



Benefits of Cisco Compatible Extensions (CCX) Certification for the Modero[®] MVP-9000i Touch Panel



TABLE OF CONTENTS

Introduction	3
Benefits for the Modero MVP-9000i Touch Panel	3
Security	3
Mobility	4
Performance	4
Quality of Service (QoS)	5
Management	5
Configuring the MVP-9000i	6
Conclusion	6

INTRODUCTION

The recent proliferation of wireless devices into corporate and government infrastructures has introduced many challenges in the realms of interoperability, reliability, and secure data access. With so many products and network options available to IT administrators, standards and certifications are essential in making sure network products work together efficiently.

Launched in 2002, the Cisco Compatible Extensions (CCX) program is a license free technology initiative open to all manufacturers of WLAN equipment. The goals of the program are as follows:

- Accelerate WLAN technology adoption while working with standards bodies
- Enhance end to end security
- Enhance IT administration and end user experience in a mobile networking environment
- Enhance mobility services for business applications

CCX is the driving force behind advanced enterprise-grade WLAN technologies. More than 70% of the technologies developed within the CCX program receive standards certification.

BENEFITS FOR THE MODERO MVP-9000I TOUCH PANEL

As a CCX-certified WLAN appliance, the MVP-9000i has been optimized to work with a Cisco wireless LAN infrastructure and supports the latest WLAN standards and Cisco innovations. Achieving CCX certification is not easy. Cisco has stringent testing, security and interoperability requirements before a device can acquire certification. CCX certification offers customers peace of mind and first-to-market system features in a broad range of areas, including security, mobility, performance, Quality of Service (QoS), and management. Each of these areas is covered in detail below.

SECURITY

For financial institutions and organizations charged with protecting sensitive information, security concerns are a critical issue surrounding wireless installations.

The MVP-9000i supports the following CCX security enhancements:

- Wireless Intrusion Detection System
 - The MVP-9000i can simultaneously monitor RF beacons, probe attempts and other RF activity while continuing to service WLAN clients.
- Network Admission Control (NAC)
 - NAC restricts access to the network based on identity of security posture. When the MVP-9000i is configured for NAC, it can force user or machine authentication prior to granting

access to the network. In addition, guest access can be granted to a quarantine area for remediation of any problems that may have caused authentication failure.

- Fast Re-authentication
 - In a roaming environment, fast re-authentication expedites WPA key handshake to reduce roaming times to 125 milliseconds or less. In contrast, solutions without fast re-authentication might attempt to reduce roaming latency by shortening key lengths which decreases security or by deploying more overlapping network equipment thus increasing the cost of the wireless infrastructure.
- Management Frame Protection (MFP)
 - MFP adds a message integrity check to each management frame transmitted. Any attempt to copy, alter or replay the frame invalidates the packet. An access point receiving an invalid messaging frame packet will report the discrepancy to the network management system.

MOBILITY

New mobility enhancements feature location based services and better roaming support:

- L2 Roaming Enhancements
 - Dynamic updates of Access Point (AP) roaming information to improve network edge performance
- AP-assisted Roaming
 - The Station (STA) receives information from AP to make intelligent roaming decisions
- SSID List and BSSID Support
 - Enhances STA roaming performance
- Location Based Services
 - STA location reporting to enable location-specific services

PERFORMANCE

By improving the performance of the wireless network, broader coverage can be obtained with less equipment. Another aspect of performance is power management, which greatly reduces the power consumption of the network infrastructure. The MVP-9000i supports the following performance enhancing CCX features:

- Radio Measurement Requests
 - STA submits radio signal/bandwidth data to AP to optimize network reliability
- Single Sign-on Support
 - Support for a single sign-on to a Windows network

- U-APSD
 - Support for STA power save when using WME
- Keep Alive Support
 - Allows an STA to stay associated to the AP after a period of inactivity, if desired
- Link Test Support
 - Tests the quality of the wireless link
- Diagnostic channel
 - Support for a separate channel for diagnostic support

QUALITY OF SERVICE (QoS)

QoS allows the network to prioritize network traffic when needed. For example, a call placed to an emergency response network could be given higher priority over normal voice data traffic. The MVP-9000i supports the following QoS enhancements:

- Call Admission Control
 - Helps to maintain VoIP call quality during network congestion
- Expedited Bandwidth Request
 - Provides priority for VoIP or emergency wireless traffic

MANAGEMENT

Enhanced management allows IT administrators to better monitor and control Enterprise network topologies from a central location:

- Voice and Traffic Stream Metrics
 - Detect and correct packet latency and packet loss problems in the wireless network
- Client Reporting
 - STA provides detailed hardware, capability and network statistics information to the AP
- Roaming and Real-Time Diagnostics
 - STA provides diagnostic information to AP to fix performance or connection problems
- Status and Result Code Support
 - Specific AP requests that are performed by the STA to address network security or performance

CONFIGURING THE MVP-9000I

Details on how to configure the CCX parameters for the MVP-9000i are available in the MVP-9000i Operation/Reference guide on www.amx.com.

CONCLUSION

Having the Cisco Compatibility Extensions certification ensures the MVP-9000i has widespread interoperability with Cisco WLAN infrastructures and is able to take advantage of Cisco innovations for enhanced security, mobility, quality of service, and network management. For more information on the MVP-9000i, contact your dealer or visit the AMX website at www.amx.com.