

CONTROLLER

PS5022-E22T

Features	Specifications
Host Interface	<ul style="list-style-type: none">- PCIe 4.0 x4 (Bandwidth: 16GT/s x4)- Backward compatible with existing PCIe generation transfer rates- Compliance with PCI Express Base Specification Revision 4.0- Compliance with NVMe 2.0- Host Memory Buffer (HMB) support
Processor	<ul style="list-style-type: none">- Dual-CPU architecture with built-in ARM Cortex R5- TSMC 12nm processing technology with Automotive Service Package (ASP)
Flash Controller	<ul style="list-style-type: none">- Up to 4 Channels with 16 Chip Enable (CE) counts- Flash transfer rate up to 2400MT/s- Support 3D TLC and QLC NAND flash memory- Compliant with Toggles 5.0 and ONFI 5.0- Flash I/O operating voltage supply 1.2V
Data Reliability	<ul style="list-style-type: none">- Phison 5th generation LDPC ECC & RAID ECC engine- SmartECC (RAID ECC) engine- End-To-End Data Path Protection
Security	<ul style="list-style-type: none">- AES 256- SHA 512- RSA 4096- TCG OPAL- DICE
Performance	<ul style="list-style-type: none">- Sequential read up to 7000MB/s- Sequential write up to 7000MB/s- 4K Random read up to 1000K IOPS- 4K Random write up to 1000K IOPS
Temperature Range	<ul style="list-style-type: none">- Operating range: -40~95 °C- Storage range: -40~145 °C
Package	<ul style="list-style-type: none">- 529-ball FCCSP, 12 mm x 12 mm
Peripheral	<ul style="list-style-type: none">- Built-in internal thermal sensor- GPIO pins- Built-in UART function- I3C and SPI for external ROM
Highlights	<ul style="list-style-type: none">- Designed for ASIL-B compliance- SR-IOV supported- With dual-port functionality- Can fit into the design of BGA 1620; also available in discrete (packaged) form



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