

# Universal Communications Platform (UCP) Public Safety Case Study

The UCP provides translational communications for daily operations which allows a wide spectrum of flexibility for public safety missions. The UCP capability is unmatched when infrastructure is temporarily lost, damaged or inaccessible by unforeseeable events. With its ability to connect any radio and frequency as well as push P25 cellular radio communications to users, the UCP allows the emergency first responders to immediately communicate and coordinate with police, fire rescue, as well as any agencies such as FEMA, American Red Cross, and the National Guard.

## Situation

A hurricane slams into the coast causing loss of major infrastructure such as power, cellular and radio communications, impassable roads...

## Solution

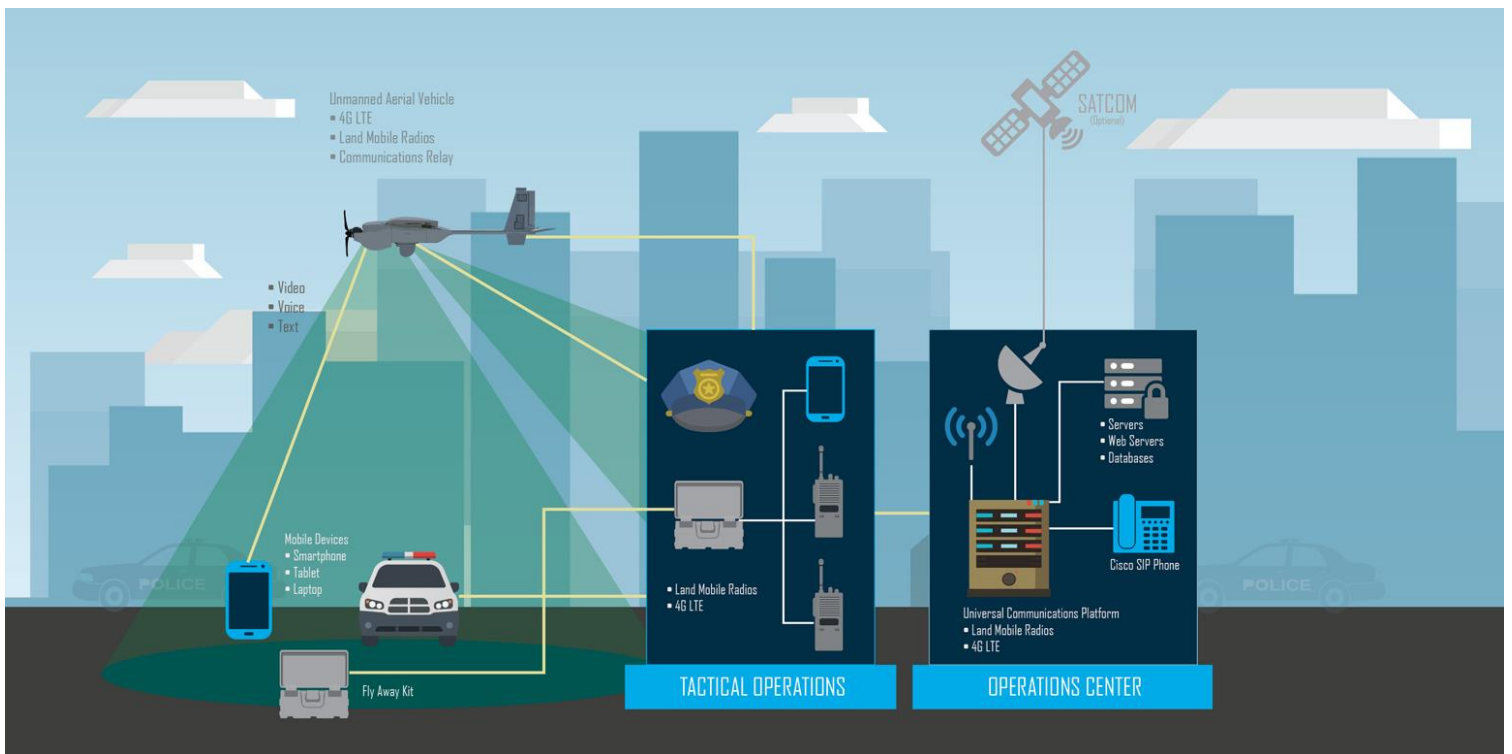
With the UCP capability, first responders can quickly restore communications and command center operations. The UCP is the most effective system to leverage the existing infrastructure even when it is damaged.

- The UCP Tactical Deployable Units (TDU) are dispatched to the hardest hit areas and provide responding authorities with the ability connect and maintain communications with central command centers.
- The UCP Communicator application can be downloaded onto any android, iOS or Windows device and provide APCO P25 radio capabilities for the user. This also provides the command and control authorities with nearly unlimited talk groups to coordinate the wide number of responding entities.
- The TDU automatically links with other TDUs and UCPs to provide a solid, ad hoc network allowing communications to stretch across areas with damaged or no infrastructure.
- As responders from federal agencies arrive, the UCP and TDU continue to provide the ability to expand communications and create networks to meet the changing operations. Examples include connecting FEMA or National Guard communications into the command network or allowing responding utility teams from outside area to be connected and coordinated prior to their arrival.

## Benefits

- The UCP's ability to connect any radio together in a seamless operation and to perform as a dispatch unit allows uninterrupted communications.
- The TDU design allows for a wide variety of power sources to keep the TDU operational including 110 VAC from a generator, 12 / 24 VDC from a response vehicle or even solar panels and solar batteries.
- The TDU can accept up to four different radios to provide seamless land mobile radio (LMR) operations and cellular communications as well.
- With the software defined radio (SDR) capability, the TDU provides a fully operational 2-G, 3-G, and 4-G LTE cellular base station. As an LTE cell site it can handle up to 128 active users with many more registered users.

- With the software defined radio (SDR) capability, the TDU's UCP Communicator application provides P25 radio communications from mobile device to radio with complete P25 capabilities and functionalities. Additionally, the SDR Operates from 20 MHz to 6 GHz and can run several LMR and Military waveforms.
- The UCP improves interoperable and translational communications with the infrastructure that is in place today; this allows budget-conscious stakeholders to immediate improve their capability without spending funding on new radios or radio systems.
- Provides interoperable and translational communications when the communications infrastructure is damaged or inoperable
- The UCP TDU includes Wi-Fi capability and functions as a "hot spot" for Wi-Fi enabled devices, and can operate from any location such as a bed of a truck, the hood of a car or in a temporary shelter or tent using a wide variety of power sources or independently without a power grid.
- Provides cost-effective and highly flexible connectivity with National Guard, DoD or other responding federal agencies by leveraging their radio communications equipment immediately.
- With the UCP Communicator software uploaded to mobile devices, P25 radio communications are available to any number of authorized users who can be connected to the network as required.



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