

ATLAS[®]

P25 SYSTEMS



LMR Communications

Made Simple.

Making Safe, Simple™

ATLAS is the most modern & flexible P25 System

Our patented **Latitude™** technology makes the ATLAS® P25 application and transport network distinctive. This enables ATLAS systems to offer increased flexibility as compared with traditional LMR systems in various aspects of its operations.



Auto-Discovery & Self-Healing Sites

When a new site is added and connected to the network, the ATLAS system automatically configures the site. The system uses site peer-to-peer or inter-site communication to broadcast relevant adjacent site information to the other sites periodically. Because the system is exceptionally efficient, the broadcast message is particular and identifies the confirmed talkgroups for which the site is looking to connect. Then, the control message exchanged during the call setup indicates the availability to participate in the calls. This auto-discovery occurs each time a new site is deployed on the system, and it follows the Latitude technology protocol of exchanging messages with other sites. As a result, all sites in the system are rapidly aware of all other sites and only track which sites are interested in the same confirmed talkgroup and availability to participate in the call. Because of this communications protocol and information exchange, when a network connection is lost and then reestablished, the system can heal itself automatically.

The inter-site communication leverages the power of IP multicast to provide one-to-many and many-to-many communication using a standard IP gateway router. Any site on the ATLAS-enabled IP network that is capable of listening or sending voice packets can participate in the talkgroup. Network packets are simultaneously received and processed by all participating sites.

Distributed Call Control

The site initiating a call is responsible for call setup. Once the call is established, the initiating site encodes voice messages with a standard audio CODEC and uses standard IP multicasting to send real-time transport protocol (RTP) voice packets across the network to the other sites.



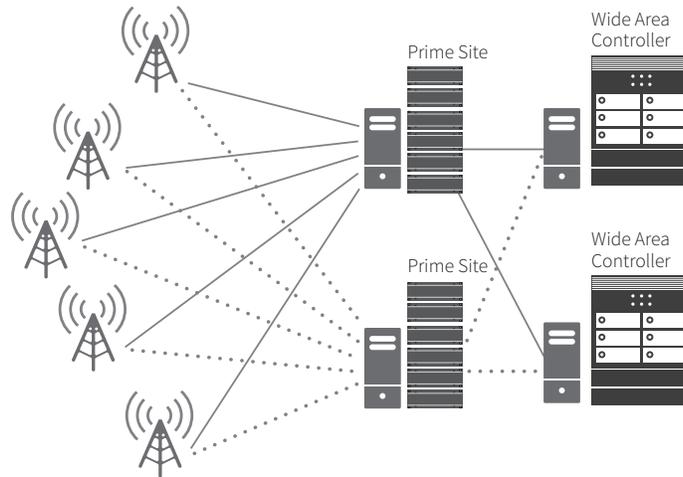
- | **No central controller is necessary to initiate a call**
- | **A failure at one site does not affect operation & performance of remaining sites**

Simulcast Control

Our ATLAS simulcast solution has consolidated the traditional hardware elements of the comparator, prime site controller, and wide-area controller functionality into a software application. The ATLAS simulcast solution replicates this functionality at each site. Where traditional LMR systems may deploy a second instance of comparators and controllers, ATLAS provides redundancy equivalent to the number of sites times two, plus a hot standby controller installed at each site. Critical timing requirements for simulcast call launch are achieved using GPS-acquired time, which has unparalleled accuracy (on the order of nanoseconds).

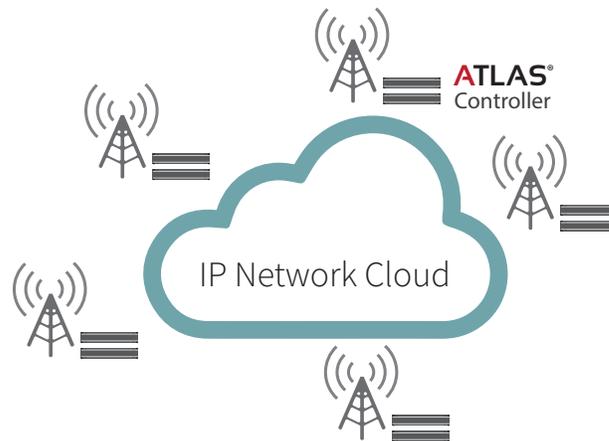


**Traditional
Simulcast is
COMPLEX**



**Legacy
hardware based
solution**
*One level of
expensive
redundancy*

**ATLAS
Simulcast is
SIMPLE**



**Latitude
- modern
IT-based
solution**
*Nine levels
of affordable
controller
redundancy*

*"We never lost communication with any first responder in the county during two separate tornadoes in 2015. The ATLAS system worked just like it was designed to do. The tower sites were all in the storm damaged areas and **communications stayed up during the storm.**"*

- Randy Miller
Emergency Management Director, Huron County, MI



Simple Business Model

We offer a flat pricing model for ATLAS systems. All supported software features are included in the base system offering. There are no additional fees for operational licenses, console features, network management system features, number of user IDs, number of talkgroup IDs, or number of NMS client users.

Adding a channel, a site, a console, or an NMS to a system only requires you to purchase the extra infrastructure equipment—no additional or hidden fees will be charged.



Service Support Care

We make your critical communications safe and simple with support services customized to your needs.

You choose the level of services that is right for agency:

- **Basic** - Do it yourself and manage your own network and radio fleet with access to remote technical support and software updates when you need it.
- **Essential** - Basic support plus worry-free hardware warranty support.
- **Premium** - Access to fast on-site response from our certified technicians to network and radio issues as well as preventative maintenance.
- **Premium Plus** - We'll manage your network and radio fleet for you, maximizing performance and ensuring system health.

System & Subscriber Service Packages

	Basic	Essential	Premium	Premium Plus
Remote Support	•	•	•	•
Software Maintenance	•	•	•	•
Software Care ¹	•	•	•	•
Hardware Care		•	•	•
System Restoration ²			•	•
Preventative Maintenance			•	•
Advanced Replacement				•
Network Operations Center (NOC) Monitoring ²				•
Battery Care ³				•

¹ Available as OPTION in either of the four packages

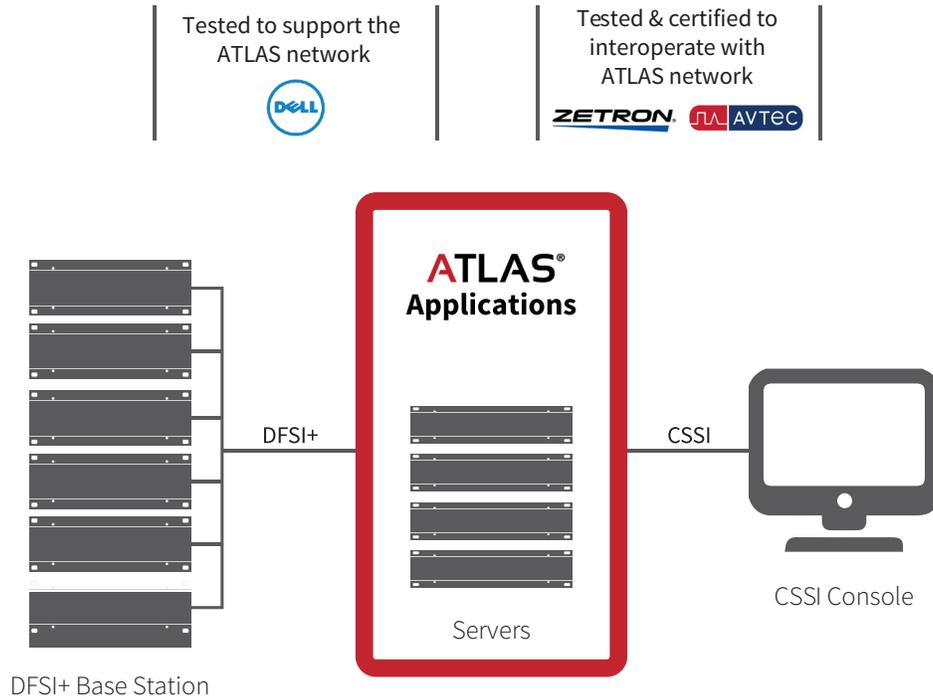
² Systems Only

³ Subscribers Only

We give you the **freedom** to choose

We support interoperability to its fullest extent and make it simple to integrate multiple vendors' P25 solutions with our ATLAS system - subscribers, consoles, base stations, logging recorders - you can choose to use ATLAS products or a mix of other vendor's components at the time of implementation or any time during the life of the system.

ATLAS Ecosystem



Our Guarantee to You

ATLAS is designed to work with all P25 subscriber manufacturers - we guarantee our coverage with all P25 Phase 1 CAP tested subscribers.

We also guarantee that we will not initiate any change order during the project implementation. Our customers will attest that every change order in their project was initiated at their request as a system enhancement outside of the scope of the original project.

"Scaling up the system from a small beginning to become a state-wide system has not been a problem. A flat IP-network has allowed us to grow this system very easily. The audio quality on the ATLAS system is just outstanding."

- Bob Hlivak
Hawaii State-wide Radio System



Just Four Basic Components

ATLAS systems consist of just four basic components. By using a common hardware platform to build the system components, the ATLAS solution reduces the need for spares by allowing a single pool of spares across multiple component types. The majority of ATLAS system components are based on commercial-off-the-shelf (COTS) hardware, significantly reducing system obsolescence and extending the life of your critical investment.

The ATLAS system's minimal space requirements lower risk and add flexibility to co-locating new equipment with existing equipment, mitigating difficult cutover problems and reducing additional shelter costs.

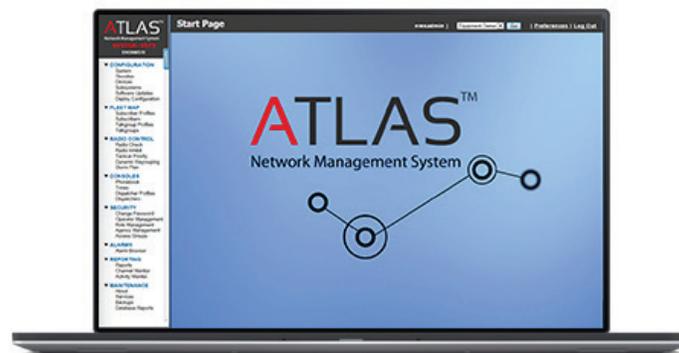


ATLAS

4000 P25 Phase 1 & 2 Base Stations/Repeaters

VHF | UHF | 700/800 MHz

The ATLAS 4000 series products offer the capability to deploy the full gamut of P25 solutions including conventional, trunked, simulcast, and hybrid systems. Available in analog and P25 mixed-mode, the base station/repeater line is designed to build out the ATLAS distributed architecture system solution in a cost-effective and scalable manner.



ATLAS

6100/6200 Network Management System (NMS)

The ATLAS NMS is a state-of-the-art web based network management system that provides centralized network management functionality for all ATLAS infrastructure products. A fully redundant solution with web based client access, the ATLAS NMS offers unified management and deployment of configuration to all infrastructure solutions including conventional systems, trunked systems, StarGate® consoles, and gateways. The ATLAS NMS is available in two options: ATLAS 6100 Basic NMS for small systems and ATLAS 6200 Advanced NMS for larger systems.



StarGate 7000 Dispatch Console

The StarGate® Dispatch Console is a next generation console that provides interoperability via direct connection to P25 trunked and conventional systems, analog systems, paging systems, and connection to other disparate systems via control stations. The StarGate console is IP-based and fully distributed with no requirement for central control equipment, allowing extensive scalability and expansion and with no single point of failure.



ATLAS 8000 Controller/Gateway

The ATLAS 8000 series controllers and gateways provide IP-based fully integrated solutions to support all the interoperability and interface capabilities across all the system types including conventional, trunked, hybrid, and simulcast solutions. In addition, the ATLAS 8000 gateways offer distributed call control, mobility functions, and also provide diverse interoperability solutions to interface multiple system types with the StarGate console.

ATLAS®

bit.ly/makingsafesimple

EF Johnson Technologies, Inc.

a JVCKENWOOD Company

1440 Corporate Drive, Irving, TX 75038-2401
Phone: 800.328.3911 • efjohnson.com