

DDR2 Modules Unused Pins

Revision history:

Rev 1: Document initial

3D Plus DDR2 Modules are built by x8b or x16b basic component.

For an x16b basic component, the x16 is divided into 2 bytes: the lower byte and the upper byte. For the lower byte, DM refers to LDM and DQS refers to LDQS. For the upper byte, DM refers to UDM and DQS refers to UDQS.

For an x8b basic component, there are only DM and DQS.

If only one of the bytes of the x16 needs to be used, use the lower byte for data transfers and terminate the upper byte as noted:

- Connect UDQS to ground via $1k\Omega^*$ resistor
- Connect UDQS# to VDD via $1k\Omega^*$ resistor
- Connect UDM to VDD via $1k\Omega^*$ resistor
- Connect upper byte DQ individually to either VSS or VDD via $1k\Omega^*$ resistors, or float upper byte DQ.

*If ODT is used, $1k\Omega$ resistor should be changed to 4x that of the selected ODT.

These also are applicable to x8b basic component's DQS, DQS#, DM and DQ.

In the condition that a whole x8 or x16b basic component is unused, it is recommended also to terminate the CK and CK# as below:

- CK tied to Ground via a resistor
- CK# tied to VDD via a resistor

The value of the resistors is not important