

IBM LinuxONE Emperor 4



IBM LinuxONE Emperor 4™ at a glance						
Processor Core Capacities:						
Feature	Minimum			Maximum		
Type	Cores	IFP	SAPs	Cores	IFP	SAPs
Max39	0†	2	0	39	2	8
Max82	0†	2	0	82	2	8
Max125	0†	2	0	125	2	8
Max168	0†	2	0	168	2	8
Max200	0†	2	0	200	2	8
Channels – Maximum Adapters						
	FICON Express on iPDU §		FICON Express on BPA **		OSA-Express on iPDU or BPA ††	
Max39 – Max200	192		160		48	
Inter-LPAR Communications						
HiperSockets™	Up to 32 high-speed ‘virtual’ Local Area Networks					
SMC-D	Up to 32 ISM virtual CHPIDs					
Coupling Links						
Internal Coupling maximum	64					
Coupling Express2 LR maximum	32 adapters §§ ††					
Cryptography (60 AP Max)						
	Crypto Express8S (2-port adapters)			Crypto Express8S (1-port adapter)		
Max	30 adapters			16 adapters		
Compression Acceleration						
Compression acceleration capability now on every LinuxONE Emperor 4 processor chip						
AI Acceleration						
AI acceleration capability now on every LinuxONE Emperor 4 processor chip						
RDMA over Converged Ethernet (RoCE) – SMC-R						
	25 GbE RoCE Express2.1				16 adapters §§ †††	
Processor Memory						
Feature	Minimum		Maximum (BPA is ½ the maximum)			
Max39	512GB		10TB §§§			
Max82	512GB		20TB			
Max125	512GB		30TB			
Max168	512GB		40TB			
Max200	512GB		40TB			
Upgradeability						
Upgradeable within the IBM LinuxONE Emperor 4 family ****						
No upgrade into features Max168 or Max200						

Linux Distributions	
Red Hat®	RHEL 8.4, 9.0
SUSE	SLES 15 SP3
Ubuntu	Ubuntu 21.04
Supported Hypervisors	
z/VM®	z/VM 7.2 z/VM 7.1.
KVM	KVM hypervisor for IBM Z® which is offered with the following Linux® distributions from Canonical, Red Hat and SUSE, contact your Linux distributor for more information.

† There must be at least one CP (processor) ordered on the server.

§ FICON Express with Intelligent Power Distribution (iPDU) allows for a maximum of 12 PCIe+ I/O drawers. At Max125, this is limited to 11 PCIe+ I/O drawers. At Max39, this is limited to 6 PCIe+ I/O drawers. Each adapter has 2 ports. FICON Express16SA can be ordered new. When the Fibre Channel connection endpoints use the FICON Express 16SA adapters to the IBM DS8900F storage, authentication of the endpoints is enabled.

** FICON Express with Bulk Power Assembly (BPA) allows for a maximum of 10 PCIe+ I/O drawers. Each adapter has 2 ports. FICON Express32 can be ordered new. When the Fibre Channel connection endpoints use the FICON Express32 adapters to the IBM DS8900F storage, authentication of the endpoints is enabled.

†† OSA-Express adapters: OSA-Express7S 25 GbE SR1.2 has 1 port per adapter and can be ordered new. OSA-Express7S 25 GbE SR has one port per adapter. The OSA-Express7S 1000Base-T has 2 ports per adapter, OSA-Express7S 10 GbE has 1 port per adapter and OSA-Express7S GbE has 2 ports per adapter.

§§ Two ports per adapter

§§§ Provides the minimum physical memory required to hold purchase memory plus 256 GB HSA

**** Some restrictions may apply on upgradeability between adapters. No upgrade into the LinuxONE Emperor 4 from previous generations.

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