Comprehensive Communication Services

Product Catalog

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Comprehensive Communication Services (CCS) is a systems integrator and manufacturer that focuses on providing mobile power, communication, and office space solutions that can be utilized during an emergency response or business continuity situation. Our solutions can be deployed anywhere in the world providing our customers a completely self sufficient mobile work environment that allows them to communicate and function regardless of the local conditions. Every solution package we provide our customers is custom designed to meet their specific requirements.

CCS manufacturers our own line of communication and power trailers that are branded under our registered trademark “Mobile Emergency Response Center “ or MERC. The MERC brand includes our own line of mobile command center trailers, mobile video surveillance trailers, mobile long range acoustical device trailers, mobile licenses plate recognition and radar trailers, and mobile aerial control centers that can be used to launch and control unmanned aerial surveillance vehicles. CCS also manufactures our own line of command center accessories that assist in the deployment of our communication products.

Product & Information Index:

Mobile Emergency Response Center® (MERC)

The MERC registered trademark represents a custom built line of mobile power and communication trailers that are designed to provide a fully operational voice, data, and radio network and a climate controlled work space within 15 minutes of deployment. MERC trailers can be as small as a 16 foot bumper pull trailer or a much larger 45 foot gooseneck style trailer.

The MERC includes an on board diesel generator designed to support the trailer size and associated resources. A VSAT auto acquire satellite system allows it to offer network access anywhere in the world providing not only internet service and data access, but also Hosted VoIP and SIP service for two way voice communication. A pneumatic mast equipped with removable antenna arms provides a platform to mount antennas for land mobile radios and repeaters, cellular extender antennas, wireless LAN/WAN antennas, weather station equipment, television antennas, HAM radio antennas, and video surveillance equipment.

The interior of the MERC is designed to support multiple work stations with internal LED lighting, custom rubber flooring, metal overhead storage cabinets, equipment cabinets and racks, LED wall mounted televisions, carpeting on walls, E-Trac where needed, floor mounted recessed tie downs, kitchenettes, bathrooms, heating and ac equipment, conference room table and chairs, and many other amenities. The MERC trailers can also be built with custom slide outs to provide more interior space and exterior storage space under the trailer flooring. These trailers are sized based upon each customer's specific requirements.

Mobile Emergency Response Center®(MERC) Lite

The MERC Lite is a small, but powerful mobile power and communication trailer that is designed to provide a fully operational voice, data, and radio network within 15 minutes of deployment. This tactical trailer weighs less than 3,500 pounds and is compact enough to be towed by most standard vehicles, air lifted, or loaded in a transport plane for delivery. The MERC Lite can be deployed in areas where larger command center trailers and vehicles can not travel. The MERC Lite is also more suitable for densely populated urban areas with narrow streets and limited parking.

The MERC Lite is powered by a Cummins Onan 12,000 watt Quiet Diesel generator with a 91 gallon fuel tank. A VSAT auto acquire satellite system allows it to offer network access anywhere in the world providing not only internet service and data access, but also Hosted VoIP and SIP service for two way voice service. A 30 foot pneumatic mast equipped with removable antenna arms provides a platform to mount antennas for land mobile radios and repeaters, cellular extender antennas, wireless LAN/WAN antennas, weather station equipment, television antennas, HAM radio antennas, and video surveillance equipment. A 360-Track GPS system provides remote monitoring of the MERC Lite for location tracking purposes and attempted theft alerts.

The MERC Lite is equipped with a climate controlled equipment cabinet that houses three 21u equipment racks mounted on air bags. A locking middle storage compartment allows communication and other necessary equipment to be transported with the unit. A custom manufactured 10X10X8 inflatable shelter can be secured around the rear of the trailer to provide complete access to all three equipment racks from inside the shelter. Three heating and cooling vents open from the rear of the trailer into the shelter powered by a 15,000 BTU heating and ac unit. The shelter provides mobile office space for up to 7 users, but can be stored in a small storage bag on a cargo carrier for easy transport.

Mobile Emergency Response Center® Video Surveillance Trailer
MERC - V

The MERC-V is a small light weight mobile video surveillance trailer that can be deployed anywhere in the world to provide remote video monitoring and storage. The MERC-V can be used for construction site security, public event security, remote monitoring applications, traffic monitoring and analysis, disaster relief monitoring, facial recognition applications, license plate recognition, railway security and monitoring, and any other application where video surveillance is required. The MERC-V is a 15 foot single axle bumper pull trailer that weighs less than 2,500 pounds and can be towed by most standard vehicles.

The MERC-V can be powered by multiple power sources; 15 amp shore power connection, solar panels, internal battery bank, and/or a diesel generator. A 15-30 foot mast with multiple antenna and camera mounting arms allows for equipment to be quickly elevated from the trailer. A climate controlled locking equipment cabinet provides secure electronics rack space and a solar battery enclosure. Heavy duty integrated hydraulic jacks allow the trailer to be leveled when deployed. Network connectivity is provided by 3G or 4G connections and by an optional VSAT satellite in areas where the cellular network is not available. Local DVR recording equipment can be rack mounted or streamed across the selected network.

MERC-LRAD 360
Mobile Emergency Response Center ® (MERC)

The MERC-LRAD is a mobile long range acoustical device designed to provide the ability to broadcast crystal clear messages to assist in an emergency response situation. Each lightweight and power efficient LRAD 360X dish can project sound at 129dB at 1 meter in a 360 degree circle around the whole device. A stack of 4 LRAD sound dishes mounted on a MERC trailer can cover 2.46 radial miles around the unit.

The MERC-LRAD consists of an Onan 7,000 watt diesel generator with a 30 gallon fuel tank, a 30 foot electronic mast, a 2 to 4 stack of LRAD dishes, on board 21U rack with LRAD amplifiers and a control unit with hand microphone, and a rack mounted AC unit. The unit can be towed to any emergency response location and deployed within 5 minutes of reaching the destination. The MERC-LRAD unit can also provide network access for remote control and operation.

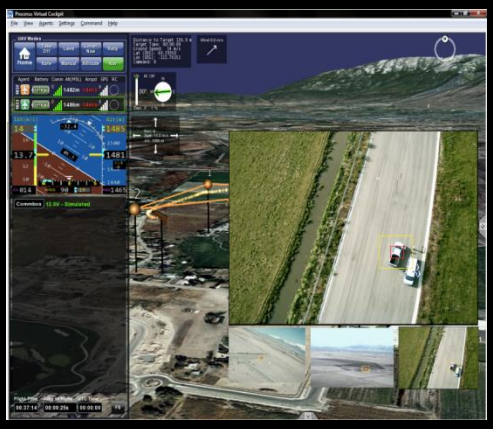
The MERC-LRAD has applications for military use such as convoy protection, announcing stand off distances for control points and ship pier sides, checkpoint security, and immediate broadcast messages for information sharing. The system can also be used for campus wide address and mass notification, broadcast announcements to clear an area during a chemical or biological response, to provide a bio-acoustic deterrent for bird and waterfowl control at airports and wind turbine farms, or for general information sharing at public gatherings and events where a normal microphone and speaker can not provide adequate sound coverage,.

Mobile Emergency Response Center® – Aerial Control Center (MERC – ACC)

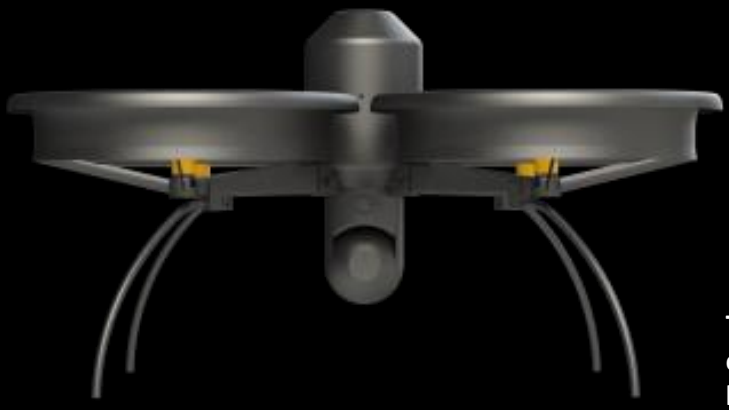
The MERC-ACC is a joint product development with Crescent Unmanned Systems that combines the power and mobility of a MERC communication trailer with the aerial flight and surveillance capabilities of Crescent's Bravo300 small unmanned aerial system. This new version of the MERC is custom designed to serve as a launching pad, flight control center, video storage facility, and network access provider for the Bravo 300.

The Bravo 300 unmanned aerial system can be launched from a roof mounted platform on the MERC and then piloted and controlled from an internal operator work station located inside the climate controlled trailer. A wireless link can be established between the Bravo and the MERC by utilizing the trailer's 42 foot pneumatic mast equipped with long range wireless antennas. The pilot of the unit will be sitting in front of the Ground Control Station, consisting of dual LED monitors: one monitor utilizing the Virtual Cockpit 3D software and the other showing the video from the camera payload. The semi-autonomous nature of the Bravo 300 allows operators to stay focused on the mission at hand and operate the unit from the safety of the MERC trailer. Autonomous take-off and landing, waypoint navigation, and click to fly operability make the Bravo 300 very easy to operate. A single operator or pilot can control up to 5 units from the same screen ensuring maximum aerial coverage of search areas.

Mobile Emergency Response Center® – Aerial Control Center (MERC – ACC)



The MERC trailer is equipped with a Cummins Onan diesel generator that provides a mobile power source for all on board electronics. The equipment rack in the MERC will include a local DVR system to store all video footage from the Bravo sent back to the trailer across the wireless link. A VSAT satellite will provide a satellite backhaul connection that will allow live video feeds back to a Network Operation Center or other destination for additional viewing and storage capabilities as well as off-site situation analysis and command instructions. The normal communication capabilities of the MERC trailer including VoIP service, land mobile radio service, video conferencing capabilities, cellular gateway, and wireless LAN network allow the trailer operators to stay in constant contact with their co-workers and other First Responders during a MERC – ACC deployment.



The mobility of the MERC trailer and the Bravo 300 combined with the communication capabilities of both products make this a very powerful tool that can be utilized in such operations as accident reconstruction, search and rescue, crowd control, land and sea traffic monitoring, critical infrastructure protection, crisis management, and aerial land surveying. By utilizing the MERC trailer with the Bravo 300, our customers will be able to utilize this powerful aerial surveillance tool anywhere in the world regardless of the availability of local power or communications. This will prove to be very beneficial after a natural or man-made disaster temporarily causes normal local resources to be inoperable.

Portable Emergency Response Center (PERC)

The **Portable Emergency Response Center (PERC)** is a small tactical mobile communication network that can be easily transported and deployed anywhere in the world with satellite access. The PERC is housed in a portable shock mount case with wheels that can be ordered in a variety of sizes based on the required communication equipment. A VSAT motorized self aligning satellite dish is sold with the unit to provide remote network connectivity and this dish can be placed on a ground stand near the portable case or mounted to a vehicle roof top rack.

The standard configuration of the PERC will include an internal communication system supporting analog, digital, VoIP, wireless, and SIP connectivity, the satellite controllers and modem, and a rack mounted battery back up system. Optional components can be added including cellular gateways, video conferencing equipment, radio interoperability servers, wireless LAN equipment, and any other communication equipment that can operate off a standard network connection.

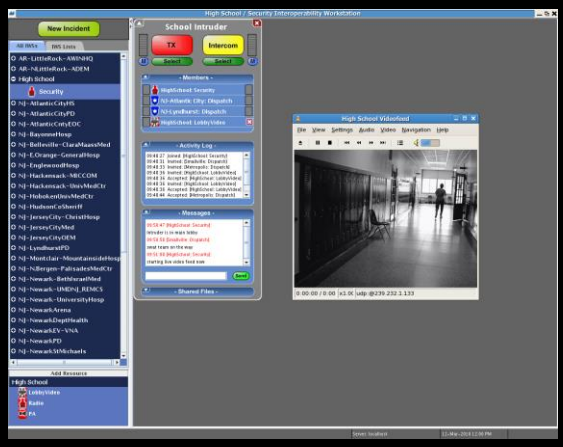
Please note that the PERC will require an external power source to operate. CCS does offer a wide array of portable generators that could be transported with the unit. The PERC can be transported in the back of a truck or in the trunk or back seat of most standard sized cars. Upon reaching a disaster site, the unit can fully operational within 15 minutes or less.

Mutualink
Interoperable Communication Resource Sharing Platform

Mutualink is an innovative multimedia interoperable communications sharing platform for emergency and day-to-day needs. It can be used for public safety, first responder agencies, hospitals and critical infrastructure, as well as National Guard and Military use. It is a proven, deployed and rapidly expanding system.

Mutualink is an IP-based multimedia communication resource sharing platform that allows public safety agencies and critical community assets to communicate in a manner that is separate and apart from the general public. It can incorporate:

- Voice: LMR radios, VoIP “push-to-talk”, telephone, cellular & Nextel
- Video: live feeds from buildings, streets, cruisers, copters
- Text Messaging: more effective than voice for informational content
- File Sharing: blue prints, floor plans, photos, procedures
- PA System Interface: Broadcast Emergency Messages
- Dispatch Collaboration: off-the-air conferencing between dispatch centers



A key advantage of the Mutualink system is the user friendly gui interface that allows the person managing the incident to easily initiate an incident response, identify the available local and remote resources, and then invite them or “pull” them into a response by simply clicking and dragging the desired resource into the response box on their screen. With less than 30 minutes of training, most users can manage an incident response without outside support.

Mutualink continues to enhance their mobility options and users can now manage or join an incident response from their smart phone or tablet device. They have also been selected by Google as an early adopter of the new Google Glasses and are working to incorporate this amazing new technology into their system.

MOBILE OPERATIONS FUSION CENTER "MOBILE MUTUALINK"

Interoperability Where and When It's Needed

The MOBILE OPERATIONS FUSION KIT or "MOBILE MUTUALINK" is a dynamic communications unit that is fully contained in a shock proof and weather resistant case. This system provides complete Mutualink functionality in a variety of First Responder, Tactical, and Crisis Management scenarios. Mobile Mutualink has been designed to complement CCS's complete line of Mobile Emergency Response Centers "MERCs" or operate as a stand alone unit. At under 30 lbs., this suitcase sized powerhouse allows responding personnel to be fully operational within minutes of arriving on-scene to an incident where no infrastructure exist or has been destroyed. Connectivity can be established via an existing LAN, Satellite Service, WiFi or 3/4g cellular service. Operators can deploy Mobile Mutualink in an existing Operations Center (EOC), from the back of a vehicle or even back in a hotel room .

- An IP-based multimedia communication resource sharing platform that allows public safety agencies and critical community assets to communicate in a manner that is separate and apart from the general public
- Voice: LMR radios, VoIP "push-to-talk", telephone, cellular & Nextel
- Video: live feeds from buildings, streets, cruisers, helicopters
- Text Messaging: more effective than voice for informational content
- File Sharing: blue prints, floor plans, photos, procedures
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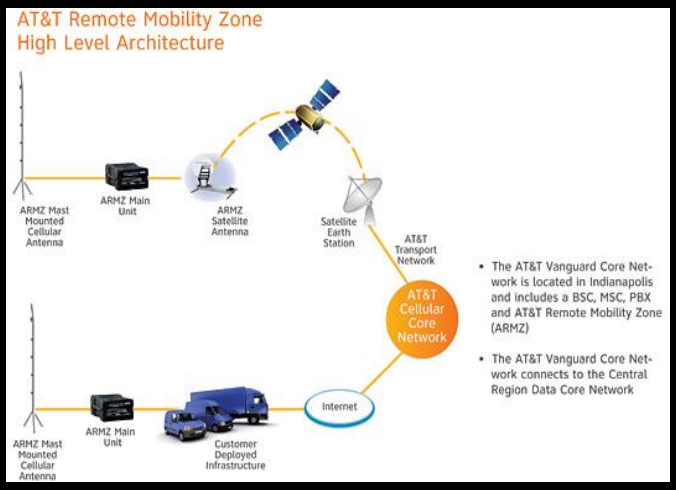
AT&T Remote Mobility Zone

CCS is an authorized reseller for AT&T's Remote Mobility Zone. This new system can provide recoverable GSM voice and data equipment that can be dynamically deployed in a disaster area where mobile coverage has been disrupted. It can also be set up in any area where AT&T cellular coverage is not available, and where AT&T is licensed to provide cellular service.



Each AT&T Remote Mobility Zone system relies on the same basic components. The mast and its cellular antenna provide cellular service to wireless phones and other communication devices within the coverage area. The mast connects to the main unit, which hosts the active electronic equipment. The main unit can be then connected to the satellite system or Internet via a local area network (provided by the customer or AT&T). Traffic is then transmitted to the AT&T cellular network.

Flexible and easy customer-deployable solution

AT&T Remote Mobility Zone is available in the vital first minutes of a disaster. It's always on, using VSAT and PSTN connectivity.

Fully managed service

AT&T Remote Mobility Zone uses a cellular spectrum that is automatically managed by AT&T. It detects potential interference and assigns the radio frequency with the lowest interference level. An optional satellite service is hosted and managed by AT&T.

Key features

- Operates using a spectrum licensed by AT&T—GSM phones "just work"
- "Instant on"—whenever the customer needs it
- Each radio can support up to 14 concurrent calls. Each picocell can support up to two radios (for up to 28 concurrent calls)
- Whitelist capability restricts general public access
- Easy to set up and use—typically in less than 30 minutes

Combining the mobile power and satellite connectivity of our CCS Mobile Emergency Response Center with the cellular coverage and expertise of AT&T allows our customers to use their personal or business AT&T cell phone even when all normal local cell service is inoperable! This provides an additional layer of communication during an emergency response situation.