



### uCPE Madrid Desktop

#### uCPE Based on Intel Atom® C3000 Processor (3958)

#### Product Description

Silicom's uCPE are based on the Intel Atom® C3000 Processor (3958) 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 Desktop Specification	
<b>CPU</b>	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
<b>BIOS</b>	Coreboot
<b>BIOS Flash</b>	SPI – Dual redundant
<b>Operating System</b>	Linux
<b>Memory</b>	Two Channels, Memory Down, SODIMM, Up to 32GB, ECC Support, 2400 MTs
<b>Storage</b>	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

<b>Ethernet ports</b>	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
<b>Console</b>	RS232 RJ45 (Cisco pinout) on front panel
<b>USB 3.0</b>	1x USB 3.0 on front panel
<b>mPCIe</b>	2x mini PCIe expansion slots
<b>PCIe Expansion</b>	Not supported
<b>LTE</b>	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
<b>WiFi</b>	Support for 2x mini-PCIe slots which supports simultaneous dual-band
<b>TPM</b>	TPM 2.0
<b>Buttons</b>	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
<b>LED's</b>	Tri-color Power LED Tri-color Status LED (programmable) LED's integrated in RJ45's
<b>Other Hardware</b>	Battery for RTC Programmable FAN controller Watchdog
<b>Form Factor</b>	Desktop Form Factor, (WxDxH) = 222x241x44mm Rack Mount option Wall Mount option OEM branding option
<b>Power</b>	12V@90W External Power Adapter with locking connector. Optional addition 12V@90W External Power Adapter with locking connector for redundancy. Optional: 54V@65W External Power Adapter with locking connector for POE+ ports Optional: Dying Gasp
<b>Cooling</b>	Number of Fans TBD, Design supports 2 FAN
<b>Sensors/Monitors</b>	Thermal protection Critical Error Detection Voltage monitors Current protection
<b>Operating Temperature</b>	0°C – 40°C

Storage Temperature	-20°C – 70°C
Regulation	<p><b>EMC:</b></p> <ul style="list-style-type: none"> <li>• FCC 47CFR part 15: 2019, subpart B, Class B ICES-003: 2017 Issue 6, Class B</li> <li>• VCCI-CISPR 32: 2016, Class B</li> <li>• AS/NZS CISPR 32: 2015, Class B</li> <li>• EN 55032: 2015 + A1(20) + A11(20), Class B</li> <li>• CISPR 32: 2015 + A1(19), Class B</li> <li>• EN 301 489-52: V1.1.0: 2016 (draft), Class B</li> <li>• EN 301 489-17: V3.2.2: 2019 (draft), Class B</li> <li>• EN 301 489-1: V2.2.3: 2019, Class B</li> <li>• EN 55035: 2017 + A11(20)</li> <li>• CISPR 35: 2016</li> <li>• EN 300 386 V2.1.1: 2016, Class B</li> <li>• EN 300 386 V1.6.1: 2012, Class B</li> </ul> <p><b>Safety:</b></p> <ul style="list-style-type: none"> <li>• IEC 62368-1:2014 (Second Edition)</li> <li>• IEC 60950-1:2005 (Second Edition) + A1:2009 + A2:2013</li> <li>• CSA C22.2 NO. 62368-1-14, 2nd Ed., Issue Date: 2014-12-01</li> <li>• UL 62368-1, 2nd Ed., Issue Date: 2014-12-01</li> </ul> <p><b>Carriers (LTE – Sierra EM7455):</b></p> <ul style="list-style-type: none"> <li>• PTCRB</li> <li>• Verizon Wireless</li> <li>• AT&amp;T</li> </ul> <p><b>GMA (Global Market Access):</b></p> <ul style="list-style-type: none"> <li>• CCC (China)</li> <li>• BIS (India)</li> <li>• MIC (Vietnam) – only 90500-0151-G61</li> <li>• NBTC (Thailand) – only 90500-0151-G61</li> <li>• RCM (Australia)</li> <li>• PSE (Japan)</li> <li>• Anatel (Brazil)</li> <li>• El Salvador</li> <li>• KC (S.Korea)</li> <li>• JATE&amp;TELEC (Japan)</li> <li>• NICE (Mexico)</li> </ul> <p>RoHS Directive 2011/65/EU and 2015/863</p> <p>EN 50581:2012</p>
MTBF*	<p>TBD</p> <p>* According to Telcordia SR-332 Issue 2. Environmental condition – GB (Ground, Fixed, and Controlled). Ambient temperature 40°C</p>

## Order Information

P/N	Description	RMN:	RTN:	Notes
<b>90500-0151-G03</b>	uCPE, Desktop/C3758(8C)/16GB DDR4 w/ECC/ 128GB M.2/6x1GbE	IA3001	IA3001.01	w/o Dying Gasp, including +12V Power supply
<b>90500-0151-G01</b>	uCPE, Desktop/ C3558(4C)/8GB DDR4 w/ECC/ 64GB EMMC/6x1GbE	IA3001	IA3001.02	w/o Dying Gasp, including +12V Power supply
<b>90500-0151-G04</b>	uCPE, Desktop/C3338(2C)/4GB DDR4 w/ECC/ 32GB EMMC / 6x1GbE	IA3001	IA3001.03	w/o Dying Gasp, including +12V Power supply
<b>90500-0151-G14</b>	uCPE, Desktop/C3338(2C)/ 4GB DDR4 w/ECC/32GB M.2 /8x1Gb (2- POE ports)	IA3001	IA3001.04	w/o Dying Gasp, including +12V Power supply, including +54V Power supply