50-inch Surface Hub 2S: $8,999, shipping in June; 85-inch version next year

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First announced last year, Microsoft’s second-generation Surface Hub now has a price and release schedule—and a couple of new siblings, too.

Surface Hub is Microsoft’s hardware dedicated to collaboration within meetings. It combines several roles, most notably digital whiteboarding and video conferencing, with Teams, Skype, and OneNote built into a single combined, integrated package. The 50-inch 2S is only vaguely specified: it has a custom-built 3:2 aspect ratio 4K (3840×2560 with 10 bits per pixel) screen with embedded touch sensors that work with both pen and finger. Inside is an 8th-generation Core i5 (Microsoft offered no more specifics than that) with 8GB RAM and 128GB SSD storage; while that may seem miserly, the Surface Hub 2 software is designed so that it doesn’t store data locally, so 128GB should be abundant. To support video conferencing, it has an array of eight microphones, front-firing speakers, and a detachable 4K webcam. It will be available in the US from June, with other markets following, for a price of $8,999. One pen and one camera come in the box.

As we’ve come to expect from Microsoft, the screen looks

great. It has a matte finish (reflections are too hard to avoid otherwise), so it doesn’t quite have the punch a gloss finish would get it, but it’s far better than many of the 1080p screens I’ve seen in offices around the world. Using techniques refined from building its portable Surface devices, the Hub 2’s display integrates the touch-sensing layers into the glass of the screen, a design that makes the screen itself much thinner and reduces the parallax error when using a pen (it was 3mm in the first generation, down to 1.7mm in this).

Enlarge / Surface Hub 2S from the back. The reason it’s round? With a round case, there’s no chance that rotation will snag on fingers, cables, etc.

The software stack it runs is an updated version of the original Surface Hub platform. Though based on Windows 10, this isn’t Windows 10; it can’t run arbitrary Win32 applications, only Universal Windows Platform applications, and this is at least in part due to its specialized nature: when you end a meeting, anything you drew on the whiteboard or in OneNote, chat transcripts, and so on, is saved to some networked location, and then your entire session is discarded,

leaving no trace of the things you've done, so the machine is pristine for the next meeting.

But here's where things get complicated. The original announcement last May wasn't for the "Surface Hub 2S." It was for the "Surface Hub 2," and Microsoft demonstrated a number of neat capabilities: rotating the screen between its portrait and landscape modes was seamlessly smooth, and up to five of the systems could be placed in portrait mode to make a giant display. Indeed, Surface Hub 2S has a rotation mechanism built in. Try to rotate the screen, however, and it won't budge.

That's because of something announced last September: the Surface Hub 2 was split into two models, with the 2S available this year, and the 2X next year. The underlying cause for this split is believed to be the software. Surface Hub 2 is expected to ship with a modernized version of Windows 10 and a new version of its custom user interface, and that's not going to be ready this year. Features like the smooth screen updating during rotation and the multi-display capability depend on this new software, so since that's not finished, Surface Hub 2S doesn't have them.

However, Microsoft doesn't want to leave out Surface Hub 2S buyers. When Surface Hub 2X is released next year, it will be possible to upgrade 2S units to the 2X spec and feature set. This won't be a simple software upgrade; it will require a hardware upgrade, too. The Surface Hub 2 puts its processor, memory, and storage into a removable module that slots in the back of the system. 2S owners will be able to install a 2X compute module when it becomes available, and this will provide them with the updated system software and the new rotation/multi-screen facilities.

The current 2S compute module is designed so that it locks the rotation mechanism in place; it has a small protrusion that prevents rotating the screen. As far as I can tell, it's still possible and supported to switch between portrait and

landscape modes, but doing so requires removing the 2S compute module, rotating the screen, and then reinserting the 2S compute module to re-lock the screen in its new orientation.

Specs of the 2X compute module? Unknown. Availability? Also unknown. Price? Non-zero, but how high is anyone’s guess. What will companies do with all their obsolete 2S compute modules once they’ve upgraded to the 2X? Again, a mystery.

Enlarge / The Surface 2S compute module. I believe it’s the little screwed-on piece above the HDMI port that blocks rotation when the module is installed.

Microsoft says, entirely plausibly, that the system was always going to have a modular compute unit even if the 2S/2X split hadn’t been necessary. That’s because of the general observation that computer tech is progressing faster than screen tech, and large-screen displays are typically expected to last for many years once installed. The display could be good for ten years, say, but after five years, the original compute unit will look rather old and stale, so swapping in a new one would be a good way to ensure that buyers of the system can make use of the full useful life of the display.

The module system has been designed so that it’s easy enough to replace the modules “blind,” reaching around to the back of the machine while leaving it mounted on a wall.

Expansion ports are split between the compute module and the base unit; the module’s ports include USB Type-A, USB Type-C, HDMI input, mini-DisplayPort output, and yes, *no* Thunderbolt

3. The Type-C port can do USB and DisplayPort but no more. The monitor augments this with another four USB Type-C ports for things like the webcam.

Microsoft is also trying to build an accessory ecosystem around Surface Hub. Its launch presentation today was done in conjunction with Steelcase, which makes all kinds of office furniture. Steelcase was showing off a wheeling stand with a circular mount purpose-built for Surface Hub 2. This was paired with a $1,400 battery pack from APC that can mount on the stand and power the Surface Hub 2 for a couple of hours. The wheeled stand brings back memories of school and the excitement you felt as the teacher rolled the TV and VCR into the classroom, indicating that no learning would take place because you were going to watch a video instead.

The first-generation Surface Hub had two versions, one with an 84-inch screen, the other 55-inch. For a long time after its launch, the 84-inch machine was very hard to buy because demand was far higher than Microsoft expected, (this lack of expectation led to the company not building enough of them quickly enough). Initially, Surface Hub 2 was announced only in its 50-inch guise, but today Microsoft revealed, and showed very briefly, an 85-inch model with a 16:9 non-rotating screen. That will launch in 2020.

If you want the display but aren’t too keen on the modular computer inside it, later this year Microsoft will start selling the Surface Hub 2 Display: a 55-inch Surface Hub 2 with the computer (and a few other bits and pieces, such as Wi-Fi) taken out of it.

And finally, later in the year, Microsoft will also start selling Surface Hub 2 with regular Windows 10 Pro or Enterprise. This will mean forfeiting the special Surface Hub user interface, but it will enable the use of arbitrary Win32 applications. I suspect that at some point Microsoft will ship software that can offer both the Surface Hub interface while

also supporting regular Win32 apps, but we’re not at that stage yet. No pricing information is available yet.

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