

Technical Notes

BrainSphere R380 F5 GPU Output Limitation

ALTOS

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Revision History

Ver.	Date	Description
1.0	Oct 31, 2022	First release

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Limitation

With a GPU which has 4 DP ports, 1 of the DP ports cannot connect to DP connector when it is installed in some of BrainSphere R380 F5 PCIE slots.

Description

Some NVIDIA GPU (for example, NVIDIA RTX A6000) has 4 x DP output port in the rear (bracket side) of the GPU card (as in figure 1).



Figure 1. Example of GPU with 4 x DP output

When the GPU with 4 x DP port is installed in the location as figure 2 marked in red of BrainSphere R380 F5, the farthest DP port from the PCIe slot (as figure 3 marked in red) cannot connect to DP connector.



Figure 2. Rear view of BrainSphere R380 F5 PCIe slots



Figure 3. DP location which cannot connect to DP connector

When you trying to insert the DP connector to the DP port, it will conflict with the mechanical design which used to fix the riser card bracket and chassis (as figure 4).



Figure 4. DP connector conflict with BrainSphere R380 F5 chassis

In most case, the GPU in BrainSphere R380 F5 will be used for computation, not for display. Though one of the DP ports in the GPU cannot be used, there are still 3 x DPs available. We treat this as designed mechanical limitation of BrainSphere R380 F5 PCIE slot.