ZimaBlade Troubleshooting.

If you bought the parts from IceWhale (directly or CrowdSupply) they should work together.

Try basic checks, Is the memory is seated correctly (See **Memory** section). Are the cables pushed firmly home. Is the power supply getting power. If that does not resolve the issues then the unit may be faulty, email support@icewhale.org.

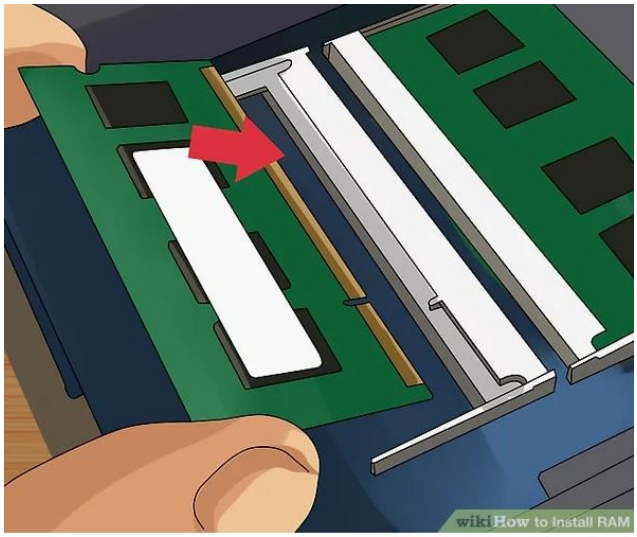
If you bought parts from other sellers please read on.

Memory

ZimaBlade DOES NOT have any onboard RAM. When you get one from the factory there is no RAM module installed, and you need to install one before you can use the device.

Its not clear but you need to unclip the black surround and unscrew two screws under the clear cover to be able to get to the SODIMM slot.

Insert the RAM by putting it in at 45 degrees to the board, pushing firmly in and then pushing flat to the board,. It will click into place, as shown in these images from WikiHow..(3 Ways to Install RAM - wikiHow)



The unit has a single SODIMM Slot, compatible with 16GB DDR3L. IceWhale shipped the Crowdfunded units with a 16GB DDR3L 1333 MT/s (PC3L-10600S) 204-Pin SODIMM Memory module.

Faster memory modules may work but note this is DDR3L - The L indicated this is a Low Voltage module. The RAM needs to be 1.35V NOT the usual 1.5V

If you experience issues, it's a good idea to remove and reseat the RAM module to make try and eliminate this as a problem.

Power

The RED LED on the ZimaBlade board, is an indication some power is getting to the ZimaBlade BUT is **NOT** an indication that the correct voltage is getting to the board.

ZimaBlade needs 12V 3A, and it uses USB C Power Deliver (PD) for power input. This can lead to some issues:

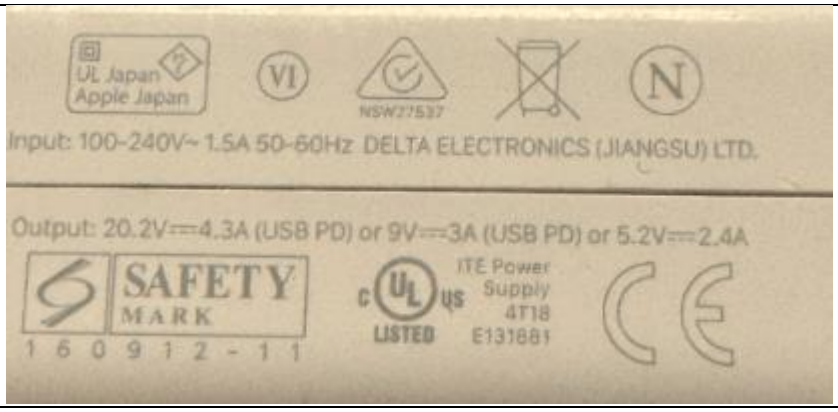
First you need to understand a little about PD power supplies. When connected the device and the PSU negotiate to determine what power the device needs and what the PSU can supply. If this negotiation fails for any reason the PSU should drop to only supplying 5V / 1A (or 500mAh in some cases) .

If the negotiation happens but the PSU cannot supply what the device asks for, the standard says they should drop back to the lowest common match, again the 5V USB standard.

Secondly despite the marketing hype its quite common that USB C chargers cannot offer all the voltages that the PD spec permits and so they may not be able to charge everything, different voltages, ampages and even the PD specification that the device is built to can mean a PSU may not work.

Any USB C Charger that is rated at LESS than 36W is unlikely to work. Read the small print on your charger to know what it can output.

If in doubt check the small print on the charger, using a phone to zoom in may help. These are two of the Authors chargers, the MacBook Charger **DOES NOT** work with the ZimaBlade, the PhuZack does. When you read the small print you can see that the Macbook PSU only offers 20.2V, 9V or 5.2V, NOT 12V that the blade needs.

MacBook Pro Charger (2018) 87W charger	

PhuZack Charger (2018) 65W Charger	

Common reasons this PD negotiation may fail:

- Not all PSU's can supply 12V /3A, some (in the images above the authors 87W Apple Macbook PSU's can supply 20V/4.3A, 9V /3A and 5.2A /2.4A but crucially does not support 12V at all.) If the PSU cannot supply 12V then negotiation will fail.
- Other PSU's may support 12V but less amps, say 12V/1.5A Again this negotiation will fail.
- It's uncommon, compared to the cheap USB A cables, but poor cables may prevent the communication and so cause negotiation to fail.

USB C adapters and docks may or may not have power pass through adapters. If the dock does not pass power out, then no power will get to the ZimaBalde. As ZimaBlade is powered over USB C then of course it will not work.

Again, as examples the author has a Dell DA300 USB-C MiniDock / adapter that has Ethernet, USBA and USB C as well as VGA/HDMI and DP out. However, it more of a dock and cannot be used to add monitor in an extended Desktop Mode is only mirrors the same video out.

This DOES NOT work with ZimaBlade as it does not have power passthrough so cannot power the ZimaBlade

The Dell DA310 (later version) is reported that it **DOES** support power pass through.

On the other hand the Authors cheaper Selore&S-Global 14 in 1 Adapter which **DOES** have power pass through, This DOES work with ZimaBlade. The author tested that he could see the ZimaBlades video out on

the HDMI and VGA output of this Dock. The author does have a DP enabled monitor but has no reason to think it will not allow DP out.

NOTE: This dock is capable of outputting three video outs to different monitors, however that does depend on the OS and setup. A ZimaBlade running the stock Debian and CasaOS does not a graphical interface on the video output by the command line Debian and so the output on all outputs (HDMI/VGA/DP) will be mirror mode.

This type of adapter may help if you cannot easily get a MiniDP to *anything* adapter.

It has also been confirmed that the IceWhale Cyberize DOES WORK as a power supply and as a pass through adapter.

NOTE: It is highly recommended that you use good quality USB C cables. Poor quality cables may have thin wiring cores, or not be fully wired, and may not perform as expected.

Display

Without a doubt one of the biggest frustrations can be the MiniDP adapters. MiniDP to **anything** adapters, especially cheap ones, can be a problem, some work, some don't, some work sometimes. Even an adapter that works on another system may not work.

Common issues are no display, or a display that shows the BIOS screen and then goes black. This is probably as the video output is not something the adapter or display can cope with or there is a driver issue or config problem (and the two symptoms may be related). As the Board boots it uses a basic video driver for the BIOS and GRUB or the Windows Boot manage (Note Grub and the Windows boot manager may be set to a delay of zero seconds which means you may not see them appear on screen). Once you go past the BIOS and the GRUB / Windows OS Choices / troubleshooting screen the controls of the video is passed from the basic driver the BIOS uses to the drivers for the dedicated card. When in the basic BIOS display mode the output is a very basic mode of 640 x 480 so it's as universally compatible as it can be, then when the drivers are called the screen setting is changed to whatever is set in the video drivers (so resolution and refresh frequency).

At that point the cable or display is just saying No and you losing the video output.

The only advice here is to buy either from IceWhale, so its known to work or buy a reputable branded cable.

If you have tried all the above please either email support@icewhale.org or post here to the ZimaBlade Discord channel.