C4-ET-X44E-256.1

Centon OEM SSD Extended Commercial , TLC, PCIe 4.0 x4, NVMe 1.4, M.2-2280, 256GB

*Image may not represent actual product

General Specifications

Pin Count	67 pin (M Key)	**Default Format**	Unformatted
Form Factor	M.2 (80mm)	**Voltage**	3.3V
Unformatted Capacity	256GB	**Interface**	PCIe 4.0 x4, NVMe 1.4
Cache	N/A	**Warranty**	1 Year

Endurance/Power/Performance

Max Read Speed*	3800 MB/s	**Active Power**	3400 mW
Max Write Speed*	1700 MB/s	**Idle Power**	1500 mW
Seq. Read Speed**	3800 MB/s	**Sleep Power**	5 mW
Seq. Write Speed**	1700 MB/s	**Shock Tolerance**	1500G(0.5ms duration, half sine wave)
4k Random Read***	110000 IOPs	**Vibration Tolerance**	20G(Peak,80-2000Hz)
4k Random Write***	245000 IOPs	**MTBF**	1,500,000 Hrs
Endurance (TBW)	248	**DWPD**	0.85

NAND Specifications

NAND Manufacturer	Kioxia	**NAND Config.**	1Tbit
NAND Part Number	TA5AG95AYV	**NAND Quantity**	2
NAND Type	TLC	**NAND Package**	BGA-132
NAND Geometry	3D BICS5	**NAND Technology**	Dual Plane

**Maximum speeds are determined using ATTO Disk Benchmark*
***Maximum Sequential speeds measured using HD Tune Pro 5.75*
****Maximum I/O performance is measured using IOMeter 2010, 4K bytes Random*

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Environment

Operating Temp	Extended (0 to 85 C)	**Storage Temp**	Storage (-40 to +85 C)

Controller Specifications

Controller Mfg.	Phison	**RAID Support**	Yes
Controller PN	PS5021-E21T	**SMART Support**	Yes
Wear Level Static	Enabled	**TRIM Support**	Yes
Wear Level Dynamic	Enabled	**ECC**	LDPC Gen4 + RAID
Power Loss Protection	No	**Data Encryption**	TCG Pyrite 2.0 (AES 256-bit)

Certifications

ROHS	Yes

Scope of Work

Industrial temperature controller with Commercial temperature NAND.

Pin Out Diagram

Pin Assignment and Description

Pin No.	PCIe Pin	Description
1	GND	CONFIG_3 = GND
2	3.3V	3.3V source
3	GND	Ground
4	3.3V	3.3V source
5	PETn3	PCIe TX Differential signal defined by the PCI Express M.2 spec
6	N/C	No connect
7	PETp3	PCIe TX Differential signal defined by the PCI Express M.2 spec
8	N/C	No connect
9	GND	Ground
10	LED1#	Open drain, active low signal. These signals are used to allow the add-in card to provide status indicators via LED devices that will be provided by the system.
11	PERn3	PCIe RX Differential signal defined by the PCI Express M.2 spec
12	3.3V	3.3V source
13	PERp3	PCIe RX Differential signal defined by the PCI Express M.2 spec
14	3.3V	3.3V source
15	GND	Ground
16	3.3V	3.3V source
17	PETn2	PCIe TX Differential signal defined by the PCI Express M.2 spec
18	3.3V	3.3V source
19	PETp2	PCIe TX Differential signal defined by the PCI Express M.2 spec
20	N/C	No connect
21	GND	Ground
22	N/C	No connect
23	PERn2	PCIe RX Differential signal defined by the PCI Express M.2 spec
24	N/C	No connect
25	PERp2	PCIe RX Differential signal defined by the PCI Express M.2 spec
26	N/C	No connect
27	GND	Ground
28	N/C	No connect
29	PETn1	PCIe TX Differential signal defined by the PCI Express M.2 spec
30	N/C	No connect
31	PETp1	PCIe TX Differential signal defined by the PCI Express M.2 spec
32	N/C	No connect
33	GND	Ground
34	N/C	No connect
35	PERn1	PCIe RX Differential signal defined by the PCI Express M.2 spec
36	N/C	No connect
37	PERp1	PCIe RX Differential signal defined by the PCI Express M.2 spec
38	N/C	No connect
39	GND	Ground
40	SMB_CLK (I/O)(0/1.8V)	SMBus Clock; Open Drain with pull-up on platform
41	PETn0	PCIe TX Differential signal defined by the PCI Express M.2 spec
42	SMB_DATA (I/O)(0/1.8V)	SMBus Data; Open Drain with pull-up on platform.
43	PETp0	PCIe TX Differential signal defined by the PCI Express M.2 spec
44	ALERT#(O) (0/1.8V)	Alert notification to master; Open Drain with pull-up on platform; Active low.
45	GND	Ground
46	N/C	No connect
47	PERn0	PCIe RX Differential signal defined by the PCI Express M.2 spec
48	N/C	No connect
49	PERp0	PCIe RX Differential signal defined by the PCI Express M.2 spec
50	PERST#(I)(0/3.3V)	PE-Reset is a functional reset to the card as defined by the PCIe Mini CEM specification.
51	GND	Ground
52	CLKREQ#(I/O)(0/3.3V)	Clock Request is a reference clock request signal as defined by the PCIe Mini CEM specification; Also used by L1 PM Substates.
53	REFCLKn	PCIe Reference Clock signals (100 MHz) defined by the PCI Express M.2 spec.
54	PEWAKE#(I/O)(0/3.3V)	PCIe PME Wake. Open Drain with pull up on platform;Active Low.
55	REFCLKp	PCIe Reference Clock signals (100 MHz) defined by the PCI Express M.2 spec.
56	Reserved for MFG DATA	Manufacturing Data line. Used for SSD manufacturing only Not used in normal operation. Pins should be left N/C in platform Socket.
57	GND	Ground
58	Reserved for MFG CLOCK	Manufacturing Clock line. Used for SSD manufacturing only. Not used in normal operation. Pins should be left N/C in platform Socket.
59	Module Key M	Module Key
60	Module Key M	
61	Module Key M	
62	Module Key M	
63	Module Key M	
64	Module Key M	
65	Module Key M	
66	Module Key M	
67	N/C	No connect
68	SUSCLK(32KHz) (I)(0/3.3V)	32.768 kHz clock supply input that is provided by the platform chipset to reduce power and cost for the module.
69	N/C	PEDET (NC-PCIe)
70	3.3V	3.3V source
71	GND	Ground
72	3.3V	3.3V source
73	GND	Ground
74	3.3V	3.3V source
75	GND	Ground

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Physical Dimensions

Physical Product Dimension : 80.00mm (L) x 22.00mm (W) x 2.15mm (H)