



Technology Currents...

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Research, Analysis, Strategy, Insight

Why it May be Some Time Before You Get a 5G Enabled Laptop

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I recently bought a new laptop because I travel a lot I wanted a nice thin and light machine with a good display, excellent battery life and lots of processing power. After some research, I decided on an HP Elitebook Dragon Fly G2, with an Intel 11th gen processor. The machine had most of the features I wanted, including some security enhancements that are becoming absolute necessities in this malware-infested world. And because I am on the road so much, I decided that a 5G modem to enable always connected computing would be a great feature to have, rather than having to rely on public WiFi (something that is posing increasing security risks). The cost of carrier connections have come down and are now affordable so it would not be a major cost burden to get my carrier to power my laptop connection.

“...when I went to order the machine with a 5G modem installed, I got sticker shock! HP quoted a \$400 uplift on the price of the machine to get 5G! That’s an amazing 25% uplift. The vast majority of people who are buying a new machine...won’t pay an additional 25%+ to get a 5G modem installed! ...At this cost premium, there will be very few takers, even for corporate users who are less price sensitive...”

BUT - when I went to order the machine with a 5G modem installed, I got sticker shock! HP quoted a \$400 uplift on the price of the machine to get 5G! That’s an amazing 25% uplift, especially given that most vendors of modems and RF components tell me that the additional BOM for 5G for most laptops would be on the order of \$50-\$75. And this cost was on a top-of-the-line, already expensive machine. Imagine the percentage cost uplift for a typical mid-tier corporate level laptop. No wonder there are so few of 5G enabled machines being sold (well under 5%)!

There was also an extended build/delivery time of about 12 weeks to get the customized machine, which I attributed to supply chain interruptions, so I was willing to live with that (and nurse my old machine for a few months until the new one arrived). But the high 5G cost made it unattractive for me to purchase. Heck, you can buy an entire 5G enabled smartphone for about the same price that HP charges for 5G connectivity in this laptop. If Smartphone vendors can figure out how to charge a reasonable amount, why can’t a PC vendor?

What’s apparent from this pricing is that a) HP thinks it can “milk” the availability of 5G as a major margin enhancer, and b) they don’t really want to sell 5G equipped machines if they are going to charge that much more for the device. The vast majority of people who are buying a new machine, even expensive ones like the Dragonfly, won’t pay an additional 25%+ to get a 5G modem installed!

This is a very bad sign for 5G enabled machines going forward. At this cost premium, there will be very few takers, even for corporate users who are less

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price sensitive than consumers and small business users. Something has to change if we’re going to see the expansion of 5G equipped machines that everyone predicts will happen. And all this is truly unfortunate in that we’ve done some cost modeling research to show that with a reasonable cost of a modem, a business user can pay back the additional modem and carrier connectivity costs in as little as 1-3 months of use.

Some vendor needs to step forward and change this dynamic if 5G laptops are to take hold, and perhaps to take market share as the competitive advantage of 5G connectivity emerges. Qualcomm is trying to change this equation with its Snapdragon powered Windows laptops, but being non-Intel based, it presents app compatibility problems for many enterprises, although Windows 11 does help this situation. It’s not clear what Apple will do in this space as they are rumored to release a 5G machine in the next year or so. They may decide to make it a reasonable cost uplift (say \$150-\$200) in which case for many people it will be a no-brainer. And they could stimulate the market if they do and force other PC makers to price accordingly.

But I think carriers need to take some blame here as well. While they have attempted to sell some 5G machines through their own channel, very few people and even fewer enterprises buy laptops from a carrier. And once a user does buy a machine from a traditional laptop vendor, they then need to go to a carrier to get it enabled - another step that while not all that burdensome, still adds to the complication of getting a fully functional machine. What they should be doing is building partnerships with the major laptop makers to ease the burden for users to purchase and deploy a machine, particularly as E-SIM capability makes remote enablement fairly straight forward. They should also be partnering with the major distributors (like a CDW) that can offer a completely bundled solution, which at this point I have not seen. Making things simpler and easier to deploy can’t help but expand the market.

I do think we will eventually get to reasonably priced 5G enabled laptops that are widely purchased and deployed. In fact, I expect that in 3-4 years, we’ll see 35%-50% of enterprise laptops equipped with 5G capability. But the current costs and complexity barriers need to be resolved before this will happen. So if you’re looking to buy a new laptop, and want a 5G enabled device, you may not get an attractive option to do so in the short term.



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