Technical Specifications

### Communications System
- VoIP base Session Initiation Protocol (SIP) and secure SIP
- Dual Ring Gigabit Ethernet Backbone – configurable to operate in fallback mode without performance degradation
- System and radio management

### Power Supply
- 18-36 VDC input, MIL-STD-1275 compliant distributed power supply

### Interfaces
- Ethernet (IP Phone / IP Radio / Data Terminals)
- RS232
- Analogue audio (4-wire Tx / Rx / PTT)
- Analogue alarm inputs and loudspeaker outputs

### Environment and EMI/EMC Qualifications
- Operating Temperature: MIL-STD-810G (-40°C to +60°C)
- Storage Temperature: MIL-STD-810G (-55°C to +71°C)
- Solar: MIL-STD-810G
- Fungus: MIL-STD-810G
- Vibration: MIL-STD-810G
- Shock: MIL-STD-810G
- Salt Fog: MIL-STD-810G
- Humidity: MIL-STD-810G
- Ingress Protection: IP68 (Water Submersion at 1m)
- EMI/EMC: MIL-STD-461E
- Vehicular Supply Standard: MIL-STD-1275D

Our Services
- System conceptualisation and design
- Manufacturing and procurement
- Implementation
- System integration
- Testing and commissioning
- Documentation and training
- Supply support
- Warranty and maintenance

Accolades
- CRP (Congrès de la Radiocommunication Professionnelle) Outstanding Product Trophy for SuperneT Radio Gateway
- Asia Pacific ICT Awards (APICTA) – Merit Prize (Communication Applications Category) for SuperneT Integrated Communications System
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Patents
- Voice over the Internet Method and System [SG: P-No 152824 (WO 2008/069754)]
- Uninterrupted VoIP Radio Gateway Services through Clustering [SG: P-No 143323 (WO 2007/070009)]
- Wireless Communication System [SG: P-No 120810 (WO 2005/067165)]
- Redundant Power Supply for Power-Over-Ethernet [SG: P-No 132094 (WO 2006/052277)]
- Dual Mode ISDN S/U Interface Converter [SG P-No 88454 (WO 02/84983)], [US 7,016,374 B2]
Vehicular Integrated Communications System

The Vehicular Integrated Communications System (VICS) is a versatile, rugged and reliable integrated communications and network solution for military and paramilitary applications in harsh tactical and mobile environments. It is suitable for deployment on both wheeled and tracked combat vehicles, as well as naval/maritime vessels. The VICS is a full IP system that facilitates the convergence of voice and data (including video) services for collaborative engagement in mission critical operations. It serves as a unified communications platform to provide interoperability between heterogeneous communications systems (IP and non-IP).

**Key Components**

<table>
<thead>
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<th>Form &amp; Fit</th>
<th>Key Features</th>
<th>System Capabilities</th>
<th>Various Application Platforms</th>
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<tr>
<td>Size (mm)</td>
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<td>Weight (kg)</td>
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</table>
| Gigabit Switch Unit | • A 10/20-port Managed Gigabit Ethernet Switch that provides additional Ethernet interfaces | • Provides intra-vehicular connectivity with communications server and security features |**Integrated C4 Mode**

The entire suite of C4 system (including Battlefield Management System and Electronis) resides on the VICS infrastructure to integrate voice, data and video. With the Communications Processor Server (CPS)'s role ID addressing feature, inter-vehicular communications is made easier for the crew as it takes over the complication of specific network selection. The fully redundant CPS data link server provides end-to-end data services among vehicles, across echelons and with other forces.

**System Scalability and Reliability**

The VICS adopts a scalable, modular and expandable architecture to support different interface requirements and configurations. In addition, its survivable dual ring infrastructure and distributed power supply are designed to enhance system reliability.

**Integrated Inter-communications Mode**

The VICS can be configured for a maximum of:
(i) 20 crew units or 40 pinaural headsets,
(ii) 48 ports for CNR or SDR, and
(iii) multiple IP connectivity and digital inputs/outputs.

The digital 1 Gbps ring serves the voice and data traffic separately, to provide redundancy and reliability. Any crew unit can be programmed as a primary or secondary master control station. This mode is suitable for any combat vehicular platforms.

**Single Station Mode**

In the simplest form, the VICS functions autonomously by providing a complete vehicle intercom system, including two radio interface controls, an Ethernet-to-external IP device and/or data terminals. This mode is suitable for light variant combat vehicular platforms.

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Key Features

- Tactical network for digital transformation
- High-speed tactical network for mission critical communications
- Open vehicle architecture for easy integration
- Various Application Platforms

System Capabilities

System Integration and Interoperability

A secure and reliable communications system is critical to the success of collaborative engagement between friendly forces. The VICS enables integration and interoperability of various communications systems.

Various Application Platforms

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