

TB270 (Rev6) – 452 PC Data Receive Error / Ethernet Error, CNCPC to Controller

This error is most often caused by noise. Make sure the cable connected between the MPU11 and the network adapter is shielded, a shielded CAT5 cable will have metal clips on each end. If it doesn't have metal clips on each end, it's not shielded. See [TB251 Ethernet Cable to use for Centroid systems](#)

1. Does the CAT5 cable run directly from the MPU11 to the PC? The cable running between the MPU11 and PC should be a single shielded cable that does not connect to any switches, hubs or butt connector. Any of these things can effectively defeat the shielding and introduce noise. They may also likely introduce propagation delays which will cause this error as well.

2. Does the CAT5 cable run next to any 3 phase or power cables? The Cat5 cable should never be run alongside any 3 phase or power cables. Make sure the CAT5 cable is run well away from Spindle and servo motors and any other cables with inductive loads such as coolant and lube pumps, solenoids.

3. Do all your inductive loads have Quench Arcs installed on them? Quench arcs are very important and **must** be installed across the coils of all relays, solenoids and motors. Quench arcs should be installed as close as physically possible to the load (coil) itself. See [TB206 Noise Suppression](#)

4. Are all firewalls and anti-virus are disabled/uninstalled? The second most common cause of PC Data Receive Errors are firewalls and anti-virus programs. These programs intercept and delay the real-time data exchange between the MPU11 and the PC. These delays can accumulate to the point that it triggers this fault. If you are seeing PC Data Receive Errors, please completely disable all firewalls and uninstall all anti-virus programs.

5. Are Windows Updates or any other auto updaters turned on? Windows, Adobe, anti-virus etc.. auto updaters can bring a PC to it's knees while checking for, downloading and/or installing updates are being checked for. Make sure all updaters are turned off.

6. Are there any other network devices attached to the PC? Very often, network traffic from other network devices can cause a dramatic decrease in PC and network performance. Remove all other network devices and connections to the PC, uninstall any hardware drivers or network utilities associated with network hardware not associated with the network adapter connected to the MPU11. Wireless network devices that are searching for a connection can be extremely resource intensive.

7. Does your PC hardware meet the minimum hardware specs? The minimum recommended specs of Windows 7/8/10, a CPU with a single thread benchmark of 1250 or higher, and 4GB of RAM.
[See Centroid CNC PC minimum hardware and benchmark requirements for proper CNC control operation](#)

8. Are any other applications running on the PC? The minimum hardware requirements specified above take into account running only the CNC11 software. If you are receiving PC Data Receive Errors, please terminate any other programs that may be running.

9. Check power supply connections. Verify that the connections between the power supply and MPU11/ALLIN1DC are crimped properly. It has been seen in the past that a poor crimp in those wires have caused random 452 errors.