

System Integration – Our Services



Mobile Solutions

Container Solutions

EMC Service

Optic Cable Manufacturing

Logistics and Technical Documentation

Training

The steep GmbH is specialized in the integration of innovative and premium information- and communication technology into mobile and highly mobile solutions for network-enabled operations.

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Smart 19" Case-Technologies for the
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Mobile Solutions

Deployable Network

The deployable network has the purpose of providing a self-supporting, localized network infrastructure for units of troops in the field. In addition to providing a network access for users and a local supply, it ensures all features of a convergent network according to public standards and, by doing so, enables the operation of all applications (for example central services, command and expert information systems) on a standardized network.



Smart 19" Case-Technologies for the Armed Forces Guidance Information Systems

steep developed a Smart 19" Case based on a platform of intelligent and innovative technologies which will improve the command capabilities of the armies sustainably. It consists of a system-compatible integration of hard- and software as well as of the interaction of communication measures and works in a holistic information network.

Features:

- IP65 in operation and transport
- Zone 1-certified 19" Case
- EMC Mil-Std 461/462
- Temperature range in operation -35°C to +60°C (backpack climatisation)
- Environment Monitoring System (EnMoS):
Temperature monitoring, humidity monitoring, smoke monitoring, lid monitoring, status display of the active components, boot processes, clear text display, connection of more than 90 sensors possible, compatible with Realtech etc.



Container Solutions

Stationary Remote Detection

The Stationary Remote Detection is a deployable container solution for access control to field camps or other stationary facilities. The system includes various access control systems and enables the remote detection of dangerous objects and persons.



GSCS Eurofighter

The Ground Support Container System is a deployable and modular system for operations on a Deployed Operation Base for 6/12 Eurofighters. It is operated by an independent electricity supply and air-conditioning and provides three differently classified networks. The system can be operated up to the secrecy level SECRET and has a radio-integration into a VOIP environment.



Container Solutions – Service Overview:

- Installation and adjustment
- Fault analysis
- Documentation
- Functioning tests and system checks
- Commissioning and system support
- Maintenance and Repair
- Procurement of new components
- Assembly and disassembly for transportation
- After-sales and on-site service (also international)



System Integration

Our services in the field of system integration range from project management via engineering up to production and commissioning. Security systems for telecommunications facilities and control systems for industrial production are additional reference projects. We supply the armed forces, police and aid organisations with fully equipped mobile operations centres. Furthermore, our customers can also benefit from our cross-functional services that are essential for their system integration. These include services for contract design, documentation and maintenance and repair of technical systems.

System Development – Mechanical and Electrical Construction

In four construction phases, we plan, conceptualize, design and realize the technical product. Customer specific requirements will be implemented in accordance with valid norms and regulations DIN EN and for military requirements additionally according to VG-standards. We conduct initial and recurrent tests according to DGUV Regulation 3.

Furthermore, we develop:

- CAD-based circuit diagrams
- Lightning-, overvoltage protection-, and grounding-concepts
- Test instructions in accordance with DIN EN
- Proof of electrical security and compliance with norms by an independent surveyor

Engineering Service

The range we offer to our customers goes far beyond the development and design of mobile systems. Our system support service includes technical documentation, maintenance and repair as well as major overhaul of technical facilities and systems. The aim of our solutions is to deliver all required processes from a single source, in order to ensure flawless operation and handling for our clients.

System Support – Our Services:

- Maintenance and repair
- Spare parts management
- Storage, materials and management
- Testing and certification
- Technical documentation

EMC Service

In our EMC centres in Bonn and Ottobrunn, the steep GmbH experts standard-compliantly test and check electronic components, equipment and systems in terms of electromagnetic compatibility (EMC). Qualified and experienced engineers advise and accompany our customers from research and development to qualification and production maturity of electric and electronic products. We will recommend ways for EMC interference elimination and offer first aid in the areas over-

voltage protection, shielding, filtering and grounding. This way, re-examinations can often be prevented. The EMC centres of the steep GmbH and its own calibration laboratory are accredited by the German accreditation body (Deutsche Akkreditierungsstelle GmbH; DAkkS) according to DIN EN ISO/IEC 17025.

The competence areas of our EMC centres are:

- Emission control
- Aerospace
- Defence technology
- Automotive technology
- Marine technology
- Measurement and control technology
- Rail technology
- Medical equipment
- Information technology

Our Services - Overview:

- EMC testing
- EMC interference eliminating
- EMF measurement
- Tempest testing
- EMC engineering and consulting
- Accredited calibration
- NEMP



Tempest Testing

Hardware that is used for the unencrypted processing and transferring of classified material is subject to authorisation by the German Federal Office for Information Security (BSI). Authorisation is granted for so-called “radiation-secure” hardware, meaning hardware where all compromising signals are prevented. Furthermore, so-called “low-radiation” hardware can also obtain authorisation. This concerns appliances that are referred to as “zone equipment”, meaning hardware that has a limited radiation and only poses a very limited risk due

to being operated in a specific zone (the former “COMSEC zone”). After successful admission measurement (type testing), serial equipment needs to pass testing of individual devices. The steep GmbH is an authorised test centre that is certified to conduct testing according to the BSI zone procedures on products that are approved by the BSI as zone material. We attach our own badges and seals to IT products as an approved proof centre.

Cable Confectioning

The steep GmbH manufactures customized fibre-optic cable assemblies for a wide range of military and industrial harsh environment applications.

The Expanded Beam Connectors offer high performance, flexibility and cost efficiency combined with a simple termination process allowing rapid in-field termination and repair. High mechanical stability of connector and cable and easy handling make it the ideal connector system for data transmission and communication.

Features:

- Sturdy construction enables very reliable optical connections
- Dust and waterproof enclosure acc. to IP67
- Easy plug-in, many connection cycles possible without any decrease in performance
- Single-mode and multi-mode applications possible
- Hermaphroditic design simplifies the plugability (clutches not necessary)
- Snap-in self-aligning connector housing
- Temperature range: from -55 ° C to +85 ° C operating and storage
- Plug is repairable
- Easy to clean in the field if necessary

Our range of cable types includes:

- Expanded Beam Connectors – 38999 Series III
- Maxi Connectors
- Senior Connectors
- Universal Tactical Field Splices
- Junior Connectors
- Mini Connectors
- Flexible Field Splices
- Tactical Cable Assemblies

Logistics and Technical Documentation

The steep logistics and documentation department issues operating instructions, service and installation instructions, spare parts catalogues, circuit diagrams, manuals and training literature. For this purpose our editors develop concepts in co-operation with our logistics specialists. Based on configuration management (CM) we develop concepts for the maintenance of equipment in terms of supply and serviceability of the product during the entire product life cycle (PLC).

This includes the management processes of Integrated Logistic Support (ILS) und Logistic Support Analysis (LSA). The instructions (assembly, disassembly, maintenance etc.) for the spare parts and consumable material determined in logistics are then described according to the standards of the client in descriptive documentation.

Training

In addition to our product-related services, we also support our customers in the area of Logistics and Technical Documentation with training and advanced education of their specialist staff.

steep can draw on extensive experiences with the various forms of e-learning and, on this basis and in consultation with the customer, decides in which areas interactive training solutions such as Computer-based Training (CBT), Web-based

Training (WBT) or complex virtual 3D trainings are suitable and in line with demand.

In connection to training, steep offers:

- Individual solutions and customized concepts
- Modern visual representation
- Optimum target group qualification



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