



# Next Unit of Computing

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We here at HYPACK are always looking for tools that will enable our customers to do their jobs effectively. This includes keeping up with some of the advances with computing technologies. One of the most recent trends is being influenced by the maker community. More specifically, affordable computer boards such as the Raspberry Pi, Beagle Bone, etc. As attractive as it may seem to run HYPACK® onboard one of these boards, the computing capacity isn't enough to handle the different sensors that our user base demands to do their work. But all hope is not lost and one of the more recent proposed solutions comes from a trusted leader in computing hardware: the Intel Next Unit of Computing (NUC).

**FIGURE 1.** Intel Next Unit of Computing (NUC)



We purchased a couple of these units here at HYPACK and are excited by some of the capabilities that this form factor extends to our software. The computing capacity about the NUCs rival some of the existing laptops that folks are currently using and can run on Windows® 7 up through Windows® 10.

We are actively engaged with others to exploit this platform where space is a premium and hope that we may one day utilize these systems onboard unmanned vehicles.

**FIGURE 2.** Current HYPACK Evaluation Systems

|                |               |           |                          |
|----------------|---------------|-----------|--------------------------|
| NUC 1: USB 3.0 | Intel Core i5 | 8 GB RAM  | 250 GB Solid State Drive |
| NUC 2: USB 3.0 | Intel Core i7 | 16 GB RAM | 250GB Solid State Drive  |

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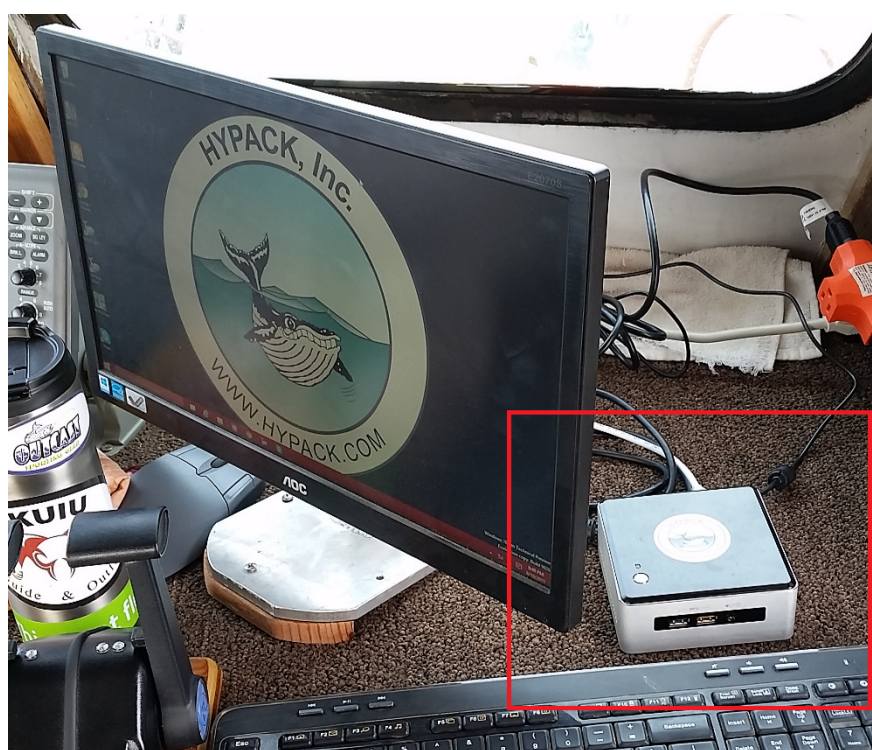
As an initial evaluation, I recently had the opportunity to try out the NUC on an actual survey and had installed Windows® 10 with HYPACK® 2015. In this configuration, we ran the unit as a network computer with a remote display of another laptop running HYSWEEP®.

After this successful trial, I went through some processing and was amazed at how comparable the speeds were to processing on my laptop running an Intel Core i7, 16GB RAM, and 250GB Solid State Drive. While I do not have hard numbers to back up my observations, anecdotally, the processing times were slower on the NUC (as expected, especially compared to a high-performance, gaming laptop); however, the NUC was faster than some of the lower-end laptops to mid-range desktops that I've encountered.

All of this being said, I did not subject the NUC to any extended, graphic-intensive testing. Given the onboard video, this is an outstanding question that we hope to answer in the near future.

**FIGURE 3.** *Testing the Intel NUC on a Survey.*

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As always, we here at HYPACK are always here to help. Give us a call if you have any questions and know that we're always looking to the future to make your jobs easier in the present.