

# BEST IN CLASS

## RF COVERAGE SOLUTION FOR THE TRANSPORTATION INDUSTRY



Safety is one of the highest priorities in the transportation industry. Millions of people commute and travel on a daily basis using different modes of transportation. Rail and Metro Lines and Stations, Highways and Tunnels are packed with people and cities and transit authorities have an increased responsibility of keeping these areas safe in critical emergency situations.

Fiplex Products and Services are key in supporting mission-critical public safety radio communication, where clear and uninterrupted communication is a must. Our comprehensive line of Signal Boosters and Distributed Antenna System (DAS) provide first responders with the extra coverage they need to protect others.

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# FIPLEX | LEADER MANUFACTURER

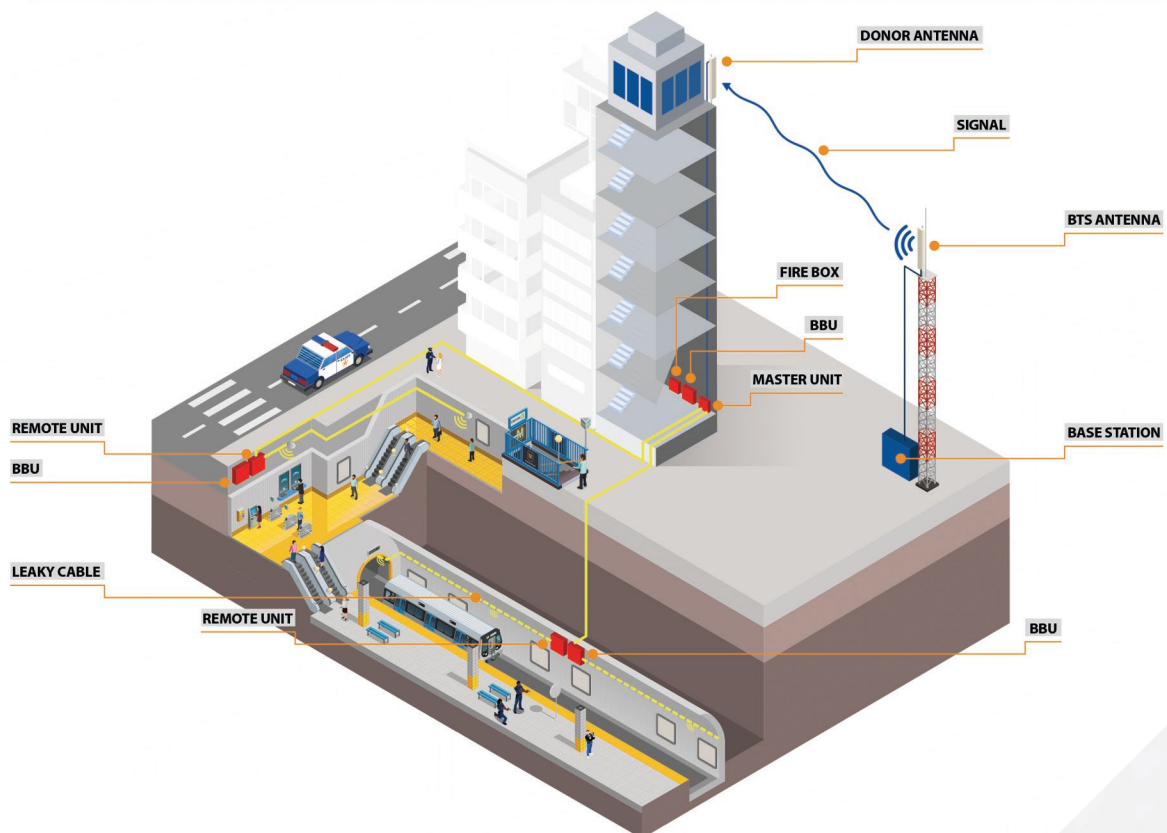
Fiplex Communications, Inc. is a globally recognized designer and manufacturer of highly innovative coverage expansion products to support Public Safety and Mission Critical applications.

As an engineering-driven company with more than 35 years of expertise, Fiplex is known as an industry leader for its high standard of customized active and passive products. Through strong Research & Development, Fiplex continuously strives to evolve and improve the specifications of its products. Whether responding to a customer requirement or future roadmap, R&D is always conducted under the highest standards.



## TRANSIT AUTHORITIES | CHALLENGES

In today's world, Rails, Metros and Subways must have a seamless fast operation but, above all, must be safe. Worldwide cities are becoming more urbanized and metro transportation is a priority for citizens' mobility. There are metros in more than 178 cities in 56 countries, carrying on average a total of 168 million passengers a day. In these environments, smoke and fire are common hazards and thousands of incidents are reported annually. But, despite the fact that most of the incidents are minor, large scale evacuations of platforms and stations must be implemented. In any kind of emergency, **first responders need to be safe, fast and efficient and communication between them while in the tunnels or outside the station, is mission critical.**





# FIPLEX FLEX SOLUTION | PUBLIC SAFETY CENTRIC DAS

Fiplex has developed an advanced Distributed Antenna System (DAS) to support Transportation Authorities with their RF coverage expansion requirements. Our Fiplex FLEX DAS products are compatible with various technologies including P25 (Phase I and II), DMR, NEXEDGE®, IDAS™, TETRA and Conventional. Fiplex products are available in VHF, UHF, 700Mhz and 800 Mhz bands.

A DAS is a network of distributed antenna nodes connected to a common source via a transport medium that provides wireless service within a geographic area or structure. The system can be driven by a direct connection to a Base Station, can be fed Over-The-Air (OTA) or a mixture of both. In Public Safety and LMR systems the most common signal source is an OTA connection to a remotely located Base Station. Several Remote Units can be connected to one Master Unit. The Remote Units relay the signal into the coverage area via radiating cable and/or antennas. The Master Units can either interface directly with several base stations (often called a “base station hotel”) or can be fed via several off-air repeaters. Master and Repeater units must have a Battery Backup System to guarantee its operation up to 24 hours in case of power failure.

## OUTSTANDING FEATURES

Strong in-house R&D has allowed the Fiplex Engineering team to design a “Best in Class” Public Safety Centric DAS solution that focuses on improving performance through enhanced design and implementation flexibility, sharper filtering masks, efficient spectrum and uplink noise management and virtual measuring. Some of our product’s outstanding features:

- Channelized solution
- Preserves the far end communications and protects BTS Rx sensitivity
- Reduced infrastructure cost
- Gain adjustment per channel in Master and Remote units
- UL and DL Squelch per channel and per time slot in Master and Remote units
- UL and DL AGC per channel and per time slot in Master and Remote units
- Programmable uplink squelch (per channel and time slot) for reduced UL noise contribution
- No degradation of the BTM uplink sensitivity
- Built-in redundancy
- Built in spectrum analyzer
- Centralized operation, single point of access
- No fiber-environment noise transported to RF
- Remote control capability
- UL2524 2nd Edition Listing
- NFPA 72 2013 Edition, NFPA 1221 2016 2019 Edition

## TRANSPORTATION PROJECTS | SUCCESS CASES

Fiplex solutions have been the preferred choice by many important transportation organizations that consider public safety a priority:

L.A Metro WestSide Extension – Los Angeles CA, USA  
M.A.R.T.A – Atlanta GA, USA  
S.E.P.T.A – Pennsylvania, USA  
W.M.A.T.A – Washington DC, USA  
Metro-North Railroad – New York, USA  
Tunnel Palmas de Gran Canaria, Spain

ARGENTREN – Buenos Aires, Argentina  
Croydon Tramlink - London, U.K  
DFW Airport  
REM Toronto  
LA Metro (West Extension)  
Sao Paulo Metro (ongoing)



# FOMS | FIPLEX OPERATIONS AND MAINTENANCE SYSTEM

FOMS is a unique operations and maintenance system (OMS) capable of managing all DAS units in your communications network via the simple network management protocol (SNMP). This system will allow you to save time and money in system installation, training and software updates and obtain unified access and full control of the system data from your own premises.

FOMS will collect Masters and Remotes data via IP and this data will be sent to the FOMS server within a LAN or Internet.

FOMS is a non-GUI software that automatically runs on a main server automatically, without user intervention. With no need of installing a Client Application, FOMS provides a GUI interface to users via a standard web browser allowing users to run FOMS on a desktop PC, laptop, tablet or mobile phone without additional configuration or installation overhead.

## Key features

- Unified Access to the entire DAS network
- Updates automatically synchronized for all users
- Individual Profiles
- E-mail notifications



## MENU

- Dashboard to monitor all devices at a glance
- Add/Remove devices to be monitored by FOMS. Edit parameters such as the SNMP version, DNS or IP of the device, polling period
- Data Audit to monitor updated parameters and history of modifications
- Settings of profiles and user permissions

Host group	Host	IP	Availability	Tags	Problems	Status	Latest data	Problems
9915-0121-0121	9915-0121-0121	192.168.1.100	OK			OK	Latest data	Problems
9915-0121-0121	9915-0121-0121	192.168.1.101	OK			OK	Latest data	Problems
9915-0121-0121	9915-0121-0121	192.168.1.102	OK			OK	Latest data	Problems
9915-0121-0121	9915-0121-0121	192.168.1.103	OK			OK	Latest data	Problems
9915-0121-0121	9915-0121-0121	192.168.1.104	OK			OK	Latest data	Problems
9915-0121-0121	9915-0121-0121	192.168.1.105	OK			OK	Latest data	Problems
9915-0121-0121	9915-0121-0121	192.168.1.106	OK			OK	Latest data	Problems
9915-0121-0121	9915-0121-0121	192.168.1.107	OK			OK	Latest data	Problems
9915-0121-0121	9915-0121-0121	192.168.1.108	OK			OK	Latest data	Problems
9915-0121-0121	9915-0121-0121	192.168.1.109	OK			OK	Latest data	Problems
9915-0121-0121	9915-0121-0121	192.168.1.110	OK			OK	Latest data	Problems
9915-0121-0121	9915-0121-0121	192.168.1.111	OK			OK	Latest data	Problems
9915-0121-0121	9915-0121-0121	192.168.1.112	OK			OK	Latest data	Problems
9915-0121-0121	9915-0121-0121	192.168.1.113	OK			OK	Latest data	Problems
9915-0121-0121	9915-0121-0121	192.168.1.114	OK			OK	Latest data	Problems
9915-0121-0121	9915-0121-0121	192.168.1.115	OK			OK	Latest data	Problems
9915-0121-0121	9915-0121-0121	192.168.1.116	OK			OK	Latest data	Problems
9915-0121-0121	9915-0121-0121	192.168.1.117	OK			OK	Latest data	Problems
9915-0121-0121	9915-0121-0121	192.168.1.118	OK			OK	Latest data	Problems
9915-0121-0121	9915-0121-0121	192.168.1.119	OK			OK	Latest data	Problems
9915-0121-0121	9915-0121-0121	192.168.1.120	OK			OK	Latest data	Problems







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