

**Smart
Ammunition**

Arnega™

**for special services staff and
telemedical applications**



Autonomous media communication system

Arnega™ system has been developed for equipping special task forces and special services staff in order to help them solve unit management tasks, improve the effectiveness of interdepartmental cooperation, increase the security of the activities conducted and provide operational support of collective decision-making.

The system supports videoconferencing that can bring together different experts from anywhere in the world for real time brainstorming and decision-making.

The system has a modular architecture and has a wide range of options for solving various tasks. The basic version supports wireless audiovisual communications with the head office.

The extended version supports:

- Audiovisual communications with the other workers onsite and between the team members,
- Connection of additional autonomous metrological equipment for collecting local data and/or controlling physical and psychological state of a staff member;
- Additional equipment for real-time positioning of a staff member.

System Structure

The videoconferencing module as well as all other additional equipment is inbuilt into a specialized wearable vest, backpack or a belt; while the camera is inbuilt into a protective helmet. Such construction keeps hands free providing the worker with a complete freedom of movement.

Audio and video data is transmitted from the equipped staff member to the coordination center; audio communication is bi-directional.

In addition, the system can be equipped with a micro display integrated into the glasses worn by the worker for a duplex video mode.



The System includes.

1. Mobile component:

ARNEGA-MAX (semi-rugged, fully rugged).

- Helmet equipped with an audio and video device.
- Unload vest (protective suit (2-6 ballistic protection category) or backpack with a power supply and additional equipment.



ARNEGA-MINI (Lightweight version to be used in environments that do not require physical protection of the worker).

- Video headset with an inbuilt video camera (monocular or stereoscopic)



- Backpack or waist belt with a rugged computer and a power supply.

2. Computing & communication device:

- Protective case with switchboard equipment and autonomous power supply, rugged notebook or communication module.

Protective case



Rugged notebook



Communication module



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Depending on the mission/task at hand, the surrounding environment and the required level of task completion control (interaction between the user, with the control center), the user is equipped with the following equipment:

- Camera type – normal, wide angle, long-focus or universal
- Light – lamp, infrared light
- Laser pointer

Other auxiliary equipment:

- High resolution camera with a zoom;
- Glove manipulator (for remote system control, including remote-controlled airplane);
- GLONASS, GPS, GALILEO module, inertial tracker (for worker positioning).

The system can be configured to be used by a team where actions of the team or of one particular team member can be displayed.

Repeaters and cellular networks can be used for increasing the working range of the equipment.

The advanced version of the system supports media communication with a situation/crisis or dispatch center, where a remotely-located group of experts receives data from the staff onsite, analyses it and sends back spatial models and other visual instructions on completing the task in real time. The dispatch center is equipped with supercomputers for greater processing power and all necessary databases.

Tradition Group designs, develops and manufactures custom-made autonomous media communication systems according to your needs & requirements.



Main application areas

1. Industry & Transport. To survive in the modern highly competitive world businesses have to search for new methods and technologies that will help provide a simultaneous growth of business effectiveness and security, lower expenses and improve quality, as well as minimize downtime and losses. **ARNEGA™** - a mobile wireless videoconferencing solution can help businesses improve all of the above factors in any industry.

a. *Remote expert support.*

ARNEGA™ will help production and service personnel to work with corporate knowledge bases and experts in a remote mode, whether it's on the oil platform or in the mine, while restoring or constructing transportation facilities, in the auto service center, workshop or railway/bus depot – anywhere and anytime **ARNEGA™** will guarantee the security and effectiveness of the works conducted.

b. *Telemedicine and distance education.*

ARNEGA™ will help bring medical care to a new level lowering the risks of losing one's health and life by either allowing the patients to have direct communication in real time with the their doctors or providing qualified first aid in case of accidents and casualties through remote support of a number of experts. Aside from increasing the overall safety & security of the citizens, **ARNEGA™** helps decrease insurance costs. The system is also effective for distance learning, training and knowledge exchange between the doctors.

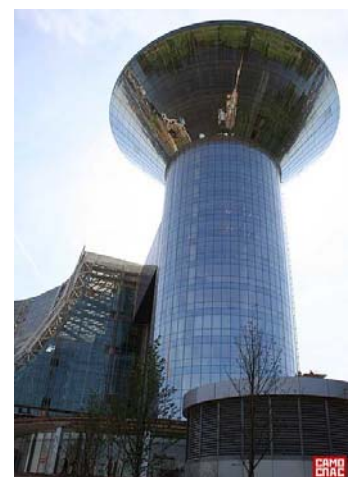
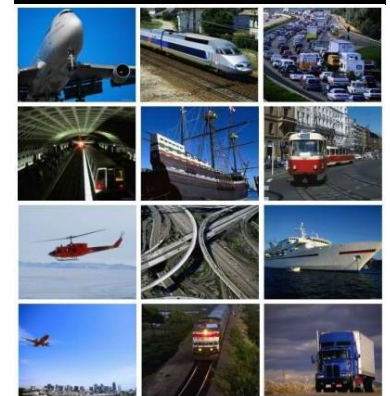
c. *Remote sales and customer support.*

Remote object or complex process demonstration to an unlimited number of users, problem search and recording with video logging will help many businesses provide quality classification of warranty and other cases of product malfunction.

2. Government and civil security. The need to cut down the government budget spending is accompanied by the citizens demanding high quality and transparency of the government services. Increasingly complex infrastructure of civil security alongside with risks of terrorist acts and man-made catastrophes require rapid and adequate response from the government. Introduction of the **ARNEGA™** media communication system and its new options will significantly help improve the work of various government technical and operational services as well as lower the aggregate costs and improve citizen and staff safety and security.

a. *Technical supervision and maintenance.*

When supervising works being conducted on complex technical objects and at construction sites, the supervisor can receive a teleconsultation and record all object testing procedures. This possibility provides transaction transparency, helps exclude corrupt transactions or negligent behavior onsite while overall decreasing the risks of man-made catastrophes and improving the quality of technical maintenance;



b. *Ambulance, firefighters, rescuers and first aiders.*

ARNEGA™ will help save the lives and health of many people thanks to the possibility of receiving remote expert medical and technical support at the place of the accident; the system will likewise help lower safety risks and number of rescuer and firefighter casualties when carrying out rescue works in hazardous conditions;



c. *Counterterrorism and defense.*

ARNEGA-ARMOUR is built using the latest technologies in ballistic protection ensuring effective work of storm troopers or combat engineers in real time interaction mode with the command staff and expert groups. Event logging and video analysis module will help bring the quality of special operations, their preparation and the effectiveness of personnel actions to a new level due to cognitive support, hazards identification and classification.



ARNEGA™ can be integrated with personnel, vehicles and infrastructure real-time positioning systems providing the management with full situation awareness and ability to make informed decisions in real time.

3. **Medical care, education and culture.** **ARNEGA-MINI** system will open up wide opportunities for the citizens to expand the range of their daily activities, discover new creative horizons while maintaining an adequate level of medical care, giving them unprecedented mobility both in terms of territorial freedom of movement as well as unlimited access to distance learning and training. Journalists, writers, media artists and performers will receive a powerful creative tool that will help connect the real and the virtual worlds for building new culture.