



(public safety) core network

AuraNet - Secure Wireless Networks for Public Safety & Site Security

Move your Wireless Network to the Next Generation

Auria's secure encrypted wireless network provides a core for your APCO P25 or TETRA wireless network.

AuraNet is a fault tolerant, self healing, all-IP next generation network, based on open standard interfaces allowing integration to a wide range of third party wireless infrastructure products.

Auria can upgrade your existing analog or digital wireless network to an all-IP secure encrypted network, providing both link security and over-the-air security.

Robust Technology

Auria are experts in APCO P25 and TETRA technology. Our products are proven and in use by Police Forces and Security Services in Europe, the United States and the Asia Pacific region.

We remain abreast of the ongoing ETSI and TIA standardization process, ensuring that our systems conform to the latest APCO-P25 and TETRA standards as they evolve.

Open Interfaces - No Lock In

Trapped with your existing wireless equipment vendor? Auria provides our clients with detailed interface specifications based on international open standards - allowing our clients the ability to source third party components developed to these interfaces. This ensures a wide range of potential suppliers, enabling cost effective acquisition programmes.

Of course, Auria can also supply all base station and mobile terminals for a complete turn-key solution.

The Complete All-IP Based Network Solution

Auria's AuraNet product suite provides a complete solution for APCO P25 and TETRA public safety networks across both conventional and trunking operation. Consisting of a number of mated, fault tolerant network elements and designed around the

APCO P25 ISSI, Auria's IP-based solution allows public safety agencies to access the P25 features they need.

Through the use of modular network elements the AuraNet product suite supports all mandatory P25 individual and group call types, the most desirable P25 advanced features, roaming between networks, and the end-to-end encryption necessary in the public safety market.

AuraNet is a fault tolerant, self healing, all-IP next generation network, based on open standard interfaces

The modular design of the AuraNet APCO P25 product suite also allows easy integration with other supplier's equipment, as well as operating seamlessly with Auria's own products, including our base station and data gateway.

And naturally, as all our standard products are designed with modularity in mind, they can be delivered separately or as part of a complete solution - and can easily be customised to suit your requirements.

Security & Encryption - DES, AES & Custom Cryptography

AuraNet supports both air interface and core network link security, including frame protection for end-to-end encryption.

Our network supports multiple DES and AES encryption algorithms, graded to your needs and executed in a FIPS-certified environment. For special security applications we can also introduce custom solutions.

Aurora P25 Base Station

Auria's Aurora P25 AX420 Base Station is a modular APCO P25 base station that acts as the interface between radio units for the registration, group affiliation, individual and

group calls and supplementary services. Its modular design can be delivered in almost any configuration to suit the network requirements and is responsible for:

- Air interface signaling
- Call control (both conventional and trunked)
- Translation of audio frames into RTP packets (encrypted and clear) for transfer across the IP network
- PTT arbitration
- SIP based call control for wide area calls
- Local switching of audio frames

AuraNet P25 Radio Gateway

The AuraNet P25 Radio Gateway (RG) acts as

the central routing entity within the P25 network and the network's single point of contact with the Network Location Register (NLR) for updating and querying the location of units and groups during call delivery.

Designed around a mated pair of processors to provide fault tolerance, the RG also acts as a group call controller for the system and interacts with the NLR to facilitate roaming between other networks.

AuraNet Network Location Register

Auria's AuraNet Network Location Register (NLR) acts as the central repository for unit profiles, group affiliations and locations. The profiles within the NLR are updated when a unit registers at a new base station and when asked, the NLR returns the current profile and location of the unit queried for. A graphical user interface allows a network operator to update the profiles of individual units and groups as well as configuring the available ranges of working identities.

The NLR interacts with other networks across the ISSI to allow units to roam between the local and adjacent networks.

AuraNet P25 PSTN Gateway

The PSTN Gateway provides the all-important ability to make PSTN calls to and from the APCO P25 network. Again built around a pair of mated elements for fault tolerance, it allows P25 units to make and receive calls to and from the PSTN.

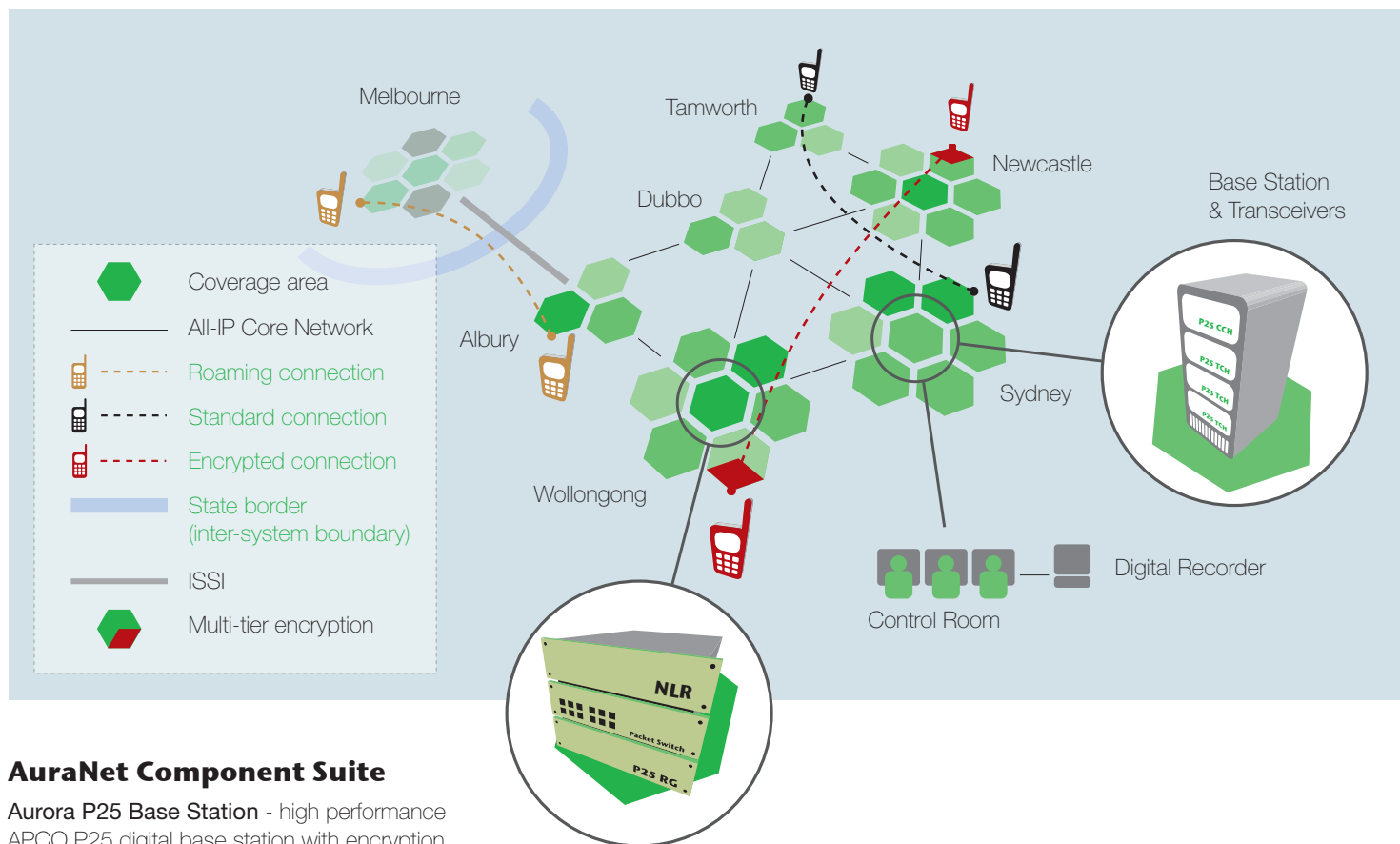
Responsible for translating ISUP (or E&M)

signaling to and from the appropriate SIP messages as well as transcoding the RTP voice packets onto the PSTN, it can either be co-located with one of the base stations in the RFSS, or positioned anywhere in the network.

AuraNet P25 ISSI Gateway

Auria's ISSI Gateway allows a network operator to interface their existing P25 infrastructure or

another operators network with the AuraNet P25 solution suite and its core IP network. This allows roaming and calls between the operator's existing infrastructure and Auria's network elements while not forcing an operator to remove existing equipment from their network. By providing a standardized interface to Auria's network existing infrastructure can continue to be utilized.



AuraNet Component Suite

Aurora P25 Base Station - high performance APCO P25 digital base station with encryption

P25 Radio Gateway - Interfaces P25 base stations to the all-IP core Network

Network Location Register - Subscriber authentication and visiting network roaming control

PSTN Gateway - Network interface to PSTN, PABX, consoles and digital recorders

P25 ISSI Gateway - connects AuraNet to other P25 networks

P25 Key Management System - for distribution of encryption keys to terminal using OTAR (Over-The-Air-Rekeying)

P25 Network Management System - network monitoring, configuration, faults and alarm management

AuraNet Key Features

- Fully APCO P25 Compliant
- Secure, Encrypted Communications
- All-IP Fault Tolerant Core Network
- Authorised Roaming Capability
- P25 Trunked & Conventional Support
- Advanced Call Types
- PSTN Interconnect
- SMDCP Packet Data and Short Messages
- Self Healing Network Topology
- Open Standard Interfaces
- Hybrid Network Support

More information

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