



The TETRA System of Hytera

PMR solution for public safety and challenging scenarios

The TETRA radio system ACCESSNET®-T IP from Hytera provides all the advantages and the full feature set of the open ETSI-standard TETRA. The highly scalable and modular system covers all requirements of demanding and especially security-concerned users and provides the radio coverage and services you need - from smaller networks to nation-wide public safety projects.



Key Features and Highlights

TETRA system from Hytera

TETRA is the acronym of Terrestrial Trunked Radio and is a global Standard developed by the European Telecommunications Standards Institute (ETSI) for digital trunked radio. TETRA is characterized by a high degree of frequency economy and voice quality. Secure voice and data transmission, excellent functionality and a wide range of features ensure the adaptability of Hytera's TETRA radio system to the demands of professional mobile radio (PMR) users.

Reliable and robust for high availability

ACCESSNET-T IP stands out by its high system availability and robustness against external influences. It is exactly the right choice to ensure reliable communication to stay connected anytime - especially in mission-critical situations.

To protect your communications against any unforeseen events and external influences, numerous redundancy options are available to e.g. cover important hardware components. With the geographical redundancy options it is also possible to distribute the intelligence within the system and further raise the robustness. Even a partial breakdown of the backbone will not affect the single radio cells thanks to the powerful isolated operation modes.

Save money with TETRA from Hytera

Investing in ACCESSNET-T IP will reduce your total cost of ownership (TCO), in terms of capital expenditures (CAPEX) as well as operational expenditures (OPEX).

- Efficient base stations with high receiver sensitivity, high transmit power and intelligent diversity optimize the link budget and significantly lower expenses for base station sites, as less are required
- The power saving mechanisms of the DIB-R5 base station family reduce the power consumption and thus the OPEX
- Virtualization and COTS (Commercial off-the-shelf) hardware reduce the hardware expenses while offering high performance at a lowered maintenance level
- Monitor and improve the system with administration software to optimize service expenses and use the network resources like frequencies most efficiently
- Benefit from Hytera's long-term support and keep your investment safe with regular software updates

Secure communications

One key aspect beside the reliability of communication is the security of communication, especially in public safety sectors. Hytera's radio system supports all the security features defined by the TETRA standard like air interface encryption (AIE), end-to-end encryption (E2EE) and authentication. Furthermore, ACCESSNET-T IP extends these security features by securing your communications to protect you from cyber-attacks.

- Manipulation of the system, e.g. installation of malicious software, is prevented by hardened operation systems and applications
- Tapping sensitive information, e.g. on transport layer, is prevented by encrypted network traffic and authentication of peers

Tailor and enhance your system

The system technology of ACCESSNET-T IP is scalable so that the system can grow over time. Depending on the requirements, the system offers options like e.g. different switching architectures, flexible synchronization mechanisms (GNSS, PTP), gateways and applications to make it "your" radio system.

Prepared for the future and its capabilities

The TETRA radio system from Hytera is state-of-the-art today and already prepared for the future, so your investment will be safe and can be used with capabilities like broadband data services. With Hytera, using LTE (Long Term Evolution) increases your possibilities like video streaming and to combine robust PMR with broadband capabilities. No matter if you want to supplement your TETRA system with the PTTconnect app, converge LTE and PMR with Multi-mode Radios or connect multiple radio systems with SmartOne: Hytera offers broadband today.



Your complete system from one hand

Comprehensive TETRA portfolio and service

Hytera offers a complete TETRA portfolio including infrastructure, terminals, applications and accessories and is the most competent solution provider for your TETRA system. From green field installations to network renewals, Hytera can offer turnkey solutions all from one hand for any needs and requirements. Even during the operational phase Hytera offers a broad service spectrum reaching from service level support to full network surveillance (Network Operation Center, NOC).

Gain flexibility

Virtualization

Many components of ACCESSNET-T IP are running in virtual machines (VMs), as virtualization allows providing software independently from dedicated hardware - even multiple VMs can be combined to run on one hardware platform. Besides the high flexibility and scalability, VMs offer additional availability and redundancy mechanisms. Combined with appropriate backup/restore solutions, VMs facilitate maintenance, as e.g. snapshots of previous points in time can easily be restored.

Powerful applications

Enrich your system with customized applications

Applications enhance the functionality of the radio system, by combining TETRA with dedicated functions needed to control your workforce and to support your business. Just to name some examples of the application-rich environment of Hytera TETRA:

- Dispatcher, to manage and control radio subscribers
- Voice Recorder, to record and analyze calls in the systems
- Automatic Vehicle Location (AVL), to locate and dispatch vehicles
- LIP Server (Location Information Protocol), to store and manage position-related messages received from terminals

Various tailor-made applications can be developed and connected to ACCESSNET-T IP via the powerful application interface A-CAPI (ACCESSNET-T Common Application Programming Interface).

Reuse your investment and information

Use your existing infrastructure

ACCESSNET-T IP perfectly supports the usage of your existing infrastructure to avoid additional costs and efforts.

- Existing IP infrastructure can be used to interconnect the individual network elements
- Existing user access control concepts, like e.g. rights/roles permissions, can be reused

Efficient and integrated network administration

Network Management System (NMS)

Offering a complete solution, ACCESSNET-T IP comes with an integrated and full-featured NMS. Thus, you have no expensive costs for 3rd party solutions to monitor and administrate your radio system. Interfaces support the connection to other systems, e.g. to existing systems or umbrella management systems.

The NMS comprises all tools to keep your system up and running and keep you up-to-date on system behavior.

- Monitor your system, its components and even connected equipment
- Remotely configure and maintain your system
- Keep control of your system and administrate its subscribers
- Optimize your system in terms of network and resource utilization
- Secure your system e.g. by disabling stolen terminals

Hytera TETRA Base Station Family

Powerful base stations for any purpose

The “everywhere” base station

DIB-R5 outdoor

The DIB-R5 outdoor is Hytera’s base station for operation in nearly every scenarios and environmental conditions. The light-weight and compact housing allows you to mount the DIB-R5 outdoor anywhere: Whether operated outdoor under harsh conditions or in underground areas, the DIB-R5 outdoor provides always reliable coverage and optimal reception.

- The DIB-R5 outdoor offers one channel per unit but can be upgraded by a second unit to a dual channel base station. Besides increasing the channel capacity also transceiver redundancy is supported to raise the availability
- The housing is dust and water proof (IP65) and can flexibly be mounted on masts or walls

The high-capacity base station

DIB-R5 advanced

The DIB-R5 advanced is the optimal base station for large networks and wherever the need for radio capacity is very high. The DIB-R5 advanced offers up to twelve Channel Units, providing a maximum of 48 radio channels.

To increase the availability, the DIB-R5 advanced offers different redundancy options to avoid “Single Points of Failures”.

The flexible base station

DIB-R5 compact

The DIB-R5 compact offers the same powerful radio performance as the DIB-R5 advanced and is the right choice if maximum flexibility is needed. The DIB-R5 compact offers up to two Channel Units, providing a maximum of 8 radio channels.

With its compact dimensions and ability to integrate into a standard 19” equipment rack, the DIB-R5 compact is the base station for flexible purposes.



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