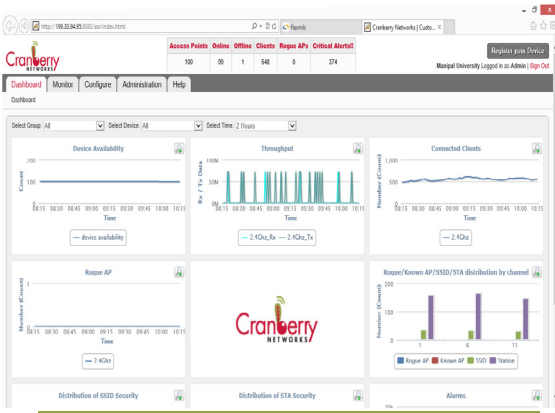


Cloudberry Cloud Controller Wi-Fi Management System

Wi-Fi over the Cloud without the hardware



- ✓ **Maximum Performance and Highly Scalable Architecture**
- ✓ **Licensing Flexibility and Investment Protection**
- ✓ **Centralized Management**
- ✓ **Captive Portal**
- ✓ **Heat Maps**

Overview

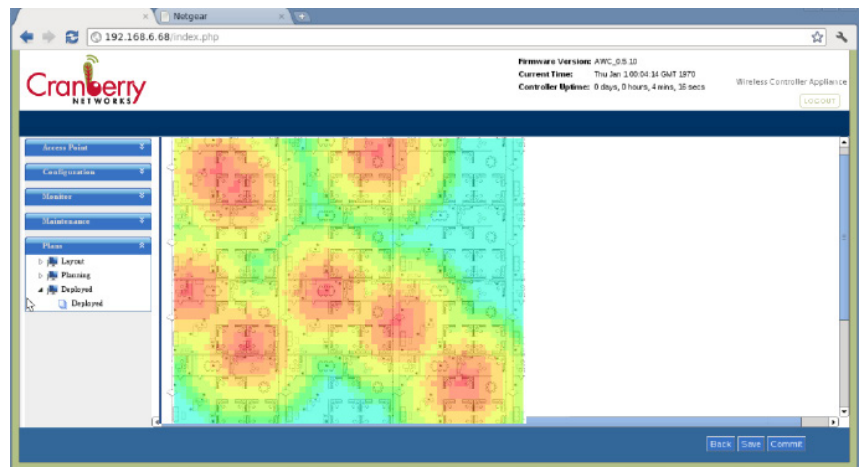
The Cloudberry-5000 Cloud Controller is a reliable, maximum performance, highly secure and scalable wireless management system designed to meet the requirements of small, medium-sized business, hospitals, and campus environments. Unlike most Controllers, Cloudberry-5000 is a cloud-based agent application.

Designed for 802.11n performance and maximum scalability, the Cloudberry Series offers enhanced uptime with RF visibility and protection and with the ability to simultaneously manage access point and 1500 clients.

The Cloudberry-5000 Controller allows you to manage your wireless network from a central point, implement security features centrally, and support layer 2 and layer 3 fast roaming within your network. It provides support for latency-sensitive applications such as video, audio and voice over wireless.

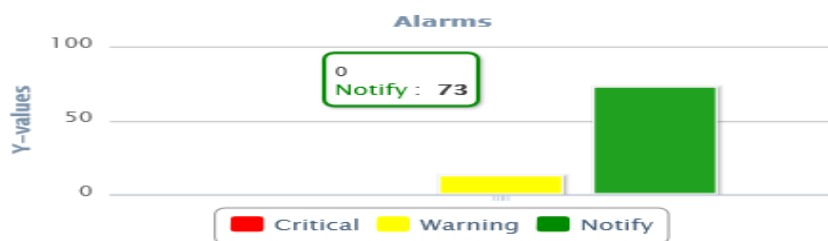
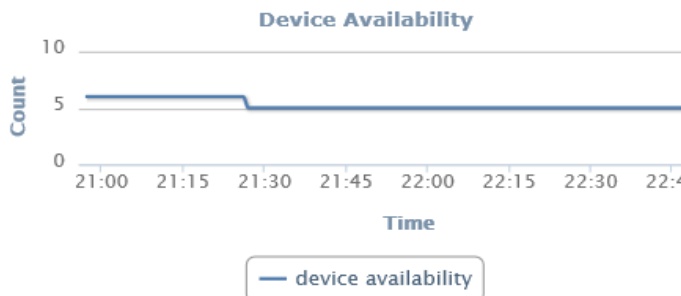
The Cloudberry Cloud Controller Wireless Controller supports rapid mobility across VLANs and subnets including 802.11i pre-authentication and fast roaming support (FRS). Wi-Fi Multimedia (WMM) advanced prioritization

[Heat Map](#)



Key Features and Standards

Maximum Performance and Highly Scalable Architecture	<ul style="list-style-type: none"> • Agent-based Controller Less Management • AP limits are based on network throughput and storage space
Licensing Flexibility and Investment Protection	<ul style="list-style-type: none"> • Licensing is based on number of agents running on your network • Enterprise License includes an unlimited licensing to run agents
Centralized Management	<ul style="list-style-type: none"> • Deployed as an overlay on the existing wired network infrastructure, the Cloudberry Cloud Controller simplifies the network management by providing a single point of management for the entire wireless network. Easy to set up, Cloudberry Controller discovers all supported access points in the network, even across VLANs and subnets. Once identified, the access points are provisioned to dependent access points in minutes. Building floor plans can be used to visualize live coverage and heat maps of the wireless network
Enterprise Billing Service	<ul style="list-style-type: none"> • Chargeback customer base for user and management of Wi-Fi Access Points
Heat Maps	<ul style="list-style-type: none"> • Access Point heat maps by wireless band, wireless channel and signal strength allows real-time view of the wireless network status. IT Administrators can easily locate known APs, rogue APs, and associated clients on the heat map directly from the monitoring page
Reduce OPEX	<ul style="list-style-type: none"> • Integrated management, security, and QoS features reduce operating cost and ensure a consistent user experience regardless of location
Operational Efficiency	<ul style="list-style-type: none"> • Makes a single point of management for the entire wireless network • Visualization of live coverage and heat maps for the wireless network • Push-Based firmware upgrade to all managed access points • Group Device Management • GUI for Geographic Topology Management with drill down views to floor plans
Support and Services	<ul style="list-style-type: none"> • Our worldwide support and services team take care of after sales requirements – installation and commissioning and maintenance and training to clients • Cranberry addresses global client technical requirements through regional partners
Tailored made services	<ul style="list-style-type: none"> • Cranberry provides comprehensive service offerings that range from professional services to design, deploy and optimize customer networks, customized technical training, to service and support tailored to individual customer needs
Software Licensing Flexibility	<ul style="list-style-type: none"> • The Cloudberry Controller licensing offers flexibility to add up unlimited licensing points as business needs grow. The licensing structure supports a variety of business mobility needs as part of the basic feature set which allows access points to dynamically establish wireless connections in locations where it may be difficult or impossible to physically connect to the wired network. I



SYSTEM SPECIFICATIONS	
Wireless	<ul style="list-style-type: none"> IEEE 802.11a, 802.11b, 802.11g, 802.11d, WMM/802.11e, 802.11h, 802.11n
Supported AP Models	<ul style="list-style-type: none"> CN-AP1001 (single band) CN-AP1002 (dual band) CN-AP1003 (single band) CN-AP1004 (dual band-outdoor) CN-AP1005 (Cranberry RED Indoor)
Supported Modes	<ul style="list-style-type: none"> A/B/G/N
Maximum AP Supported per Controller	<ul style="list-style-type: none"> Agent based Management Unlimited, based on network storage
Maximum Controllers (Stacked together)	<ul style="list-style-type: none"> Unlimited Agents No Hardware Controllers Required
Maximum AP Supported	<ul style="list-style-type: none"> Based on Network
Maximum Clients per AP	<ul style="list-style-type: none"> CN-AP1001 – up to 32 clients CN-AP1002 – Up to 60 clients CN-AP1003 – Up to 128 clients CN-AP1004 – Up to 60 clients CN-AP1005 – Up to 32 clients
Maximum Security Profiles (SSID) per Profile Group	<ul style="list-style-type: none"> 8 per radio (2.4GHz; 5GHz) 16 with CN-AP1002
Maximum VLANs per Client	<ul style="list-style-type: none"> 64 VLANs for SSIDs 1 configurable management VLAN
Maximum Security Profiles (SSID) per Controller	<ul style="list-style-type: none"> 128
Maximum Floor plans	<ul style="list-style-type: none"> Customizable Floor Planning Additional floor plans possible with Cloud Based storage (server)
Maximum Security Profiles per Network	<ul style="list-style-type: none"> 512
Maximum Rogue APs Detectable	<ul style="list-style-type: none"> 512

RF PLANNING MONITORING & REPORTING	
Integrated Deployment Planning	<ul style="list-style-type: none"> Hierarchical view of the network: Floor maps upload and floor maps dimensions input Seamless planning algorithm: Customize your AP's required to cover a floor plan Cloud Based Historical Reporting
RF Monitoring and Alert System	<ul style="list-style-type: none"> Coverage computing per floor plan Alert Notification System informing IT via email and sms alerts Rogue AP Customizable Alerts (Enhancement)
AGENT MANAGEMENT	
Group Configuration	<ul style="list-style-type: none"> Custom Logins for multiple groups Multiple AP Timezone Management Pre-defined configuration settings under specific groups Scheduled services for upgrades can be added to same group Automatic mode available in case of high level of interference
Device Configuration	<ul style="list-style-type: none"> Single Dashboard Device Summary Upgrade Firmware through Agent Agent based Edit/Delete options
Captive Portal	<ul style="list-style-type: none"> Security Authentication Page Supports pre-configured user id/ password for client authentication Self healing: Automatic neighboring AP power increase to fill in for coverage losses Open guest authentication Enterprise Billing System

QUALITY OF SERVICE	
WMM Quality of Service	<ul style="list-style-type: none"> WMM (802.11e) prioritizes traffic for both upstream traffic from the stations to the access points (station EDCA parameters) and downstream traffic from the access points to the client stations (AP EDCA parameters)
WMM Queues in Decreasing Order of Priority	<ul style="list-style-type: none"> Voice: The highest priority queue with minimum delay, which makes it ideal for applications like VoIP and streaming media Video: The second highest priority queue with low delay is given to this queue. Video applications are routed to this queue Best effort: The medium priority queue with medium delay is given to this queue. Most standard IP application will use this queue Background: Low priority queue with high throughput. Applications, such as FTP, which are not time-sensitive but require high throughput can use this queue
WMM Power Save Option	<ul style="list-style-type: none"> WMM power save helps conserve battery power in small devices such as phones, laptops, PDAs, and audio players using IEEE® 802.11e mechanisms
Rate Limiting	<ul style="list-style-type: none"> Rate limit per SSID set as a percentage of total available bandwidth
WIRELESS SECURITY	
Client Authentication Protocols	<ul style="list-style-type: none"> Open, WEP, WPA/WPA2-PSK 802.11i/WPA/WPA2 Enterprise with standard interface to external AAA/RADIUS Server Local ACLs (512 MAC) MAC ACLs based on local AAA Server or external RADIUS Server
Distinct AAA Server per SSID	<ul style="list-style-type: none"> Yes
RADIUS Accounting Protocol	<ul style="list-style-type: none"> Per Client tracking for: Bytes, Tx/Rx Connect/disconnect time
LDAP-based Authentication	<ul style="list-style-type: none"> Standard interface to external LDAP server/Microsoft Active Directory Server
Integrated AAA Server	<ul style="list-style-type: none"> Local database authentication based on WC7520 internal AAA Server
Captive Portal	<ul style="list-style-type: none"> Configurable portal page, including image files

WIRELESS SECURITY - CONTINUED	
Guest Access	<ul style="list-style-type: none"> Integrated captive portal available for client authentication in a security profile Password based authentication mode: Local user store available, receptionist assigned user name/password External Radius server mode: External RADIUS authentication for the captive portal clients Open authentication mode: Guest auto registration with email address Extraction of logs of guest activity
Rogue Access Points	<ul style="list-style-type: none"> Rogue AP definition: AP with radio SSID observed by any of the managed APs and seen transmitting on same L2 wired network
WIRELESS NETWORK MONITORING	
Monitoring Summary	<ul style="list-style-type: none"> Access Points Monitored on Cloud Google-Map Based Topology Mini-Dashboard (Graphical View)
Managed Access Points	<ul style="list-style-type: none"> AP status for the managed access points and details that includes configuration settings, current wireless settings, current clients and detailed traffic statistics
Rogue Access Points	<p>Rogue access points reported:</p> <ul style="list-style-type: none"> Rogue access points in same channel Manages interfering channels
Wireless Clients	<ul style="list-style-type: none"> Clients statistics and details per AP, per SSID, per floor, per location Blacklisted clients, roaming clients
Wireless Network Usage	<ul style="list-style-type: none"> Network usage statistics display plots of average received/transmitted network traffic per managed access point. Three different plots show Ethernet, Wireless 802.11 b/bg/ng and 802.11 a/na mode traffic separately
Heat Maps	<ul style="list-style-type: none"> Live coverage and visualization heat maps Location visualization and device tracking
Alarms Views	<ul style="list-style-type: none"> Good, Warning and Critical Systems

Ordering Information

Part No.	Description
CN-WC5000	Cloudberry Cloud Controller
Contact	sales@cranberrynetworks.com

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