

Ensuring communication among first responders, especially during a crisis situation, is a major challenge for public safety agencies. Interoperability is critical for success. The Cisco® Emergency Communications Unit 2 (ECU2) is a mobile communications trailer that is designed to establish interoperable communications in emergency situations. The ECU2 is supported by Cisco Tactical Operations, a highly skilled and dedicated team that can mobilize and respond to natural disasters and other catastrophes when normal communication infrastructure has been degraded or destroyed.

Rapidly Deployable Field Mobile Communications

The Cisco ECU2 is a command and communications resource for first responders, critical infrastructure, and other organizations that have been affected by a catastrophic event and require mission-critical networking to recover normal operations.

The Cisco ECU2, along with its NIMS certified team, helps organizations by:

- Operating seamlessly with police, fire, emergency medical services, National Guard, and other responders within an incident command system or unified command structure.
- Receiving 24-hour, proactive intelligence and logistical support from the Cisco Security Facilities Operations Centers (SFOC).

The Cisco vehicles and Tactical Operations team have been deployed in support of a variety of incidents, including hurricanes, tornadoes, floods, earthquakes, wildfires and man-made disasters.

Deploy and Redeploy with Confidence

In a crisis situation it is imperative that field communications be highly mobile and rapidly deployable. Once on scene, the Cisco ECU2 can:

- Be fully operational within 15 minutes
- Be shut down within 15 minutes in order to redeploy to another location
- Power its systems using its own portable generator, or a shore power connection to an external power source

Enable Communications via IP-Based Network

The Cisco ECU2 uses an IP-based network foundation because large-scale disasters require a range of interoperable communications beyond traditional push-to-talk (PTT) radio. IP-based communications ensure that the team can:

- Engage and employ all resources on scene, regardless of where those resources geographically reside
- Interoperate with existing communications systems while providing a path to emerging network-centric communications systems

Fault-Tolerant Redundant Internet Uplink

The Cisco ECU2 has multiple options for Internet connectivity, including satellite, cellular, and landline. It can be configured to failover from one connectivity source to another, providing a high level of fault tolerance and the most efficient use of bandwidth.

The 1.8 meter satellite dish provides high throughput satellite (HTS) bandwidth for voice, video, and data applications that require access to the Internet or other remote networks. It delivers these advantages:

- Auto-acquire capability of the control unit which eliminates the need for the vehicle crew to manually point the dish to the correct azimuth and elevation
- Quickly bring up the satellite link (~5 min) if there is a clear line of sight to the satellite.



Figure 1: Emergency Communications Vehicle 2

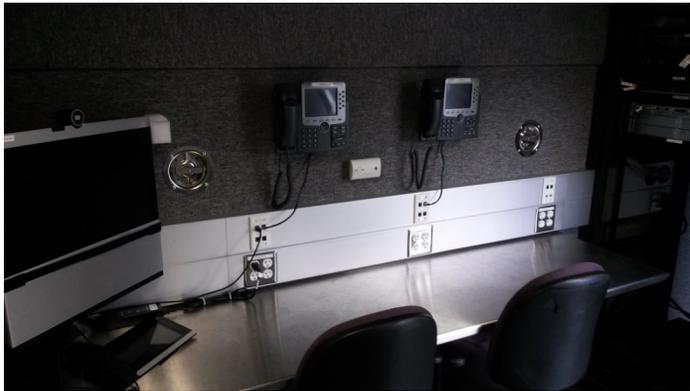


Figure 2: Seating area of the ECU2



Figure 3: Inside view of the ECU2

Wired and Wireless Network Infrastructure

The core network of the Cisco ECU2 consists of Cisco Integrated Services Routers, which provide highly secure virtual private network (VPN) tunneling services to back-end resources, firewall, and telephony services using Cisco Unified Communications Manager Express, and controllers for the wireless network infrastructure. Wireless network services are provided by Cisco Wireless Access Points in the interior of the vehicle and can be extended with extra APs outside of the vehicle.

Voice over IP

The Cisco ECU2 provides a full suite of telephony services through the Cisco Unified Communications Manager Express software, which enables voice communications over wired and wireless Cisco Unified IP Phones.

High-Definition Video Conferencing

The Cisco ECU2 is equipped with a Cisco TelePresence endpoint. The Cisco TelePresence solution enables leaders and remote personnel to quickly and easily have high-definition, high-security video conferencing and collaboration.

Radio and Voice Interoperability

Responders often struggle with different frequency bands and proprietary radio protocols. Cisco Instant Connect uses the Land Mobile Radio (LMR) feature set in Cisco IOS software and the numerous radio systems on the Cisco ECU2 to enable radio interoperability across all existing radio technologies.

Why Cisco?

- Cisco is a leader in providing the intelligent, secure, resilient network infrastructure with mobility that is the platform for this solution.
- Cisco is a leader in unified communications, which is core to the solution and uses the network as the platform.
- Cisco has a proven record in introducing technologies in the safety and security market that easily integrate with Cisco network architecture.
- Cisco collaborates with safety and security technology partners to meet your requirements for a converged network solution.

Learn More

The Cisco ECU2 is available for emergency response throughout the continental United States during the acute phase of an emergency. To engage the Cisco ECU2, or any of the other services provided by Cisco Tactical Operations, please contact your Cisco account team.

For more information about the Cisco Tactical Operations team, please visit our website <http://www.cisco.com/go/tacops>, or send email to tacops-info@cisco.com.



Figure 4: Rack view of the ECU2