



## Application Report 619EI Audio Bridge

# INTEROPERABLE RADIO NETWORK

### Customer Profile

- The Arizona Department of Public Safety works collaboratively with multiple agencies across various jurisdictions. It relies on radio communications to conduct day to day operations but is often faced with dealing with agencies that have incompatible radio equipment.

### Application

- To provide a short term solution to radio interoperability which considers ageing infrastructure and future expansion.

### Business Benefits

- The ability to utilise existing ageing infrastructure.
- Achieving radio interoperability to cope with an increase in demand for services.
- Cost savings by eliminating the need for infrastructure upgrades.
- Cost saving by eliminating the need to issue multiple radios to first responders.

### Products Used

- 619EI.

#### ***Omnitronics International***

Ground Floor  
301 Coronation Drive  
Milton Qld 4064  
Phone +61 7 3369 5733  
Fax +61 7 3369 5799

Email  
[sales@omnitronics.com.au](mailto:sales@omnitronics.com.au)

Web Page  
[www.omnitronics.com.au](http://www.omnitronics.com.au)



### → Customer Overview

The Arizona Department of Public Safety (DPS) is a multi-faceted organization with over 1,500 employees. Essentially the DPS is a state-level law enforcement agency working collaboratively with other agencies to achieve a common goal of protecting the public. The DPS provides a broad range of scientific, technical, operational and regulatory services to local and state government agencies and other organisations in the criminal justice community. The Department's State headquarters is located in Phoenix with offices situated in more than 30 communities across Arizona's 15 counties.

### → The Challenge

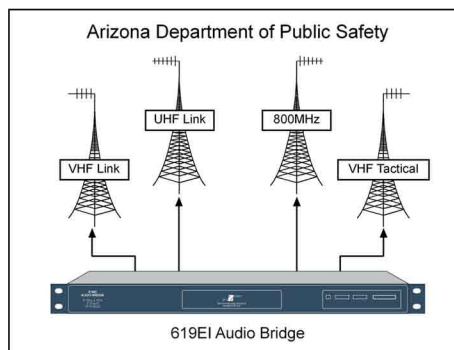
Like many organisations, the DPS was faced with the issue of radio interoperability and an ageing infrastructure. Their previous statewide emergency radio communications system could not meet the demands placed on the DPS since 9/11.

To combat this issue the DPS developed a long-term strategy to establish radio interoperability in the State of Arizona however, the Department soon realised the complexity of the project which requires many years to complete. The DPS decided a short-term solution was needed before their long term goals could be achieved. The short-term solution required a moderate level of interoperability to make use of existing equipment and to serve as a bridge to the long-term interoperability infrastructure.

### → Solution

DPS currently deploys the Arizona Emergency Radio System (AERS) as part of its short-term strategy to enhance interim statewide interoperability whilst making progress towards a long-term solution. The AERS provides limited interoperability to various city, county, state and tribal public safety agencies in Arizona that previously had little or no way to communicate with each other in emergencies. The system works by creating an interoperability overlay to local public safety communications systems. Dispatch centers are linked into the AERS sites, which can then connect various agencies to the shared communication infrastructure. Each site requires four different radio channels (VHF, UHF, 800MHz and VHF Tactical) to be cross-banded in preset configurations.

A key component of the system is the Omnitronics 619EI six port Audio Bridge. The 619EI performs the cross-banding function between the different radios on four of its six 4-Wire E & M ports. At each site, a technician used the front panel switches to configure the routing of the audio between the various transceivers and adjusted the input and output levels for each radio using only a screw driver. The output levels of each port were adjusted with the help of the front panel VU meter so that correct transmitter deviation was achieved. In this way, the 619EI allows each AERS site to be quickly configured and aligned with the rest of the network.



### → Conclusion

The Omnitronics 619 Audio Bridge has allowed the Arizona DPS to meet their short-term goal of providing a level of interoperability which meets the State's immediate needs. Since only four of the six ports are utilised, the 619EI will cater for any future expansion of the system as the DPS move towards their ultimate interoperability solution.

