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E8357A HDD life expectancy...

Question asked by **Dr_Bob** on Nov 26, 2013

[Latest reply](#) on Nov 27, 2013 by jvall

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Greetings Agilent VNA forum,

I am considering purchasing a used low-end VNA. I only require modest performance up to around 6GHz. I have identified a couple Agilent model in my price/performance bracket including the venerable 8753ES-006 or the E8357A PNA. I am currently drawn to the E8357A as it is a more modern instrument, has LAN connectivity etc, but I am rather nervous of the potential consequences of outright HDD failure on the PNA.

From what I can glean from trawling the Agilent site the E835XA platform used laptop 2.5" PATA disks ranging from 40-80Gb (at least with the later 1.1GHz Pentium M cpu running Win XP). I understand that there are two partitions, C: and D: on the disk and C: can be rebuilt from the D: partition. However I am more concerned about a outright disk failure - especially so since the E835XA PNA is now officially obsolete.

Assuming that the internal disk is good when I buy it, is possible to clone the disk? Assuming it's a standard PATA disk, I was hoping that I could just create a block-by-block image of the disk (e.g., using dd in Linux) and then use this image as a back-up in the event of disk failure. Assuming I can still get a compatible PATA HDD/SDD I can reimage the whole thing.

Anyone have any thoughts about this? Is it possible, or am I worrying needlessly? (to me the HDD seems the weakest point). I just don't want to find myself in a position where the instrument is effectively written-off because of a disk failure.

Many thanks in advance,

Robert.

No one else has this question

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Last modified on May 13, 2016 11:04 AM

Tags: general use

Categories: General Use

6 Replies



jvall 

Nov 26, 2013 10:26 AM

Some advice:

1. Make sure any E8357A or E8358A has a 500 MHz CPU or better. We cannot support the older 266MHz CPU.
2. It would be nice if the CPU had 500MB of RAM, but this can be dealt with separately
3. Don't worry about the hard drive too much. We still have plenty of 40GB PATA drives available, but you would have to contact us to get one. Yes it is a standard 2.5 inch drive Once you get one, you can always clone the drive in order to maintain a spare. Cloning to a bigger drive is also possible.
4. For those older units, the weakest link is not the HDD, but is instead, the power supply. While replacements are (somewhat) available, they are not cheap.
5. If you find a unit with a dead display (but it works with an external monitor), there is a 95% chance it is just a fuse.

We are here to support you if you go this route.

 **Actions**

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mirek

@ jvall on Nov 27, 2013 12:35 PM

We also have couple of the old E8358A. There are very slow (266MHz AMD K6-2). I wonder if the 266Mhz K6-2 CPU can be swapped with 500MHz?

I think that there is only 66MB of Ram. How much memory that old motherboard can handle?

The HD swapping might be the simplest and probably give good speed boost.

As a general purpose, Network Analyzer is still good so I am looking for some low cost approach.

 Actions

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jvall 

@ mirek on Nov 27, 2013 2:30 PM

Yes, the 266 can be replaced by the 500...it is a drop-in replacement.

However, you will most likely need to find memory for it. That CPU requires 512MB of memory and the SODIMM it needs is very specific. See this link for more info:

<http://na.tm.agilent.com/pna/FAQ1.html#G6> These SODIMMS can usually be found on Ebay for not too much money. You will need two 256MB modules.

Yes, the E8356A/57A/58A are all 4 receiver VNAs.

Contact me about the 266MHz CPU board...via private message...not that I check it very often. We probably have a good solution for you.

As a historical (or hysterical) note, back in 2000, I tried to convince them to add more than 64MB of memory to the 266MHz board. The person in charge stated that in some rare cases, that would exceed some caching limit and more memory could actually slow down the CPU as it fetched data from the hard drive. This seemed counter intuitive, but he was the expert in charge. So we shipped with 64MB even though 128MB would have made the user interface much faster and presented a much nicer user experience. Basically, in order to save a few milliseconds for 1% of our customers, we saddled 100% of them with a painfully slow user interface.

 Actions

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**drkirkby**

Nov 26, 2013 11:06 AM

> {quote:title=Dr_Bob wrote:}{quote}

> Greetings Agilent VNA forum,

>

> I am considering purchasing a used low-end VNA. I only require modest performance up to around 6GHz. I have identified a couple Agilent model in my price/performance bracket including the venerable 8753ES-006 or the E8357A PNA. I am currently drawn to the E8357A as it is a more modern instrument, has LAN connectivity etc

Also, I believe those PNAs are 4-receiver, so capable of TRL cal, whereas by default the 8753 series is only 3 receiver. (I don't know if a 4th receiver is optional on an 8753ES, like it is on the 8720D I own).

Given the price of used PNAs and used 8753ES, it would seem unwise to get an 8753ES to me. PNAs can be had for around \$8000 if you hassle a dealer enough, and play one against the other!

Also worth considering is a FieldFox - Agilent often have CertiPrime ones on eBay with a decent warranty for the price you will pay for a used PNA. Look for the seller "agilentused"

Here is an example. Just make sure to agree to buy the options you want when you actually buy the unit, as you will get a better deal than paying for the options later.

<http://www.ebay.co.uk/itm/190957971367>

Agilent also have a E8357A PNA on eBay.

<http://www.ebay.co.uk/itm/181269200630>

One suggesting if buying from someone other than Agilent. Agree a price, and then make the offer conditional on the seller sending it to *Agilent* for calibration, but you agree to pay the cost of the Agilent calibration. If it fails the cal, then you want your money back, but if it passes, arrange for it to be shipped from Agilent to you. That way you know the unit works well. If it has no calibration, or one from a dodgy 3rd party lab, you have no real idea if it is faulty or not. It is funny how some dealers advertise VNAs with cal certificates, but wont send them to Agilent.

I don't work for Agilent, and never have done, but personally if spending the sort of money you will

for a PNA, it is worth getting it calibrated by Agilent once at least, so you know it is good.

Dave

 Actions

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Dr_Bob

Nov 27, 2013 6:17 AM

Many thanks for the reply.

Good point - the possibility of a true TRL cal on the PNA is certainly attractive rather than the modified TRL allowed by the 3 receiver 8753.

In fact you've spotted exactly the used Agilent PNA E8357A on eBay that spawned my interest in fact. I was leaning towards the PNA but the disk made me nervous. The response from jvall is certainly very reassuring.

I'll need a cal-kit too :) I have a 85052A kit previously used with an 8510A/B system but that's a question for another thread!

Thanks again.

 Actions

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drkirkby

@ Dr_Bob on Nov 27, 2013 6:45 AM

> {quote:title=Dr_Bob wrote:}{quote}

> Many thanks for the reply.

>

> Good point - the possibility of a true TRL cal on the PNA is certainly attractive rather than the modified TRL allowed by the 3 receiver 8753.

But do check the "facts" on this. I *think* there are 4 receivers in the PNAs, and I'm fairly certain an 8753ES is 3 receiver and there does not look to be a 4-receiver option.

> In fact you've spotted exactly the used Agilent PNA E8357A on eBay that spawned my interest in fact. I was leaning towards the PNA but the disk made me nervous. The response from jvall is certainly very reassuring.

That seems quite a nice unit. There is probably a software option 010 (TDR). You might try negotiating Agilent add that, on an entirely unsupported basis - since the VNA is unsupported.

> I'll need a cal-kit too :) I have a 85052A kit previously used with an 8510A/B system but that's a question for another thread!

A quick look at the 85052A manual at

<http://cp.literature.agilent.com/litweb/pdf/85052-90011.pdf>

shows the coefficients are significantly different from any of the later kits (85052B, 85033D, 85033E), so I suspect you are going to have to define a custom kit. Anyway, stick that on another thread.

Dave

> Thanks again.

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