

Application Note

Zero client cooling considerations



Background

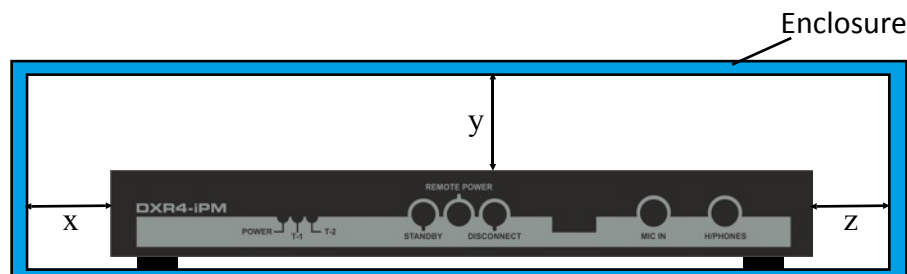
Amulet Hotkey zero clients are designed to operate efficiently, over a long period in a variety of applications. To get the best from these products it is important to ensure that they are installed correctly and properly ventilated. This application notes offers guidance on this topic however, since no two applications or environments will be identical this can only be taken as good advice or best practice. The only hard and fast rule to apply is that sufficient space should be made around the zero client case for cool air to enter the device and for hot air to escape. **Do not block the air vents. Do not install in a fully sealed enclosure.**

Note: It is a feature of these products that they will run hot. Certain components inside the zero client use the metal case as a heat sink and the unit will often feel warm or possibly hot to the touch. This is perfectly normal. In addition, it is worth noting that Amulet Hotkey quad video head zero clients (DXR4-iP / iPM) are fitted with a cooling fan whereas dual video head zero clients (DXR-iP, DXR2-iP/IPM/IPS/IPC) are passively cooled.

General guidance

We advise against stacking zero clients on top of each other. Not only does this restrict airflow around the products but it can lead to higher than usual temperatures in some units.

In tests the following advice has been found to give adequate cooling in quad head video applications and would also be appropriate for dual video head applications too:



1. If the enclosure has an aperture next to the exhaust vents (to allow the hot exhaust air to immediately exit the enclosure) X=5mm , Y=5mm , Z=5mm
2. If the enclosure has no aperture next to the exhaust vents (causing hot exhaust air to recirculate back toward the inlet vents) X=5mm , Y=25mm , Z=25mm

Assumptions: room temperature is 25°C, the enclosure is fully open front and back for cable and switch access.