Critical Communication Solutions

PowerTrunk

TETRA - P25 - LTE - CAD

Network Infrastructure

PowerTrunk-T
TETRA Infrastructure

TETRA is an open standard for LMR (Land Mobile Radio) systems originally developed according to ETSI (European Telecommunications Standards Institute) specifications and recommendations.

The PowerTrunk-T infrastructure system for TETRA mobile radio networks delivers excellent coverage, security, and reliability in a platform designed for efficient implementation and cost-effective scalability.

Throughout the system our engineering exceeds standard requirements where it matters most.

PowerTrunk-T is the only TETRA system that is fully 100% Ethernet / IP based. A secure and reliable network can be built with distributed switching, distributed intelligence, and complete fault-tolerant redundancy, as well as at lower network costs due to the use of commercial off-the-shelf equipment.

With a 75 watts of RF output power from each repeater and triple receiver diversity, PowerTrunk-T provides the best TETRA coverage performance available. It is loaded with advanced capabilities such as multislot packet data (up to 28.8 Kbps), simultaneous voice and data communication, FIPS Level 3-oriented end-to-end encryption (E2EE) management, real-time statistics of network performance, and off-the-shelf solutions optimized for AVL, telemetry, and transportation applications.

With PowerTrunk-T, PowerTrunk offers its customers the possibility to implement solutions over TETRA profitably, bringing, as with the rest of its product range, the following advantages:

1. PowerTrunk comes onto the market with an infrastructure which is 100% of its own development, with the added value of know-how and the possibility to solve complex problems of customers.

2. Due to being based on its own technology, PowerTrunk can offer totally integrated and customized product solutions.

3. The combination of knowledge and experience of a company specialized in LMR allows PowerTrunk to respond rapidly, by adapting its products to customer requirements.

PowerTrunk[25]
P25 Infrastructure

P25 is a set of open standards resulting from the combined efforts of public safety organizations in the United States, standardized and maintained by TIA (Telecommunications Industry Association).

PowerTrunk25 features a powerful, field-proven, end-to-end IP-based design, using standard networking equipment which reduces risk of obsolescence and lowers switching equipment costs. It is available for both conventional and trunking modes and is designed for a wide range of frequency bands (VHF, UHF, 800 MHz, and 700 MHz). All these characteristics together make PowerTrunk25 a revolutionary and innovative concept within the P25 market.

PowerTrunk's patented method for sending voice packets over IP results in lower backhaul bandwidth requirements so that customers may include additional applications over their IP backbones. Interoperability is fundamental to the design which includes interfaces to other LMR systems through the versatile PowerTrunk25 Connect module. In addition, VoIP connectivity makes integration with Computer Aided Dispatch and Voice Logging applications easier.

DBS
Deployable Base Station

The Deployable Base Station (DBS) is a TETRA base station of reduced dimensions and easily transportable. Its design is based on the PowerTrunk MBS (Mast-Mounted Base Station).

The DBS can be easily deployed and installed in any place where coverage needs to be improved or network traffic capacity increased. In addition, the DBS may be of great use in the event of natural disasters, making it possible to replace damaged communications infrastructure quickly or to provide service to affected areas in which no communications coverage is previously available.

The DBS installation cost is reduced because it is ready to operate outdoors under the harshest weather conditions and does not need a shelter, requiring only an antenna mast and a link to the PowerTrunk-T System Control Node (SCN). Its weight has also been taken into account in the design, so that it can be moved by four persons.

PBS
Portable Base Station

The Portable Base Station (PBS) is a TETRA base station based on the PowerTrunk MBS (Mast-Mounted Base Station).

Its light weight (less than 40 kg.) and its design with wheels make it possible to transport by a single person.

With the same TETRA functionality as a standard PowerTrunk-T Site Base Station, it is the best option for scenarios in which it is necessary to temporarily expand network coverage, for example for concerts, sporting events, VIP visits, disaster response, etc.

It is prepared for outdoor use, making the PBS the optimal communications infrastructure solution to give the quickest and most efficient response as possible in emergency situations.

MBS
Mast-Mounted Base Station

PowerTrunk's Mast-Mounted Base Station (MBS) has been prepared to be easily installed on towers or wall-mounted with minimum cost. Its design does not require an additional unit at the base of the tower. These advantages considerably reduce installation costs, making the MBS a very economic system to deploy.

The MBS is a complete single-carrier TETRA base station. Its main goal is to improve coverage in shadow zones, or for where an indoor base station is not necessary or recommended. Its modular design allows it to be easily upgraded to two TETRA carriers with an additional unit. Furthermore, as the MBS is designed for outdoor operation, the system is able to work under the harshest climatic conditions.

The system includes a complete set of software tools to maintain the unit, even remotely. Intuitive and easy-to-use applications allow the modification of user profiles, system configuration, or monitoring network status from a friendly Graphic User Interface.

Designed for integration with the PowerTrunk-T system, the MBS provides an unrivalled set of TETRA services; unique when compared to any other similar unit.

User Radio Terminals

HTT-500
TETRA Portable Radio

The HTT-500 portable radio is all about coverage, audio quality, and reliability.

It is a high power TETRA radio for improved coverage, and also provides 1 Watt speaker audio power, 18+ hours of battery life, and offers the latest features including Bluetooth® connectivity, WAP browser, GPS module, and man-down capability. The HTT-500 is solid, tough, and durable, yet small and light-weight. Its intuitive graphical color interface is easy to learn and efficient to use even in the most demanding situations.

TRM-300
TETRA Radio Modem

PowerTrunk's TRM-300 radio modem consists of a combined radio and control board. Its small dimensions and light weight makes installation easy for a wide variety of professional environments.

Its tolerance against bumps and vibration make the TRM-300 a suitable device for vehicular use plus it can also include an optional GPS module for vehicle tracking. It includes all TETRA data services such as status messaging, Short Data Services (SDS), circuit mode data, and multi-slot packet data.

MDT-400
TETRA Mobile Radio

Unique in its class, the PowerTrunk MDT-400 mobile radio provides excellent coverage and versatility that makes a difference.

Its 10 Watts of RF output power provides the best TETRA coverage available in the TETRA market by far. In addition, specialized off-the-shelf solutions and a remarkably flexible design allow the unit to be tailored for complex applications such as telemetry.

It's easy to appreciate why the MDT-400 mobile radio is used in so many networks around the world.

DT-410
TETRA Desktop Radio

The DT-410 is a TETRA radio unit especially designed for desktop use, accompanied by a set of accessories that allow ergonomic operation. The DT-410 consists of a TETRA radio unit integrated in a desktop chassis. It is attractively designed and contains a PowerTrunk MDT-400 transceiver, high-power loudspeaker, and AC/DC power supply.

The DT-410 is complemented with a high-quality tabletop microphone, headset with microphone, and foot-switched PTT pedal for hands-free operation. A line interface (600 Ohms, E&M) for external audio connection and an external battery connection are also available. The DT-410 may be operated in two manners: as an independent unit using the menus screens of the TETRA radio itself, or PC-controlled via TETRA PEI (Peripheral Equipment Interface).

Transport Products

Public transport, as a basic mean of providing mobility for the general population, is a key factor in the development of our society. Buses, trams, subways, railways, and high-speed trains, including sophisticated driverless vehicles, need an efficient communications system which grows at the same pace as their own operations, all the while as they meet the service availability and safety expectations of their customers. For this kind of environment, POWERTRUNK provides a complete and professional solution adapted to the specific requirements of each project.

Voice

TETRA provides group calls, broadcast calls, emergency calls, calls between trains, etc., for communication among the main players in the transport environment: drivers, stations, depots, control center, passengers, and security and maintenance staff.

Furthermore, it allows integration with external communications networks (police, firefighters, etc.) in critical situations for emergency coordination.

Vital Data

Signaling systems are responsible for assuring comfort, punctuality, availability, and safety in passenger and freight transportation, managing driving operations of the trains.

POWERTRUNK radio solutions, focused to optimize costs, provide the data communication means required for these kinds of applications such as, for example, ETCS European standard for railways, CBTC systems oriented to underground or trams, or PTC systems, etc.

Critical Data

POWERTRUNK on-board equipment is responsible for obtaining the location information and sending such data to the control center (CeCo-TRANS), so that the position of all vehicles is known within seconds and can be presented over various types of maps and/or synoptic line displays.

Another common application is the monitoring and management of alarms and events which take place regarding the on-board equipment and other train subsystems.

On the other hand, the on-board equipment has also auto-diagnostic functions and is able to be integrated with Passenger Information Systems, which allows passengers to be informed in real-time about next stops, arrival times, and incidents, reducing traveling and waiting times for the users.

Video and Other Applications

The POWERTRUNK TETRA solution for critical voice and data communications is complemented with a broadband radio access layer which supports applications such as:

- Real-time video to monitor at the control center images from inside the trains
- Real-time video to display in the driver cabin images of the station as the train approaches
- File transfer between the control center and trains for various required operations

RTP-300
TETRA Unit

Railway regulation compliant
Several on-board configuration options
Functionality:
- TETRA voice and data communications
- Interconnection with PA and Intercom systems
- Location via GPS

Power supply according to EN50155
Serial Communication interface (RS-232/RS-422/RS-485) and Ethernet
Digital I/Os
Communications rack managed from touch-screen user interface designed for railway environment or from external application

RTP-603
TETRA Unit

EN-50155

In addition to the RTP-300 features:
Dual equipment: up to two internal radio interfaces
Advanced functionality integrated in the communications rack:
Interconnection with Passenger Information Systems
- Railway specific communications interfaces such as MVB bus
- Interconnection with TCMS for the integration with other train subsystems
- Interface to connect a beacon reader
- Voice synthesizer

100% availability, full redundancy of:
- Power Supply
- Radio Equipment
- Communications Rack

Support for signaling systems such as ETCS, CBTC, PTC and others

On-board Control Console

User interface to access to the different on-board radio equipment functions.
Connection to the audio accessories: handset with PTT, loudspeaker, ambience microphone.
Touch-screen version with advanced functions and capacity for management and display of video.

Professional LTE

AT-PSGW

This unit integrates both the LTE Serving Gateway and Packet Data Network Gateway in a best-of-class ATCA (Advanced Telecom Computing Architecture) hardware platform. Designed to support the highest degree of system availability and resilience, the AT-PSGW is part of the EPC (Evolved Packet Core) jointly with the MME (Mobility Management Entity).

AT-PSMME

One the most powerful MMEs (Mobile Management Entity) in the marketplace, bringing together state-of-the-art processors with fully redundant storage capabilities, able to manage up to 140,000 users. The AT-PSMME is easily scalable, handling networks from just a few base stations, up to 8,000 stations for a regional or nation-wide deployment.

AT-eNodeB

Built for harsh conditions, this tough base station enables access to the LTE broadband network no matter the environment. Designed primarily for operation in the 700 MHz band, but can be provided for other frequency ranges upon demand. Operates with 5, 10, and 20 MHz channels.

MVC6000/MVC2000

The vehicular console is one of the key components of a mission-critical network, allowing users to stop thinking about which technology they use, and just let the console transparently select the optimum wireless media available at any moment to send the information. With powerful applications developed exclusively for professional use, the MVC6000 will dramatically improve operations.

xNMS
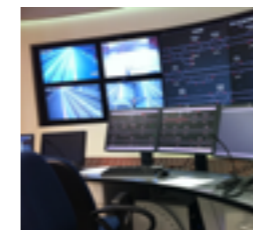
A unique management system for all of your critical networks (TETRA, P25, and/or LTE). Unified management optimizes CAPEX and OPEX for the new network. Expand your POWERTRUNK P25 or TETRA network with LTE, or roll out a brand new network including narrowband plus broadband. In any case, operation will be seen to be as just a single network.

CONTROL ROOM

TETRA + 4G system

Ad hoc Quick Deployment

Central node and APP servers
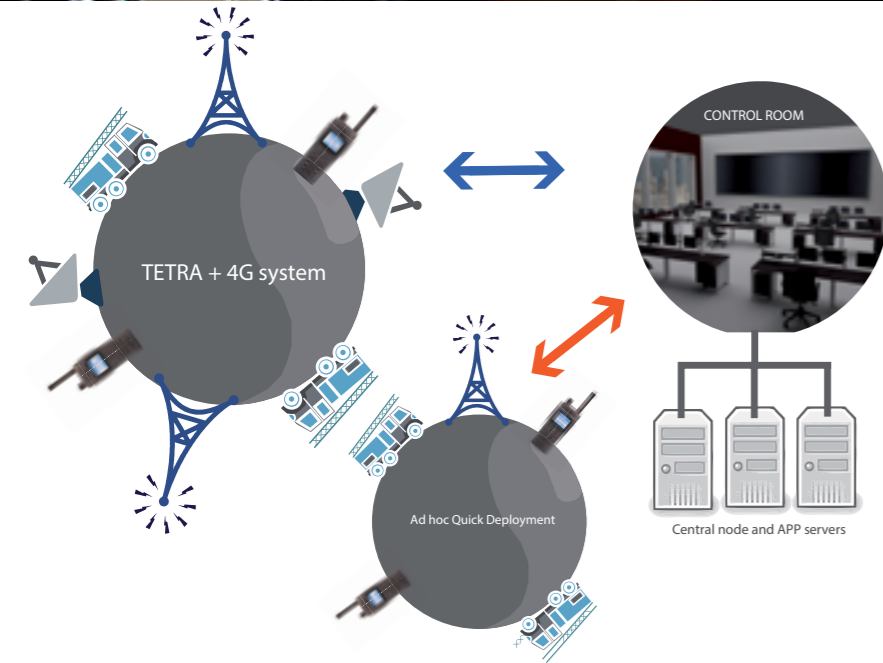
DATA BECOMES CRITICAL

Do you trust your video transmission system? Are you completely sure it will be there when you really need it? Up to now, probably not, but this is about to change as PowerTrunk leverages its vast experience in critical narrowband radio networks to offer a unique solution for broadband data that will keep pace even in the most critical situation.

THE BEST OF TWO WORLDS...

A TETRA or P25 radio network can be the first and most critical component of a new hybrid narrowband / broadband solution. Take advantage of proven system availability and an unbeatable coverage footprint to incorporate the broadband network with an advanced control channel. The Network Operation Center will always know whether or not LTE coverage is present for any given remote user and will be able to choose the best available wireless system to deliver the message.

...IN A SINGLE NETWORK EXPERIENCE

PowerTrunk's Broadband LMR Solution is affordable. The broadband network can share most components and operation processing with the narrowband radio solution. This will boost OPEX optimization, providing greater ROI (Return of Investment) over the operational life of the network.

CeCoCo Series:

### Coordination and Control Center solutions

The CeCoCo Series provides comprehensive solutions for multi-agency and multi-function Computer Aided Dispatch. The high-performance, unmatched reliability, and easy scalability of the CeCoCo range of products allow different configurations to cover the requirements of different operational functions such as:

- Law Enforcement / EMS and Fire Dispatch
- 911 call centers
- Intelligent Transport Dispatch
- General purpose CAD

The CeCoCo design allows the system to exceed the requirements of a control center:

- To process and resolve incidents efficiently, achieving minimum response time.
- Resource optimization allows reducing considerably time and displacement costs.
- The communications integration among resources, operators, and even other organizations makes coordination easier, providing fast and efficient response to the public.

Furthermore, CeCoCo solutions are highly customizable and are optimized for use with the most advanced radio technologies available today (such as P25 and TETRA). Additionally, the CeCoCo series also provides interfaces with legacy radio systems such as MPT-1327 or analog radio, providing a cost-effective migration plan or enabling interoperability with other radio systems.
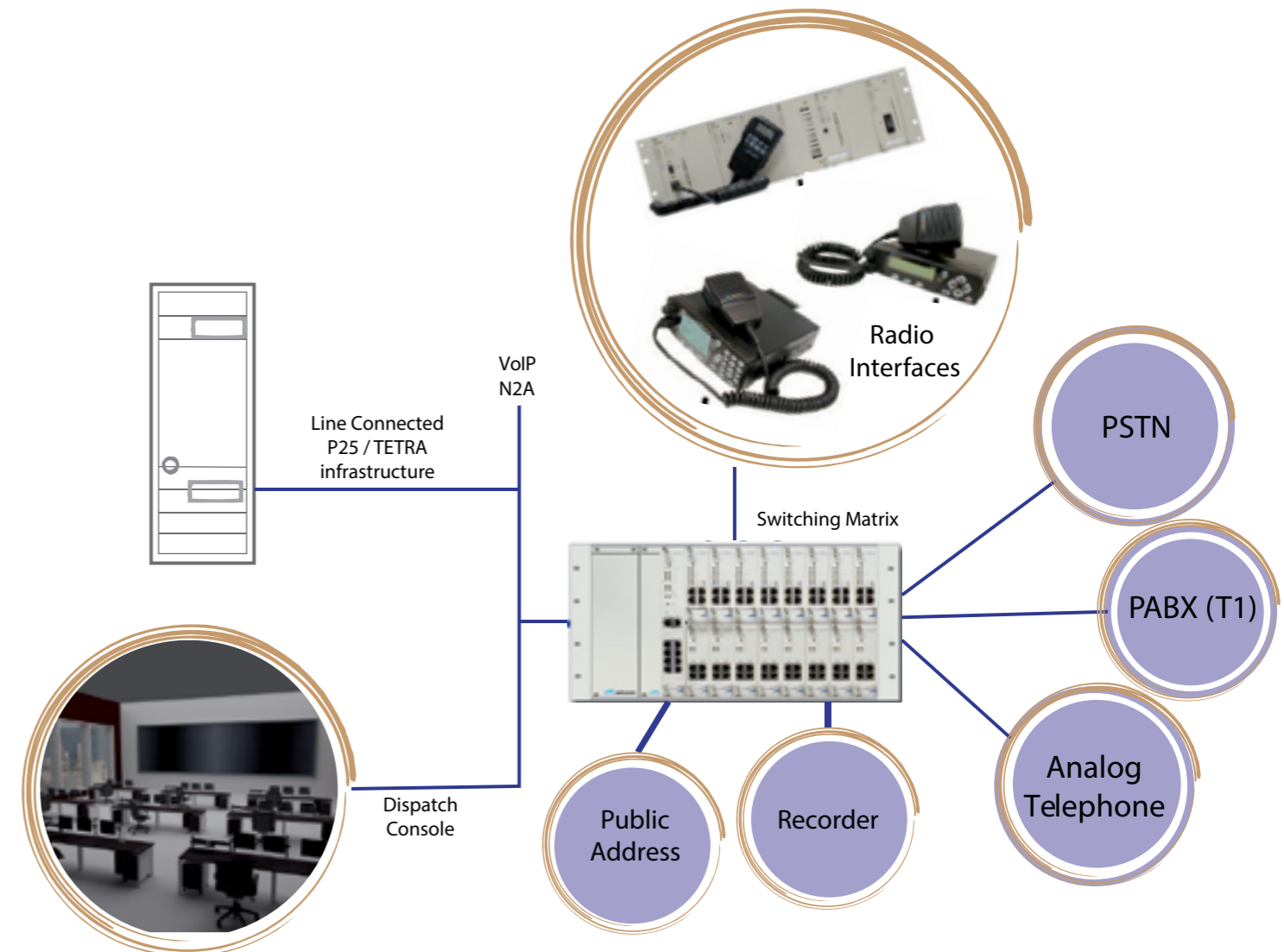
CeCoCo *Series*

CeCo-911
for 911 Call Centers

The powerful architecture of PowerTrunks's CeCoCo series provides cost-effective
scalability from small dispatch offices to local and regional call centers.
CeCo-911 is designed for enabling information sharing between different agencies and organizations, which is critical to provide quick and accurate response in emergency situations. First responders and support units can rely on a high reliability, completely fault-tolerant architecture, designed to remain up and running even in the toughest situations.

When all features of CeCo-SEC included, the CeCo-911 suite also provides the following additional features:

- Multi-agency management
- Automatic update of status of all agencies resources
- Management of life cycle of incidents between agencies
- Multi-hierarchical topology, specially designed to support complex call centers with high number of dispatch workstations
- Customizable icons for different agencies units on map
- ANI / ALI
- Synchronized cartography
- Emergency switch to desktop telephone
- Decision Tree

CeCo-Trans
for Public Transport

Public transport is a key segment for society today. Continuous growth in urban areas is creating challenging communications requirements in this sector. Increasing the security and efficiency of these systems is critical in order to meet the transportation segment requirements.

Computer Aided Dispatch and Automatic Vehicle Location can contribute to enhance the effectiveness and productivity of these systems. The CeCo-TRANS suite is oriented specifically to the management and control of public transport vehicles via radio communications.

CeCo-TRANS integrates the most common transit needs to provide dispatchers and supervisors decision support tools to manage the operating environment:

- Automatic Vehicle Location
- Passenger Information
- Transit Security
- Traffic Signal Priority
- Communications Management
- Centralized control of vehicles by fleet division based on depot assignments.
- Data acquisition system for centralized control of the fleet.
- Customer information panels
- Support for Automated Vehicle Control
- Fully customizable dispatch screens

CeCo-SEC
for Law Enforcement and Fire Dispatch

Optimized for public safety requirements, this suite leverages PowerTrunk's experience over the last 30 years supplying turnkey solutions for Law Enforcement, EMS, and Fire Brigade agencies throughout the world. The suite is focused on resource management, call handling, and incident data acquisition, being one of its key benefits the seamless and automated integration among them.

Some of the outstanding features of the solution are:

Resource management and call handling:

- Multiple voice & data communication interfaces (TETRA, P25, MPT1327, analog radio, telephone, paging, GSM)
- Advanced telephone management (DTMF, call hold, call-back, call forwarding,...)
- Telephone Automatic Call Dispatching (ACD) with queue monitoring
- Automated patching between telephone and analog radio (CCIR and CTCSS tones)
- Automated patching between different radio channels and/or talk groups
- Call logging and quick access for last call replay.
- Phonebook management
- Customizable quick access console
- Integrated GIS capabilities, enabling:
- Automatic Vehicle Location using optimized polling algorithms
- Unit routing and directions
- Detailed unit and incident status display
- User configurable alarms display
- Indication of resources current incident assignation
- Incident data acquisition:
- Full access to incident records
- Advanced reports
- Web Administration
- Redundancy options for data integrity

CeCo-CAD
for General Purpose Dispatching

PowerTrunk is a world leader in the supply of professional mobile radio infrastructure with its state-of-the-art products for TETRA and P25. CeCo-CAD is a fully integrated dispatch solution connected to the main controllers of the radio communications infrastructure through standard Ethernet / IP interface. The highly configurable user interface allows configuring operation for a wide range of applications such as utilities, commercial, oil & gas, government, military, etc.

Some of the functionalities available in the CeCo-CAD suite include:

- Line connection with PowerTrunk's P25 and TETRA network infrastructure
- Support for cutover plan with interfaces to legacy systems such as analog and MPT-1327
- All TETRA and P25 voice & data services (individual / group calls, SDS, status, half-duplex and ful duplex calls, DGNA ...)
- Discreet listening
- Ambience listening
- Call Inclusion
- Call termination
- Fleet management
- Fleet status monitoring
- Priority and emergency call
- Pre-emptive press-to-talk
- Patching

PowerTrunk Solutions

Bluetooth®

This option enables more freedom for audio & data connectivity (without leads), using different Bluetooth accessories simultaneously: headset devices that comply Hands Free Profile, data devices that comply Serial Port Profile (SPP) and PTT devices.

It is the best option for certain applications such as connection with motorcycle-use Bluetooth® devices, connection to applications resident in PCs, laptops, tablets, Bluetooth®-based indoor location systems, etc.

Video

In conjunction with TETRA technology, PowerTrunk offers various video solutions.

Its range of vehicular consoles has been designed to provide a single MMI interface for different wireless technologies. 3G, TETRA, P25, WiFi, WiMAX and/or LTE could be integrated together. Whenever a user wants to send video, perform a group call,
query a database, or fill in a report, the MVC unit will choose the most suitable wireless technology available for each case.

The MVC-6000 offers advanced radio management, web browsing, mobile CAD functions, mobile office applications, and GPS navigation, and complements the functionality with a powerful video management platform, with enhanced recording capability and ability to receive and transmit video, just to mention a few features. And everything completely integrated with the PowerTrunk CeCoCo Series control center applications.

In the transport segment, the PowerTrunk TETRA solution for critical voice and data communications is complemented with a broadband radio access layer which supports applications such as:

- Real-time video to monitor from the Control Center images taken from inside the trains
- Real-time video to display in the driver cabin images of the station as the train approaches.
- File transfer between the Control Center and trains for various required operations.

E2EE (End to End Encryption)

PowerTrunk E2EE is based on a tamper-proof hardware module. It is a high level solution that automatically destroys the stored security parameters when tampering is detected.

It provides all the encryption, decryption, key management, and key storage services required for use in a TETRA communication system and meets the security requirements for cryptographic modules standard from the National Institute of Standards and Technology (NIST). PowerTrunk provides a complete E2EE solution composed of E2EE
TETRA terminals, E2EE infrastructure gateways, E2EE voice recording, and E2EE key management tools that manage the cryptographic features of the network.

WAP (Wireless Application Protocol)

WAP (Wireless Application Protocol) provides a universal standard to access interactive applications from the subscriber radio terminal. Examples of such applications in a professional environment as a police network are: databases of license plates, IDs, photographs, stolen items, etc.

Devices including the WAP Browser option connect to the WAP proxy through the TETRA network. This proxy provides access to the WAP or Web servers that host the applications. Besides, the proxy adapts the Web pages to the device capabilities. This includes page and image scaling according to the screen size, conversion between image formats if needed, etc.

Also, WAP Push services are offered, sending broadcast events to the subscriber terminal that allow it to download automatically the information.

SDM (Synchronous Data Manager)

The success of a TETRA system is based on the correct adaptation of radio means to the specific needs of the customers in terms of voice and, above all, data transmission.

For example, the incorporation of GPS modules into TETRA subscriber radio terminals means that the volume of positioning data significantly increases the traffic load of the communications system. At the same time, other users such as utilities and oil & gas companies have thousands of metering points, so they hope to use the new TETRA system to send their readings to centralized posts.

This massive incorporation of data in systems initially designed to support voice applications may, on occasions, affect the normal operation of the system.

With SDM (Synchronous Data Manager), PowerTrunk presents a solution that allows making use of the full power of TETRA for massive periodic data transmission.

PowerTrunk has developed an advanced procedure of optimized polling that allows elimination of random access in synchronous transmission of data to the system. The system reserves a certain percentage of the slots for transmitting data so that units do not compete for resources.

In addition, the system synchronizes the position requests in such a way to minimize queues, allowing simultaneous polling in each of the system control channels.

The optimized polling method integrated in the PowerTrunk-T system allows reducing up to 60% of the channels that would be necessary compared to an asynchronous solution.

We live in a rapidly changing world, and the time has come for critical communications systems to either evolve to the next level or become obsolete. With modern cellular communication now as the most widely used means of delivering information, and changing the way we interact with others on a daily basis, our public safety command and control centers likewise need to adapt to a new way of thinking.

A new approach is needed in which first responders and other agencies receive the right information at the right time, without being overwhelmed by information overload. Dispatchers need integrated applications that process and efficiently present essential information to allow fast and simple decision making.

Interoperability is a key factor in enhancing the response from 911 call centers for the community. The ability to share the information between agencies has proven to be vital in successfully managing major emergency situations, and interconnectivity between communications systems also provides for better coordination among organizations.

PowerTrunk has been dedicated to design and manufacture mission critical solutions since 1974. We know the importance of system availability, and ensuring product reliability is one of our main goals. Our next-generation command and control centers are a vital link between first responders and the public in an emergency.

Market Sectors

Public Safety
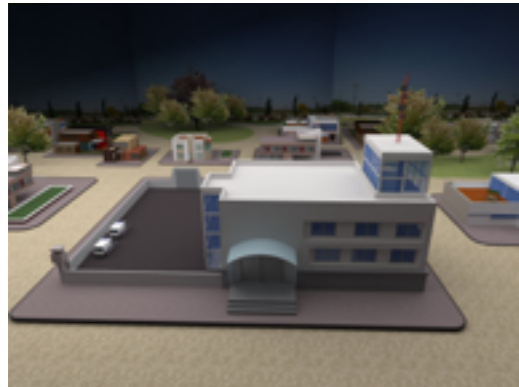
- Integrated communications system (radio, telephone, VoIP…). TETRA technology allows easy interconnection with other networks.
- Fast and reliable voice services. Fast setup calls, priority levels, emergency calls.
- Minimize TCO (Total Cost of Ownership) by enabling network sharing different organizations share the same network with total independence.
- Interoperability between different Public Safety agencies. CeCo-911.
- Vehicle & personnel location services (GPS) . SDM, CeCoCo GIS, CeCo-Fleet
- Advanced security mechanisms. Authentication, E2EE, AIE.
- Use of complementary functionalities to voice. WAP, broadband services in MVC-2000 and MVC-6000.

Transport

- Design and manufacturing control . Product and solution customization. Flexibility.
- Wide range of solutions according to the functionality required. Adaptation to the needs of each project, multiple products with different options: RTP Series, consoles, …
- Mobility. Radio technologies specially adapted to mobile environments.
- Maximum availability and reliability .Redundancy
- Data integrity and security. Standardized services such as authentication, encryption, etc.
- On-board equipment adapted to the transport sector. Compliance with railway regulation EN50155
- Useful standard services. Group calls, broadcast, ambience listening call, etc.
- Functionality specifically applicable for the transport environment.
- Global integrated solution . TETRA infrastructure, onboard terminals, CeCo-Trans, …

Utilities

- Network primary used for data. SDM, efficient method for data massive transmission, with 3 secondary control channels (SCCH), the entire TETRA carrier can be used for data.
- Robust communication. PowerTrunk provides several options for network coverage redundancy.
- Network growth capacity. PowerTrunk infrastructures are easily scalable.
- Possibility of additional services.

Municipal Services

- Voice and data services. TETRA supports simultaneous voice and data.
- Location services. GIS.
- Possibility of network growth. PowerTrunk networks are easily scalable.
- Integration with third applications. N2A (Network IP Interface Access).
- Use of additional broadband applications to TETRA. MVC-2000 and MVC-6000 integrate narrowband technology (TETRA) with broadband technologies in the same platform
- Different subscriber radio configurations depending on the users. Mobile, handheld, and desktop radios, radio modem, control unit for motorcycles, … and a wide range of radio accessories.

Airports / Seaports / Stadiums
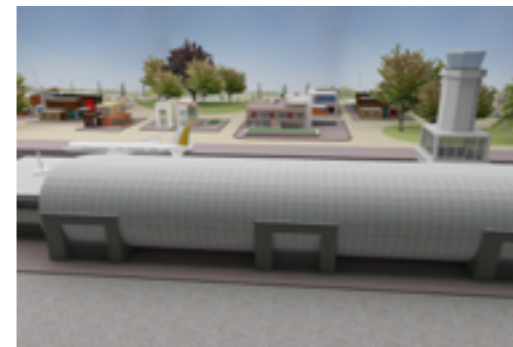
- High density of users in a small area, including indoor and outdoor zones.
- User Groups and emergency management. Group call and fleet management, DGNA groups, and emergency call and priorities.
- Security, Confidentiality and reliability. Authentication, E2EE / Air Interface Encryption (AIE), redundancy.
- Interconnection with other systems and 3rd applications. CeCoCo and N2A Interface.
- Location services for vehicles and ground personnel. Optimized real-time AVL solution (SDM).
- Database inquiries. Voice & Data convergence: WAP, MVC-6000.

Industrial / Mining
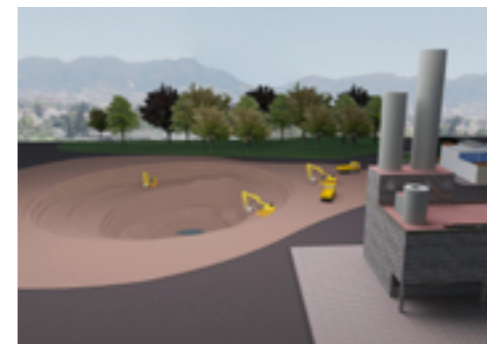
- Emergency situation management. Man-down functionality, emergency calls, DGNA.
- Audio management for noisy environments. High audio power, special accessories.
- Equipment resistant to dusty environments. Outdoor cabinets with high degree of protection, special carrying cases for extreme environments.
- Shadow areas, increase of coverage. MBS.
- Indoor coverage. No need of GPS or external synchronization in the infrastructure, internal SYNC board provides synchronization.

Military

- Secure communications. Encryption features: authentication, AIE, E2EE
- Fault tolerant infrastructure. Powerful redundancy mechanisms.
- Real time location. Optimized algorithm SDM, CeCo-Fleet, GIS CeCoCo module.
- Transportable and outdoor Site Base Station for temporal
- coverage. DBS, PBS.
- Dynamic groups for emergency situations. DGNA.