

# CAMRRI Mesh Access Point

## Dual – Band 802.11n Wi-Fi Outdoor Mesh AP

Delivery of multimedia content over wireless networks became a significant challenge in modern IP networks. User's mobility, diversity of fielded devices and ever increasing demand for high quality multimedia create a need for context driven media delivery. To that end LCI has developed a novel method for creation of a contextually aware network overlay to manage available resources across plurality of participating nodes/networks. The network overlay consists of intelligent access points, contextual information repository and autonomic management algorithms and instantiates a wireless Content Delivery Network (wCDN) capable of handling high temporal and spatial variations in the multimedia traffic. Goal of the wCDN overlay is to provide the highest level of resource utilization, which increases useful capacity of the underlying wireless system, and also to ensure required level of quality of service to the end users.

CAMRRI map is a member of CAMRRI AP family of professional/industrial grade access points with intelligent agents for context gathering and autonomic reconfiguration. CAMRRI AP family provides superior Wi-Fi infrastructure for broadband solutions and it is one of the main building blocks of wCDN solution.

## APPLICATIONS & BENEFITS:

CAMRRI map covers wide range of applications including industrial and warehouse operations, municipal and operator access, smart grid applications, video surveillance applications, extended hotspot for public access, education and healthcare campus facilities. It is equipped with three 802.11n based radios which provide leading performance and high efficiency in internet based services and locally constrained services. CAMRRI map is optimized for delivering of high quality video and voice over IP (802.11e/WMM). It is provided with high-quality QoS software which implements optimization of delay-sensitive applications, as well as traffic prioritization per application, service and protocol prioritization.

Additionally, CAMRRI map is designed to be a perfect solution for large warehouses, factories and other enterprises looking for reliable broadband access in extreme environmental conditions (-40 to 70°C, up to 95% maximum relative humidity, IP65 rated).



## Specifications for CAMRRI map

PHYSICAL CHARACTERISTICS	
<b>POWER</b>	➤ Power over Ethernet, 8-48V DC
<b>PHYSICAL SIZE</b>	➤ 8.4 x 7.0 x 2.2 in 21.3 x 17.8 x 5.6 cm
<b>WEIGHT</b>	➤ 1.3 kg
<b>ANTENNA GAIN</b>	➤ 3 x Outdoor Dual-Band Omnidirectional Antennas AirLive WAE-5AG 4.5 dBi (2.4GHz), 7dBi (5 GHz)
<b>ETHERNET PORTS</b>	➤ 2 x GbE ports, auto MDI/MDIX, full-duplex, support for auto negotiation, 10BASE-T , 100BASE-TX or 1000BASE-T
<b>ENVIROMENTAL CONDITIONS</b>	➤ Die-Cast Aluminum enclosure, IP65 rated ➤ Operating temperature: -40 to 70°C (-40 to 158°F) Storage temperature: -40 to 85°C (-40 to 185°F) Humidity: 95% maximum relative humidity, non-condensing Survival wind speed: 216 km/hr (134.2MPH)
<b>MOUNTING</b>	➤ Supports masts up to 3in (7.62cm) Wall mount (bracket not included)
<b>POWER CONSUMPTION</b>	➤ 26W
MANAGEMENT CONFIGURATION	
<b>MONITORING</b>	➤ Web User Interface (HTTP/S) CLI (Telnet/SSH)
<b>SOFTWARE UPDATES</b>	➤ SNMP v1, 2, 3 ➤ Update over Web User Interface
QUALITY OF SERVICE AND MULTIMEDIA	
<b>802.11e/WMM</b>	➤ Supported
<b>TRAFFIC PRIORITIZATION</b>	➤ Per protocol, per application
<b>RATE LIMITING</b>	➤ Per-user, per-WLAN
<b>VIDEO TRAFFIC THROUGHPUT</b>	➤ Minimum of 33.7 Mbps @ 99.5% of time (40MHz)

Wi-Fi	
<b>STANDARDS</b>	➤ IEEE 802.11a/b/g/n
<b>SUPPROTED DATA RATES</b>	➤ 802.11n 20MHz: 1Nss: 65Mbps @ 800GI, 72.2Mbps @ 400GI (Max.) 802.11n 40MHz: 1Nss: 135Mbps @ 800GI, 150Mbps @ 400GI (Max.) 802.11a: 54, 48, 36, 24, 18, 12, 9 and 6 Mbps 802.11b: 11, 5.5, 2 and 1 Mbps 802.11g:54, 48, 36, 24, 18, 12, 9 and 6 Mbps
<b>NUMBER OF RADIOS</b>	➤ 1 x 802.11n based access radio; 2 x 802.11n based backhaul radios
<b>RADIO CHAINS</b>	➤ 2x2
<b>SPATIAL STREAMS</b>	➤ 1
<b>RF POWER OUTPUT</b>	➤ 25 dBm / 316 mW
<b>CHANNEL WIDTH</b>	➤ 20 MHz and/or 40 MHz
<b>FREQUENCY BAND</b>	➤ 2.192-2.539 GHz ➤ 4.920-6.100 GHz
<b>OPERATING CHANNELS</b>	➤ 2.4 GHz channels: 1 – 14 5 GHz channels: 36 , 40, 44, 48, 52, 56,60,64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165
<b>WIRELESS SECURITY</b>	➤ WEP, WPA and WPA2 (PSK, Enterprise), TKIP, CCMP, AES Authentication via 802.1x, support for RADIUS
<b>COMPLIANCE</b>	➤ FCC and CE compliant ➤ Radio: ETSI EN 300 328 V1.7.1 (2006-10) ETSI EN 301 893 V1.5.1 (2008-12) EMC: ETSI EN 301 489-1 V1.8.1 (2008-04) ETSI EN 301 489-17 V1.3.2 (2008-04) IEC61000-4-2-ESD IEC61000-4-4-EFT Safety: IEC 60950-1:2006+A11:2009