uCPE Madrid 1U
uCPE Based on Intel® Atom™ C3000

Product Description

Silicom's uCPE are based on the Intel® Atom™ C3000 (Denverton) product line is a highly flexible network edge device that brings the agility of modular LAN, WAN, management, and compute to cost-sensitive applications in SD-WAN, uCPE, security, small cell, and IoT. The Madrid platform has two form factors: Desktop and 1U. The 1U support PCIe add in card.

Use Cases:

- Fixed Wireless Access (FWA)
- Secure Access Service Edge (SASE)
- WAN Edge gateway

Technical Specifications

General Technical Specifications – Madrid uCPE 1U Specification	
CPU	Intel® Atom™ C3958/16C/2.0 GHz/TDP 31W Intel® Atom™ C3858/12C/2.0 GHz/TDP 25W Intel® Atom™ C3758/8C/2.2 GHz/TDP 25W Intel® Atom™ C3558/4C/2.2 GHz/TDP 16W Intel® Atom™ C3338/2C/1.5 GHz/TDP 8.5W
BIOS	Coreboot
BIOS Flash	SPI – Dual redundant
Operating System	Linux
Memory	Two Channels, Memory Down, SODIMM, Up to 32GB, ECC Support, 2400 MTs
Storage	Soldered down eMMC, M.2 M-Key SATA (supports for 2230/42/60/80), J13 M.2 B-Key SATA or PCIe x1G3(HSIO config) / USB2 and USB3 (support for 2230/42/60/80), J22 1xSATA for 2.5" SSD/HDD: J17 1xSATA DOM (SATA DOM supports +5V): J16
Ethernet ports	Up to 8 ports: 2 x1GbE RJ45 x via C3000 through Marvell 88E1514P, 4x 1GbE RJ45 via i350AM4 (with optionaal +2x1GbE (POE+), or 2x 1GbE RJ45 w/ i350AM2 no POE+.

	2x 1GbE Combo (UTP or SFP), 2x via C3000 through Marvell 88E1543, SFP slots support 3W each. Supports for SR-IOV
Console	RS232 RJ45 (Cisco pinout) on front panel
USB 3.0	1x USB 3.0 on front panel
mPCIe	2x mini PCIe expansion slots
PCIe Expansion	Support for x8 Gen3 Card, 25W power budget
LTE	mini-PCIe Slot. PCIe x1G3 or USB 3.0 and USB 2.0. Externally accessible SIM slot on CS/ PCB. J9 M.2 LTE Slot (B-Key). USB 3.0 USB 2.0 Externally accessible SIM sloton PS/ PCB J30
WiFi	Support for 2x mini-PCIe slots which supports simultaneous dual-band
TPM	TPM 2.0
Buttons	Reset Button (programmable through 8051 MCU) Short tap (<7 seconds) will cause platform reset. Long tap (>7 seconds) will be used for resetting to defaults. Power Button (programmable through 8051 MCU) Very short tap filter (< 2 seconds) – tap shorter than 2 second will be filtered Short tap (>2 seconds) – initiate graceful shutdown to host CPU Long tap (>13 seconds) – hard shutdown for immediate power off
LED's	Tri-color Power LED Tri-color Status LED (programmable) LED's integrated in RJ45's
Other Hardware	Battery for RTC Programmable FAN controller Watchdog
Form Factor	1U Form Factor (WxDxH) = 350x260x44mm
Power	100Vac ~ 240Vac@150W Intenal open frame Power Supply Optional: Redundency (PSU – TBD). Optional: 54V@65W External Power Adapter with locking connector for POE+ ports Optional: Dying Gasp
Cooling	Number of Fans TBD, Design supports up to 3 FANs
Sensors/Monitors	Thermal protection Critical Error Detection Voltage monitors Current protection
Operating Temperature	0°C – 40°C
Storage Temperature	-20°C – 70°C
Regulation	EC Class A FCC Class A Compliance with European directives for EMC, Low Voltage, RoHS and WEEE EMC-Compliance and test report for ETSI ES 201 468 Level2, EN55022, EN55024, EN 300

	386 Compliance and test report for IUT-K21 enhanced Safety: compliance and test report for EN 60950-1
MTBF*	TBD * According to Telcordia SR-332 Issue 2. Environmental condition – GB (Ground, Fixed, and Controlled). Ambient temperature 40°C

Order Information

P/N	Description	RMN:	RTN:	Notes
90500-0150-G03	uCPE,1U/C3758(8C)/16GB DDR4 w/ECC/ 128GB M.2/6x1GbE	IA3101	IA3101.01	w/o Dying Gasp, including power cable
90500-0150-G01	uCPE, 1U/ C3558(4C)/8GB DDR4 w/ECC/ 64GB EMMC/6x1GbE	IA3101	IA3101.02	w/o Dying Gasp, including power cable