Data transfer considerations UltraMicroscope Blaze

Unlike the UM-II, the Blaze is not compatible with hot-pluggable hard drives. Whether you have a configuration with just one computer or two, you will need to eventually move data off one of those computers. If you choose to do this with external hard drives, there are several important considerations:

1) Reduce the amount of data you transfer in the first place: crop if possible, do not acquire at higher resolution than what you need.
2) Fewer files are better: always uncheck the option to autosave each Z plane when acquiring. There is some computational overhead associated with copying a file, independent of its size. With many files this ends up slowing down the transfer.
3) Make sure you plug your hard drive into a highest-speed USB port available. These are usually at the back of the machine, and connected directly to the motherboard. The form factor is usually USB-C and they sometimes say 40 G on the port.
4) Always use SSD drives, never hard disk drives (HDDs). The latter are much slower and less reliable.
5) A roundup of possible options are here: https://huiskenlab.com/data-storage/
6) The above is merely a starting point. Any reported hard drive speed specifications are unreliable, particularly for _sustained_ transfer speeds of large datasets. While a hard drive may copy for a few seconds at 2 GB/s, many quickly drop to much lower sustained speeds (like 100 MB/s).
7) Several labs, including UNC's MSL (during a demo) and folks from Miltenyi have had good sustained speeds with Samsung T9 or SanDisk Extreme Portable drives (though the latter have also had some failures). We have seen sustained copy speeds, when plugged into the correct port, using those drives of 500 MB/s or higher. As a useful reference point, 500 MB/s means that it will take 35 minutes to transfer 1TB of data.
8) Do not buy many units of the same kind of drive before testing one unit of the model on your system, under real-world conditions.