NFC allows for the increased security of dual-factor authentication on mobile devices. With dual-factor authentication, a password alone is not enough to break into someone's account. These features make it easy to use the internet, make presentations, and share information securely wherever you are. The Lenovo ThinkPad X1 Tablet supports Intel Pro Wireless display functionality, but does not currently support mobile broadband or NFC.



Less time to repair

The following Monday

Raquel

When Raquel returns on Monday, she receives an email from IT saying she needs to bring her device in for an upgrade.

Raquel is worried—how much downtime is she going to face while she waits for her device to get back from the manufacturer? When she goes to IT and expresses her concerns to a coworker, he laughs. To Raquel's surprise, he informs her that her STYLISTIC isn't going anywhere—he can install her new SSD in minutes.

Unlike most tablets and 2-in-1 devices, users can open the STYLISTIC and replace or upgrade components such as the battery or the SSD. Employee devices that are serviceable in-house can alleviate concerns about data security. The fact that the STYLISTIC doesn't have to be shipped out for repairs means that the data Raquel stores in it never has to be in the hands of anyone but Raquel and her company. Plus, Raquel is relieved to have a device that is designed to eliminate so much potential downtime.



Eliza

Eliza also gets her device's SSD upgraded when she returns home—but it takes somewhat longer than it would with the STYLISTIC. Faster part removal and replacement with the STYLISTIC could save time for Eliza as well as her coworkers in IT.







See your work more clearly

Ever want to work outside while you're on the go, only to realize it's impossible because it's too sunny? In these situations, a brighter screen can help. PT determined that the Fujitsu STYLISTIC R726 had a 25% brighter screen than the Lenovo ThinkPad X1 Tablet.

Conclusion

Eliza gets by with her Lenovo ThinkPad X1 Tablet. In fact, if you asked her, she'd say she's very happy with her 2-in-1. But she and her company don't realize how much productivity she could gain by switching to a device with advantages in performance, responsiveness, serviceability, and easy-to-use features. Since Raquel received her Fujitsu STYLISTIC, she's saved time here and there on a variety of tasks. Over time those little chunks can add up to something big. PT proved that for a variety of common work tasks, the Fujitsu STYLISTIC R726 has an edge over the Lenovo ThinkPad X1 Tablet. Give your employees and your business the gift of more time—you may all benefit more than you realize.

On April 18, 2016, we finalized the hardware and software configurations we tested. Updates for current and recently released hardware and software appear often, so unavoidably these configurations may not represent the latest versions available when this report appears. Fujitsu supplied the German model of the Fujitsu STYLISTIC R726 for our testing. Features may vary by location. We concluded hands-on testing on July 5, 2016.

Appendix A – Test system configurations

Fujitsu STYLISTIC R726 vs. Lenovo ThinkPad X1 Tablet

System	Fujitsu STYLISTIC R726	Lenovo ThinkPad X1 Tablet	
General			
Number of processor packages	1	1	
Number of cores per processor	2	2	
Number of hardware threads per core	2	2	
Total number of processor threads in system	4	4	
System power management policy	Fujitsu Computers EcoSettings	Balanced	
Processor power-saving option	Enhanced Intel SpeedStep® Technology	Enhanced Intel SpeedStep Technology	
System dimensions (length x width x height)	12.55" x 0.37" x 7.91" 319 mm x 9.5 mm x 201 mm	11.45" x 8.24" x 0.33" 291 mm x 209.5 mm x 8.45 mm	
System weight	1.83 lbs 830g	1.69 lbs 770g	
CPU			
Vendor	Intel	Intel	
Name	Core	Core	
Model number	i5-6300U	M5-6Y57	
Stepping	D0	D0	
Socket type and number of pins	1168 BGA	1168 BGA	
Core frequency (GHz)	2.4 - 3.0	1.1 – 2.8	
L1 cache (Data + Instruction)	2 x 32 KB + 2 x 32 KB	2 x 32 KB + 2 x 32 KB	
L2 cache	2 x 256 KB	2 x 256 KB	
L3 cache	3 MB	4 MB	

System	Fujitsu STYLISTIC R726	Lenovo ThinkPad X1 Tablet	
Platform			
Vendor	Fujitsu	Lenovo	
Motherboard model number	FJNBB4E	20GG001KUS	
BIOS name and version	Fujitsu v1.10 (03/14/2016)	Lenovo N1LET30W (1.12) (03/21/2016)	
Memory module(s)			
Туре	DDR3L	DDR3L	
Speed (MHz)	1,600	1,600	
Speed running in the system (MHz)	1,600	1,600	
Timing/Latency (CL-tRCD-tRP-tRAS)	12-15-15-34	14-17-17-40	
Size (MB)	4,096	4,096	
Number of memory module(s)	2	2	
Total amount of system RAM (GB)	8	8	
Channel (single/dual)	Dual	Dual	
Hard disk			
Vendor and model number	Samsung® MZNLN256HCHP (PM871)	Samsung MZNLN256HCHP (PM871)	
Number of disks in system	1	1	
Size (GB)	256	256	
Туре	SATA 6.0 SSD M.2	SATA 6.0 SSD M.2	
Controller	Intel 6th Generation Core Processor Family Platform I/O SATA ACHI Controller	Intel 6th Generation Core Processor Family Platform I/O SATA ACHI Controller	
Driver	Intel 14.5.2.1088 (07/22/2015)	Intel 14.6.1.1030 (08/18/2015)	
Operating system			
Name	Windows 10 Pro	Windows 10 Pro	
Build number	10586	10586	
Service pack	NA	NA	
File system	NTFS	NTFS	
Kernel	x64-based PC	x64-based PC	
Language	English	English	
Microsoft DirectX version	12	12	

System	Fujitsu STYLISTIC R726	Lenovo ThinkPad X1 Tablet	
Graphics			
Vendor and model number	Intel HD graphics 520	Intel HD graphics 515	
Туре	Integrated	Integrated	
Chipset	Intel HD Graphics Family	Intel HD Graphics Family	
BIOS version	Intel Video BIOS	Intel Video BIOS	
Total available graphics memory (MB)	4,170	4,156	
Dedicated video memory (MB)	128	128	
System video memory (MB)	0	0	
Shared system memory (MB)	4,042	4,028	
Driver	Intel 20.19.15.4364 (01/06/2016)	Intel 20.19.15.4380 (02/02/2016)	
Sound card/subsystem			
Vendor and model number	Realtek High Definition Audio	Realtek High Definition Audio (SST)	
Driver	Realtek 6.0.1.7614 (09/15/2015)	Realtek 6.0.1.7719 (01/13/2016)	
Mobile broadband			
Vendor and model number	Sierra Wireless® AirPrime® EM7305 LTE	NA	
Driver	Microsoft 10.0.10586.0 (10/29/2015)	NA	
Wireless			
Vendor and model number	Intel Dual Band Wireless-AC 8260	Intel Dual Band Wireless-AC 8260	
Driver	Intel 18.21.0.2 (09/24/2015)	Intel 18.40.0.9 (02/25/2016)	
USB ports			
Number	1	2	
Туре	USB 3	1 x USB 3 1 x USB 3.1 Type C	
Other ports	Mini DisplayPort, microSD, microSIM	Mini DisplayPort, microSD, Nano SIM	
Display			
Туре	Full HD PLS panel	Full HD+ IPS	
Screen size	12.5"	12"	
Resolution	1,920 x 1,080	2,160 x 1,440	

System	Fujitsu STYLISTIC R726	Lenovo ThinkPad X1 Tablet	
Port replicator features			
Туре	Cradle dock	Lenovo Productivity Module plus a Lenovo OneLink+ USB Port Replicator	
USB ports	2 x USB 3.0	2 x USB 2 4 x USB 3	
Display ports	1 x HDMI 1 x DisplayPort 1 x VGA	1 x Productivity HDMI 2 x DisplayPort 1 x VGA	
Ethernet	Yes (1 x Gigabit)	Yes (1 x Gigabit)	
Audio	1 x Audio out 1 x Headset out	1 x Headset out	
Battery			
Information	Integrated Lithium Ion 34 WHr	Integrated Lithium Ion 37 WHr	

Appendix B – How we tested

SYSmark 2014

SYSmark 2014 installs the following applications, which its test scripts employ:

- Adobe Acrobat[®] XI Pro
- Adobe Photoshop CS6 Extended
- Adobe Premiere Pro CS6
- Google Chrome
- Microsoft Excel 2013
- Microsoft OneNote® 2013
- Microsoft Outlook® 2013
- Microsoft PowerPoint 2013
- Microsoft Word 2013
- Trimble SketchUp™ Pro 2013
- WinZip® Pro 17.5

If any of these applications are already on the system under test, they will cause problems with the benchmark due to software conflicts. To avoid any such issues, before we installed the benchmark, we uninstalled all conflicting pre-installed software applications, including different versions of any of the programs SYSmark 2014 uses.

Setting up the test

1. Purchase and install SYSmark 2014 ver 1.5 with default settings from http://bapco.com/products/sysmark-2014.

Running the test

- 1. Launch SYSmark 2014 by double-clicking the desktop icon.
 - a. Uncheck the box next to Process Idle Tasks.
 - b. Select Configuration.
 - c. Only select the recommended default options that are listed, and click Save.
- 2. Make sure Office Productivity, Media Creation, and Data/Financial Analysis are selected.
- 3. Enter a Project name.
- 4. Select 3 Iterations, check the box beside Conditioning Run, and click Run Benchmark.
- 5. When the benchmark completes and the main SYSmark 2014 menu appears, to create a report, click Save FDR.

TouchXPRT 2016

Setting up the test

- Download the TouchXPRT benchmark (TX2016.6.51.0_GA.zip) from http://www.principledtechnologies.com/benchmarkxprt/touchxprt/ to the desktop.
- Right-click the desktop, and select Personalize.
- Click the back arrow, and select Update & security.
- 4. In the left hand column, click For developers, and select Developer mode. Close the Settings dialog box.
- 5. Unzip the downloaded benchmark file.
- 6. Inside, right-click the Install.ps1, and select Run with PowerShell.
- 7. When prompted, press Enter.
- 8. To continue the installation, press Y, and press Enter.
- 9. To close the PowerShell installation, press Enter.
- 10. Restart the computer.

Running the test

- 1. Press the Windows Key, and type TouchXPRT.
- 2. Click TouchXPRT.
- 3. Click the Start Test button.
- 4. Enter the results when the benchmark has finished.
- 5. Repeat steps 1-4 two more times and take the median.

WebXPRT 2015

Running the test

- Open the web browser under test, and go to www.principledtechnologies.com/benchmarkxprt/webxprt/.
- 2. Click Run WebXPRT 2015.
- 3. At the Ready to test your browser screen, click Continue.
- 4. Click the red "play" icon.
- 5. When the test completes, record the results.

3DMark

Setting up the test

- 1. Download 3DMark from http://www.futuremark.com/benchmarks/3dmark/all.
- 2. Install 3DMark with the default options by double-clicking the 3DMark installer.exe file.
- 3. Launch 3DMark by double-clicking on the 3DMark desktop icon. Enter the registration code, and click Register.
- 4. Exit 3DMark.

Running the test

- 1. Boot the system, and wait 5 minutes before running the test.
- 2. To launch the benchmark, double-click the 3DMark desktop icon.
- 3. At the 3DMark Home screen, click the More Tests button.
- 4. Select the desired benchmark to run (i.e., Ice Storm Extreme, Cloud Gate, or Sky Diver).
- 5. Move the slider button to turn off the "Include Demo" feature.
- 6. Click Run.
- 7. When the benchmark run completes, record the results.
- 8. Perform steps 1 through 7 two more times for each benchmark, and report the median of the three runs.

Adobe Photoshop CC 2015

Setting up the test

- 1. Download and install Photoshop CC 2015 with default options from https://www.adobe.com/products/photoshop/selector.html?promoid=KLXLS.
- 2. Copy the Photoshop test file to the desktop.

Running the test

- 1. Boot the system, and wait 5 minutes before running the test.
- 2. Simultaneously double-click the Adobe Photoshop test file, and start the stopwatch.
- 3. Stop the stopwatch when the file is loaded into Photoshop.
- Click File→Save As.
- 5. From the drop down format menu, select JPEG, and enter a file name.
- 6. Click Save.
- 7. Move the Quality Slider button to 12 (Maximum).
- 8. Simultaneously click OK, and start the stopwatch.
- 9. Stop the stopwatch when the progress bar in the bottom left of the screen indicates 100% and then disappears.
- 10. Shut down the system.
- 11. Repeat steps 1 through 10 two more times, and report the median of three runs.

Adobe Premiere Pro CC and encoding a file to MPEG4

Setting up the test

- 1. Download and install Premiere Elements with default options from https://www.adobe.com/products/premiere.html?promoid=KLXLV.
- 2. Copy the Adobe Premiere Pro test file to the desktop.

Running the test

- 1. Boot the system, and wait 5 minutes before running the test.
- 2. Simultaneously double-click the Adobe Premiere Elements test file, and start the stopwatch.
- 3. Stop the stopwatch when the project is loaded into Adobe Premiere Pro.
- 4. Select the Program: MOV screen.
- Select File→Export→Media.
- 6. Simultaneously click Export, and start the stopwatch.
- 7. Stop the stopwatch when the progress bar disappears.
- 8. Shut down the system.
- 9. Repeat steps 1 through 8 two more times, and report the median of three runs.

Measuring time to open applications

Setting up the Microsoft Office tests

- Install Microsoft Office 365 with default options. Copy the test files to the desktop.
- 2. Place the Microsoft Word Dracula.docx in the documents folder of each system under test for the Text Replacement test. This test times how long it takes to make 42,602 text replacements.
- 3. Place the Microsoft Excel Number Crunch spreadsheet in the documents folder of each system under test. This Excel spreadsheet executes approximately 28,000 sets of calculations such as addition, subtraction, division, rounding, and square root. It also includes common statistical analysis functions such as Max, Min, Median, and Average. It generates a timed score on how long the calculations took.

Time to open Microsoft Word and perform Text Replacement

- 1. Boot the system, and wait 5 minutes before running the test.
- 2. Press the Windows key, and type Word.
- 3. Simultaneously start the timer, and select Microsoft Word.
- 4. Stop the timer when the Microsoft Word templates are fully displayed.
- 5. Open the Microsoft Word Dracula.docx document.
- 6. To bring up the Find/Replace dialog box, press CTRL + H.
- 7. In the Find What field, type I.
- 8. In the Replace With field, type TEST.
- 9. Simultaneously start the timer, and select Replace All.
- 10. Stop the timer when every I has been replaced.
- 11. Close the Word document. Do not save changes.
- 12. Shut down the system.
- 13. Repeat steps 1 through 12 two more times, and report the median of the three runs.

Time to open Microsoft Excel and perform Number Crunch

- 1. Boot the system, and wait 5 minutes before running the test.
- 2. Press the Windows key, and type Excel.
- 3. Simultaneously start the timer, and select Microsoft Excel.
- 4. Stop the timer when the Microsoft Excel templates are fully displayed.
- 5. Open the Microsoft Excel Number Crunch spreadsheet.
- 6. To start the calculation, press CTRL + R.
- 7. Record the output.
- 8. Close the Excel spreadsheet.
- 9. Shut down the system.
- 10. Repeat steps 1 through 9 two more times, and report the median of the three runs.

Time to open Microsoft PowerPoint

- 1. Boot the system, and wait 5 minutes before running the test.
- 2. Press the Windows key, and type PowerPoint.
- 3. Simultaneously start the timer, and select Microsoft PowerPoint.
- 4. Stop the timer when Microsoft PowerPoint templates are fully displayed.
- 5. Close Microsoft PowerPoint.
- 6. Shut down the system.
- 7. Repeat steps 1 through 6 two more times, and report the median of the three runs.

User experience

We presented each jury member with a set of questions and had them rate the devices on a 5-point scale. The filled-in stars in this report represent the device's average rating out of 5 for that metric.

To obtain data about the user experience of the two devices, we had five testers—three men and two women from the Principled Technologies staff—evaluate the on-board interface options and docking solutions of each device.

A proctor read test instructions to participants and also observed the test. Testers had full view of the device they were reviewing during the test to allow them the full user experience.

After performing the applicable tasks, all jury members rated the following statements using a scale of 1 to 5, where 1 means "strongly disagree" and 5 means "strongly agree."

Interface connection options:

1. I am satisfied with the number and variety of interfaces (ports) this device offers.

Docking solution:

- 1. If I had to choose one, I would prefer the cradle or dock that came with this device.
- 2. This device's cradle or dock was easy to set up.
- 3. This device's cradle or dock is an organized solution.
- 4. This device's cradle or dock is a visually appealing solution.

Measuring serviceability time

This test measures the time required to replace a tablet's battery and SSD and the ease or difficulty of that task.

To avoid the cost of purchasing extra spare parts, we removed the tablet's existing hardware and then put that same hardware back in the tablet, thus simulating a replacement. We timed each separately to more accurately report the level of difficulty with each hardware replacement.

This test requires two people, a stopwatch, hand tools, and a digital video camera.

As the technician performs the simulated upgrade, the proctor executes a number of tasks:

- Videotaping and timing each step of the process.
- Recording the number and name of parts the technician removes and the number of steps the technician required to perform each replacement.
- Recording anything out of the ordinary, not specifically attributable to the tablet, that happens during the test. (We noted any such incident that increased the duration of the replacement process.)

Three PT technicians performed all upgrades on each system; we used the average result of the three technicians as the representative score for that test on that system.

Because a technician was likely to become faster replacing each subsequent tablet, the proctor delivered the tablets to each technician in a different order. Though our three-person sample is too small to yield statistically significant results, this approach did reduce the amount of bias that the learning process induced.

Note: Because the process of replacing a tablet's battery and SSD differs from system to system, this methodology uses generic terms.

- 1. The proctor starts the digital video camera, and he or she states the name of the test and the make and model of the tablet.
- 2. The technician places the powered down tablet on the bench, right-side up.
- 3. The proctor prepares the stopwatch.
- 4. The proctor counts down to zero, and he or she starts the stopwatch at zero.
- 5. The technician turns the tablet over, he or she removes the battery from the tablet.
- 6. The proctor notes every step in this process, stops the stopwatch when the technician completes this process, and records the time the technician took to remove the battery.
- 7. The proctor prepares the stopwatch.
- 8. The proctor counts down to zero, and he or she starts the stopwatch at zero.
- 9. The technician replaces the battery.
- 10. The proctor notes every step in this process, stops the stopwatch when the technician completes this process, and records the time the technician took to replace the battery.
- 11. The proctor and technician repeat steps 2 through 10 with the SSD.

We executed each test three times, using three people, and used the average result of the three technicians as the representative score for that test.

Appendix C – Our results

Benchmark	Fujitsu STYLISTIC R726 score	Lenovo Thinkpad X1 Tablet score	Fujitsu vs. Lenovo % difference
General			
TouchXPRT (overall score median—higher is better)	215	164	31%
WebXPRT (overall score median—higher is better)	444	354	25%
SYSmark 2014 v1.5 (overall rating—higher is better)	1,115	883	26%
3Dmark v2.0.2067: Ice Storm Extreme (overall score—median—higher is better)	41,284	31,851	30%
3Dmark v2.0.2067: Cloud Gate (overall score—median—higher is better)	5,797	4,518	28%
3Dmark v2.0.2067: Sky Diver (overall score—median—higher is better)	3,641	3,117	17%

Application/task	Fujitstu STYLISTIC R726 time (mm:ss)	Lenovo Thinkpad X1 Tablet time (mm:ss)	Fujitsu vs. Lenovo % difference
General			
Microsoft Word launch time	00:02.1	00:03.3	36%
Microsoft Word text replacement—median	00:05.2	00:06.7	22%
Microsoft Excel launch time— median	00:01.6	00:03.1	48%
Microsoft Excel Number Crunch—median	00:04.0	00:04.4	9%
Microsoft PowerPoint launch time—median	00:01.4	00:01.8	22%
Adobe PhotoShop launch time—median	00:17.3	00:21.9	21%
Adobe PhotoShop convert project to JPEG– median	00:35.5	00:42.1	16%
Adobe Premiere project launch time—median (lower is better)	00:15.3	00:18.1	15%
Adobe Premiere convert project to JPEG—median (lower is better)	7:01.9	09:19.6	25%

We asked testers to rate the following statements from 1 to 5, where 1 means "strongly disagree" and 5 means "strongly agree." The following table shows these results and their averages.

Usability test	Fujitsu Stylistic R726	Lenovo Thinkpad X1 Tablet		
Interface connection options:	Interface connection options:			
I am satisfied with the number and variety of interfaces (ports) this dev	vice offers (higher is better)			
Tester 1	4	3		
Tester 2	4	2		
Tester 3	5	5		
Tester 4	3	4		
Tester 5	4	4		
Average	4.0	3.6		
Docking solution:				
If I had to choose one, I would prefer the cradle or dock that came wit	h this device (higher is better)			
Tester 1	5	5		
Tester 2	5	2		
Tester 3	4	1		
Tester 4	1	2		
Tester 5	4	2		
Average	3.8	2.4		
This device's cradle or dock was easy to set up (higher is better)				
Tester 1	5	3		
Tester 2	5	2		
Tester 3	5	2		
Tester 4	3	1		
Tester 5	4	4		
Average	4.4	2.4		

Usability test	Fujitsu Stylistic R726	Lenovo Thinkpad X1 Tablet	
This device's cradle or dock is an organized solution (higher is better)			
Tester 1	5	5	
Tester 2	5	3	
Tester 3	5	1	
Tester 4	2	1	
Tester 5	5	3	
Average	4.4	2.6	
This device's cradle or dock is a visually appealing solution (higher is be	etter)		
Tester 1	4	5	
Tester 2	5	3	
Tester 3	4	2	
Tester 4	1	2	
Tester 5	4	4	
Average	3.6	3.2	

Serviceability test	Fujitsu Stylistic R726	Lenovo Thinkpad X1 Tablet
Time to remove battery (lower is better)		
Tester 1	03:28.0	10:47.0
Tester 2	05:03.0	14:20.0
Tester 3	03:05.0	07:00.0
Time to remove battery - average	03:52.0	10:42.3
Time to replace battery (lower is better)		
Tester 1	03:22.0	06:18.0
Tester 2	03:39.0	06:32.0
Tester 3	02:26.0	05:46.0
Time to replace battery - average	03:09.0	06:12.0

Serviceability test	Fujitsu Stylistic R726	Lenovo Thinkpad X1 Tablet
Time to remove SSD (lower is better)		
Tester 1	01:49.0	04:56.0
Tester 2	02.36.0	04:33.0
Tester 3	01:44.0	03:41.0
Time to remove SSD - average	01:46.5	04:23.3
Time to replace SSD (lower is better)		
Tester 1	02:29.0	02:28.0
Tester 2	03:24.0	02:37.0
Tester 3	02:20.0	02:07.0
Time to replace SSD - average	02:44.3	02:24.0

This project was commissioned by Fujitsu.



Facts matter.º

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