



Barcelona uCPE

Intel® Xeon® D-2100 Processor-Based Modular Universal CPE: Verified Intel® Select Solution for uCPE

Product Description

Silicom's Barcelona series uCPE based on the Intel® Xeon® D-2100 processor represents a collaboration with Intel to produce a fully verified Intel® Select Solution for uCPE.



The Barcelona series replaces traditional purpose-built CPE hardware with a virtualized modular approach, while pushing Network Function Virtualization (NFV) computing to the network edge. The ability to mix-and-match I/O and management options allows each Barcelona series uCPE installation to be customized to site-specific connectivity requirements, maximizing flexibility and reducing hardware cost.

Leveraging Silicom's proven line of high-performance PCIe server adapters with up to 100 Gbps Ethernet connectivity and flexible, customizable, high-bandwidth FPGA accelerator/offload solutions, the Barcelona series can address any combination of I/O connectivity requirements. With up to 16 Intel Xeon D processor cores, configurable amounts of memory, NVMe SSDs, and Intel® QuickAssist Technology (Intel® QAT) acceleration, the Barcelona series can easily handle the traffic flowing through high-performance I/O options.

Key Features

- Verified Intel® Select Solution for uCPE.
- Modular architecture consolidates multiple functions into a single box, reducing footprint, power, and complexity.
- Mix-and-match LAN, WAN, management, and compute modules allow uCPE features to be tailored to unique customer needs and site-specific connectivity requirements.
- Compliant with OCP uCPE 2.1 specifications.
- Silicom's micro-BMC (µBMC) options provide secure remote management, software/firmware update, and phone home zero touch provisioning.



Technical Specifications – Intel® Select Solution Options

Feature	“Base” Configuration	“Plus” Configuration	Notes
Processor SKU	Intel® Xeon® D-2123IT 4-core @ 2.2 GHz	Intel® Xeon® D-2177NT 14-core @ 1.9 GHz	
Intel® QuickAssist Technology (Intel® QAT)	---	High	
DDR4 Memory	32 GB	64 GB	
Storage	Intel® Solid State Drive Data Center 256 GB M.2 SATA (6 Gbps)	Intel® Solid State Drive Data Center S3110 512 GB M.2 SATA (6 Gbps)	
Management Slot	I/O passthrough	I/O passthrough	1
Network Module Slot 0	4x 1G RJ-45 (i350) 2x 10G SFP+	4x 1G RJ-45 (i350) 2x 10G SFP+	
Network Module Slot 1	4x 1G RJ-45 (i350) 2x 10G SFP+	4x 1G RJ-45 (i350) 2x 10G SFP+	
PCIe Standard Slot	---	---	
PCIe Low-Profile Slot	---	---	
Operating System	Ubuntu 16.04.3 (kernel 4.4.0-116-generic)	Ubuntu 16.04.3 (kernel 4.4.0-116-generic)	

Technical Specifications – Silicom Standard SKU Configuration Options

Feature	Midrange	Performance	Notes
Processor SKU	Intel® Xeon® D-2146NT 8-core @ 2.3 GHz	Intel® Xeon® D-2187NT 16-core @ 2.0 GHz	2
Intel® QuickAssist Technology (Intel® QAT)	Medium	High	
DDR4 Memory	32 GB	64 GB	2
Storage	128 GB M.2 NVMe (16 Gbps)	256 GB M.2 NVMe (16 Gbps)	2
Management Slot	I/O passthrough	I/O passthrough	1
Network Module Slot 0	4x 1G RJ-45 (i350) 2x 10G SFP+	4x 1G RJ-45 (i350) 2x 10G SFP+	2
Network Module Slot 1	4x 1G RJ-45 (i350) 2x 10G SFP+	4x 1G RJ-45 (i350) 2x 10G SFP+	2
PCIe Standard Slot	Configurable	Configurable	3
PCIe Low-Profile Slot	Configurable	Configurable	3
Operating System	Fedora Server x64 Linux	Fedora Server x64 Linux	2

Notes:

1. Silicom micro-BMC (µBMC) management module option coming soon (Q319).
2. Features (processor, memory, I/O, etc.) configurable and customizable at customer request. OEM-specific SKUs, preloaded OS/application images, and custom colors/branding available.
3. See Silicom’s proven line of high-performance server adapter options on the Silicom [website product page](#).

About Silicom Ltd. Connectivity Solutions

Silicom Ltd. is an industry-leading provider of high-performance networking and data infrastructure solutions. Designed primarily to improve performance and efficiency in Cloud and Data Center environments, Silicom's solutions increase throughput, decrease latency and boost the performance of servers and networking appliances, the infrastructure backbone that enables advanced Cloud architectures and leading technologies like NFV, SD-WAN and Cyber Security. Our innovative solutions for high-density networking, high-speed fabric switching, offloading and acceleration, which utilize a range of cutting-edge silicon technologies as well as FPGA-based solutions, are ideal for scaling-up and scaling-out cloud infrastructures.

Silicom products are used by major Cloud players, service providers, telcos and OEMs as components of their infrastructure offerings, including both add-on adapters in the Data Center and stand-alone virtualized/universal CPE devices at the edge.

Silicom's long-term, trusted relationships with more than 150 customers throughout the world, its more than 400 active Design Wins and more than 300 product SKUs have made Silicom a "go-to" connectivity/performance partner of choice for technology leaders around the globe.

Learn More

Silicom's Barcelona series Intel® Select Solution for uCPE

<https://www.silicom-usa.com/pr/edge-networking-solutions/cpe/barcelona-ucpe/>

Intel® Select Solutions for uCPE general information

<https://builders.intel.com/intelselectsolutions>

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