



TECHNICAL BRIEF

pCom® 300 Radio Interoperability Trailer for University Public Safety

Market: University Public Safety / Emergency Response Preparedness

Customer: University of Southern California Office of Public Safety

pCom® Integration by: Vision Communications

Needs Summary:

The University of Southern California Office of public safety, led by Chief Carey Drayton, required mobile communications capabilities for responders "on scene" during or after an emergency event. Independence of local infrastructure was a critical requirement ideally with its own power generation, deployable communications tower, radio repeating system, Internet, secure Wi-Fi Access, and traditional telephone line services. The objective was to be operational in under 10 minutes of arrive on scene.



USC Public Safety Requirements:

- Broadband Satellite Internet and Secure Wi-Fi capabilities for USC Intranet access during a crisis or event.
- Ability to dispatch from coms trailer using system as a console.
- Digital encoding and recording capabilities
- Ability to control radio patching, monitoring, and remote management through secure VSAT internet connection.
- Room for expansion, as new technologies become available (video, weather station, Digital interoperability switch).
- Trailer/tower must be capable of video camera mounting and cabling for 360 degree viewing, pan/tilt/zoom, and recording capabilities.
- Light trailer capable of being pulled by any standard tow vehicle.
- At least 10Kw of on board Power Generation for Critical Communications.
- Minimum of 30' tower with mounting for radio antennas, PTZ cameras, weather station and/or other systems.
- Environmentally controlled electronics enclosures with proper communications racks.
- Extensive storage for critical response equipment and accessories including radios, batteries, and other emergency response tools.
- Secure cabling infrastructure for radio, video, VSAT satellite internet, and IT networking.



USC pCom® Solution:

The University of Southern California Public Safety Department in conjunction with Vision Communications and Squire Tech Solutions, designed a complete emergency backup radio suite to fulfill the specifications list.

The core of the pCom® emergency backup system is 4 X Motorola® MTR2000 Analog Repeaters. These units work in conjunction with the Trident® controllers that enable the University Public Safety Operator to create a radio trunk on the fly. The Trident® controllers also act as a radio "traffic router" providing for greater frequency efficiency. The key system components are designed to be remotely serviceable via any IP connection. Standard on the Squire Tech Solutions pCom® trailer platform is a broadband Internet over satellite service for maintenance and internet based operations.

USC Future Planning:

The USC *pCom*[®] trailer will continue to change and adapt to the requirements of the campus, faculty, and students it serves. In the near future the University anticipates growing its *pCom*[®] fleet presence to expand to off main campus locations (including the Health Sciences Campus) In addition to adding *pCom*[®] trailers, USC is evaluating adding permanent Squire Tech Satellite Business Continuity VSAT services to critical campus locations that can connect to the *pCom*[®] fleet without local telephone line dependence. The addition of weather stations, pan/tilt/zoom video cameras, and local surveillance recording systems are also under evaluation for current and future *pCom*[®] trailer systems.



Key USC *pCom*[®] Integrated Communications Components:

pCom[®] Tower Components:

- 4 X UHF antenna zero gain antennas for transmission and receipt of radio transmissions

pCom[®] Electronics Components:

- 4 X Motorola[®] MTR2000 UHF Repeaters
- 3 X Trident[®] Raider Controllers
- 4 X UHF Analog Duplexers

What is *pCom*[®]?

The *pCom*[®] is a mission critical Mobile Powered Communications developed and manufactured by Squire Tech Solutions. This system is a mid-duty single axle trailer designed for critical deployments in often the most extreme environments. *pCom*[®] features an onboard 10KW generator with 100 gallon diesel fuel cell, a large storage compartment, and a NEMA 4X rated equipment bay with two professional grade communications equipment racks. The *pCom*[®] comes standard with a 30' pneumatic mast (up to 50'), an auto-acquire VSAT satellite antenna system, long range wireless access point, and an infrastructure designed for adding critical system. *pCom*[®] comes equipped with broadband satellite Internet, a phone gateway, and networking components while the rest of the bay is available for customers and integrators to equip the *pCom*[®] to meet their specific needs.

