Subject: PC SCOPE Concept
Posted by gofar99 on Wed, 01 Jun 2022 16:38:53 GMT
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I posted this on another site, but it seems suitable here as well

"Hi Everyone. I really didn't know where to put this one. I am sure a number of you use PC scopes. PICO, Velleman etc. Likely some other types that connect to PCs. It took a while to discover an issue with most. If you spike the ground you can fry the input to the PC. Since most are USB now that can be really serious...as in replace the motherboard and possibly CPU. A PITA and usually costly. I figure that is what killed my Alienware and caused me to send my new HP OMEN in for warranty service. So I found a cheap and efficient way to get around this problem. Yes not spiking the grounds would be best, but with design and testing of tube gear stuff happens. So I ordered the device below. At the time a few months back it was barely over $100US. It is a mini PC in a really small size. about 6X6X2 inches. Just add an inexpensive keyboard, mouse and monitor. It has lots of connections. Yes it is not really fast and so on, but plenty fast for the scopes. I have a LG monitor that is used for TV in my shop and it has multiple inputs and auto select. HDMI works great out of the Mini. A bluetooth mouse and keyboard and away we go. The best thing IMO is that if you fry it, the fix is cheap compared to the previous alternatives. It runs WIN10Pro and is probably just the guts of a budget tablet PC. Still just perfect for this use. it would probably be fine as a net streamer for music and video.

https://www.amazon.com/dp/B09BV9PTKP?ps ... ct_details

Good listening
Bruce"

Subject: Re: PC SCOPE Concept
Posted by Wayne Parham on Wed, 01 Jun 2022 16:57:17 GMT
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Very cool little device!

Subject: Re: PC SCOPE Concept
Posted by Madison on Sat, 25 Mar 2023 03:21:35 GMT
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An Alienware computer? Jeez, that had to hurt. They're pretty darn expensive. I usually test my gear with the oldest/cheapest stuff I have, so it doesn't hurt as bad if it all goes bust. Unfortunately, I only learned that lesson after wrecking a Mac.

So, is your setup still working well for your purposes? Have you ever tried one of those

standalone tablet versions?

Subject: Re: PC SCOPE Concept
Posted by gofar99 on Sat, 25 Mar 2023 19:43:05 GMT
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Hi, Yeah it was a bummer. However I was able to reuse the I7 CPU, video card (a high end Nvidia), the 32 gig of ram, and SSD. The mother board and power supply were toast and the case would not fit a standard board. So with a new Supermicro MB, new case and PS it is back to duty in my stereo system. Overkill for sure. My replacement main PC is a HP OMEN. I7, 32g, Nvidia, twin SSD. Hopefully it will last for a long time. For testing I use (as noted in an earlier post) a micro PC. It is a Celeron with 4gig and 128SSD. They are cheap (in the $100-150 range) and it runs WIN 10 pro just fine. I feed a monitor that does double duty as a TV in the shop and PC monitor. It will auto switch depending on which I want to use. This way my main PC is completely isolated from the test gear. If something goes wrong there most likely it will only mean a replacement of the mini (they are not really serviceable).

Subject: Re: PC SCOPE Concept
Posted by gofar99 on Sun, 26 Mar 2023 01:33:34 GMT
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Hi, I see that I didn't exactly answer the question. My test set up is working fine. The simple software scope set ups for tablets and laptops that use the audio input are not suitable for what I do as they are severely limited in band width and sensitivity. I use a Velleman PCSU1000, PCSG250 and a PICO SCOPE 2000 for testing. They feed the mini PC. Each has strong points. The 1000 is sensitive to below .2 millivolt, the 250 to 1mv but has a signal generator and ability to do real time Bode plots, the Pico has more features than the others and can do long time event recording. I use four other signal generators that can do just about anything from DC to 220 MHZ. I have more meters than I can count. My two favorites are both bench DVMs, but there are several analog ones. I also find handy a Trifield model TF2 EMF meter. It will do magnetic, electric and RF fields. Really handy for hunting down fields that are causing interference. A little tricky to use as your hand/body can influence readings. I have seen them on "ghost" hunter shows....I am really suspicious that they can sense them though. :roll: