

CLAIMS

What is claimed is:

1. A method comprising:
 - receiving, by a processing device from a host system via an host-side interface of an active input/output (I/O) expander, a read command to read a target memory die of a memory sub-system;
 - identifying a page address corresponding to the target memory die;
 - decoding the read command to send to a memory stack associated with the page address corresponding to the target memory die;
 - receiving, via memory-side interface of the active I/O expander, read data from the memory stacking comprising the target memory die;
 - performing a signal conditioning operation on the read data to generate conditioned read data; and
 - sending via the host-side interface of the active I/O expander, the conditioned read data to the host system.
2. The method of claim 1, further comprising selecting the active I/O expander from a plurality of active I/O expander in response to the read command.
3. The method of claim 1, further comprising configuring a value setting associated with one or more parameters of at least one of a host-side interface and a memory-side interface of the active I/O expander to enable ONFI-compliant communications between the host system and the target memory die.
4. The method of claim 3, wherein the one or more parameters comprise at least one of drive strength parameter or on-die termination parameter.
5. The method of claim 3, further comprising initiating a calibration command to tune the one or more value settings of at least one of the host-side interface or the memory-side interface.
6. The method of claim 5, wherein the one or more value settings are tuned to match a parasitic load on the active I/O expander.

7. The method of claim 1, wherein the signal condition operation comprises at least one of a buffering operation or a retiming operation.
8. A system comprising:
a memory component;
a processing device operatively coupled to the memory component, the processing device to:
 receive, from a host system via a host-side interface of an active I/O expander, a write command identifying a target memory die;
 decode the write command to send to a memory stack associated with the target memory die;
 receive, from the host system via the host-side interface of the active I/O expander, data to be written to the target memory die;
 perform a signal conditioning operation on the write data to generate conditioned write data; and
 send the conditioned write data to the target memory die.
9. The system of claim 8, wherein the processing device is further to select the active I/O expander from a plurality of active I/O expander in response to the write command.
10. The system of claim 8, wherein the processing device is further to configure a value setting associated with at least one of drive strength or on-die termination of at least one of a host-side interface or a memory-side interface of the active I/O expander to enable ONFI-compliant communications between the host system and the target memory die.
11. The system of claim 10, wherein the processing device is further to initiate a calibration command to tune the one or more value settings of at least one of the host-side interface or the memory-side interface.
12. The system of claim 11, wherein the processing device is further to match the one or more value settings to a parasitic load on the active I/O expander.
13. The system of claim 10, wherein the signal condition operation comprises at least one of a buffering operation or a retiming operation.

14. A non-transitory computer-readable medium storing instructions that, when executed, cause a processing device to:
- receive from a host system via an host-side interface of an active input/output (I/O) expander, a read command to read a target memory die of a memory sub-system;
 - decode the read command to send to a memory stack associated with the target memory die;
 - receive, via memory-side interface of the active I/O expander, read data from the memory stacking comprising the target memory die;
 - perform a signal conditioning operation on the read data to generate conditioned read data; and
 - send via the host-side interface of the active I/O expander, the conditioned read data to the host system
15. The non-transitory computer-readable medium of claim 14, wherein the processing device is further to select the active I/O expander from a plurality of active I/O expander in response to the read command.
16. The non-transitory computer-readable medium of claim 14, wherein the processing device is further to configure a value setting associated with one or more parameters of a host-side interface and a memory-side interface of the active I/O expander to enable ONFI-compliant communications between the host system and the target memory die.
17. The non-transitory computer-readable medium of claim 16, wherein the one or more parameters comprise at least one of drive strength parameter or on-die termination parameter.
18. The non-transitory computer-readable medium of claim 17, wherein the processing device is further to initiate a calibration command to tune the one or more value settings of at least one of the host-side interface or the memory-side interface.
19. The non-transitory computer-readable medium of claim 18, wherein the one or more value settings are tuned to match a parasitic load on the active I/O expander.
20. The non-transitory computer-readable medium of claim 14, wherein the signal condition operation comprises at least one of a buffering operation or a retiming operation.