

# shaping the future ...in TACTICAL COMMUNICATIONS

## NETWORKING EQUIPMENT & ACCESSORIES



# Tactical Communication Networks for the Future

The current evolution of tactical scenarios based on Ethernet networks is increasing the need to integrate digital voice over IP (VoIP), file transfer, image and video transmission and web based applications on the field. The digital IP based ICC-201 intercom system and PRC-525 tactical combat net radio comply with the aforementioned needs, improving simultaneously the connectivity, interoperability, flexibility and mobility.

EID Tactical Network Solutions bring to the market a product line that fits C4I costumer needs increasing the command, control and communications capability in a seamless way providing a full range of solutions to help the deployment of state-of-the-art IP based tactical networks, from simple wire to optical fibre Ethernet converters and vehicular power supplies to sophisticated rugged servers, rugged router/switches, radio access points and radio-VoIP gateways.

## Product Overview for Ethernet IP based tactical communication networks



# ICC-201 Applications

The **ICC-201 Digital Intercom System** has a key role on tactical Ethernet solutions since it is an IP based concept that enables the integration and deployment on tactical operational scenarios in a robust, compact and seamless way.

It is based on a hardware infrastructure and software applications suite for vehicular and shelter-based communications such as armoured vehicles, small vessels, shelters or other specific costumer systems. Several software applications can be installed, providing simultaneous functionalities on the same unit:

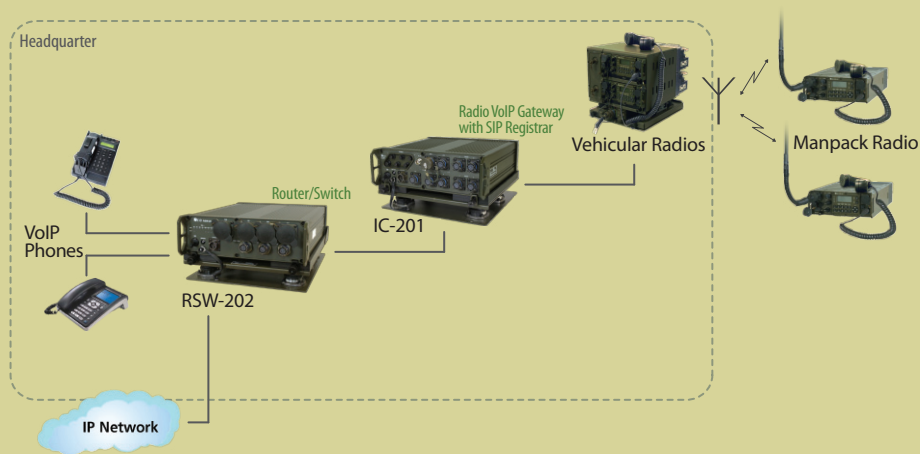
## ▪ Radio VoIP Gateway

Enables the integration up to four radio nets on military VoIP (Voice Over IP) networks; it allows calls setup from a VoIP phone to a radio net and from one radio to a VoIP phone using DTMF signalling over the air and voice prompts. An embedded SIP registrar is also available.

## ▪ Intercom

Allows intercommunication between crew members and external parties via radio communication; for further details concerning this application, please see the specific leaflet "ICC-201 & ICC-251 Intercom systems".

### Radio VoIP Gateway voice only mode operational scenario



### Radio VoIP Gateway voice and data operational scenario





# SR-202 Rugged Server

The **SR-202** is a compact and rugged server dedicated to run specific customer software applications, either locally or through Ethernet client/server connections, such as Battle Management System and Military Message Handling System in IP based tactical networks.

It features several connectivity peripherals like USB, RS232, VGA, Ethernet and when required a removal HDD bay for data protection (SR-202A). The optional CL-201 box allows the use of commercial devices up to 4 x USB and 2 x RS232 with standard commercial connectors in a rugged enclosure.



## Technical Characteristics

### Electrical

#### SR-202 / SR - 202A

|                    |  |
|--------------------|--|
| Power Supply       | 19 to 33 VDC (MIL-STD-1275B)   |
| CPU                | Intel Core Duo @ 2.16GHz; 4096KB L2<br>Cache with Speedstep power management |
| RAM                | 2GB  |
| Ethernet Interface | 1 x 10/100 BaseT   |
| USB                | 4 x USB 2.0  |
| Serial             | 2 x RS232  |
| VGA                | 1 x XVGA (1280 x 1024)   |
| Storage            | 128GB SSD  |

#### CL-201

|        |                                |
|--------|--------------------------------|
| USB    | 4 x USB 2.0 (USB-A Connectors) |
| Serial | 2 x RS232 (DB9 Connectors)     |

### Environmental

#### MIL-STD-810F

|                       |                  |
|-----------------------|------------------|
| Operating Temperature | -20 °C to +55 °C |
| Storage Temperature   | -40 °C to +85 °C |
| Shock                 | method 516.5     |
| Vibration             | method 514.5     |
| Leakage               | EN 60529 IPX5    |

### Mechanical

#### Dimensions (W x D x H)

|                 |  |
|-----------------|--|
| SR-202/ SR-202A | 280 x 300 x 88 mm (stand alone)<br>295 x 302 x 152 mm (with vehicular mount) |
|-----------------|--|

|        |                   |
|--------|-------------------|
| CL-201 | 174 x 54 x 110 mm |
|--------|-------------------|

#### Weight

|                  |  |
|------------------|--|
| SR-202 / SR-202A | 6.0 Kg (stand alone)<br>10.6 Kg (with vehicular mount) |
| CL-201           | 0.7 Kg   |

## CL-201 Connection Box for SR-201

The **CL-201 Connection Box** was designed to allow the use of commercial devices such as keyboard, mouse, webcam, etc, with four dedicated USB-A and two DB9 RS232 standard connectors.

It is linked to the SR-202 through an interconnecting cable up to 4 meters long. When the CL-201 cover is fitted, mechanical protection to the connectors is provided as well as protection against water jets.



# RSW-202 Rugged Router / Switch

The **RSW-202** is a rugged and powerful Router / Switch to deploy IP based tactical networks; it was designed for operation in tactical environments and specially prepared for vehicular usage either installed on a docking station or standard 19" rack.

The RSW-202 implements a wide range of routing protocols such as RIP, RIPv2, OSPF (Open Shortest Path), BPG (Border Gateway Protocol) and integrates also Firewall, QoS, IPSEC, VPN Tunnelling, NAT and DSCP.



## Technical Characteristics

|                       |   |                               |   |
|-----------------------|---|-------------------------------|---|
| <b>Electrical</b>     |   | <b>Routing Protocols</b>      | RIP, RIP V2, OSPF and BGP                 |
| Power Supply          | 19 to 33 VDC (MIL-STD-1275B)  | <b>Other Features</b>         | Firewall, QOS, IPSEC, VPN and DSCP        |
| Switched Interfaces   | 4 x 10/100 Fast Ethernet  | <b>Mechanical</b>             |   |
| Routed Interfaces     | 4 x 10/100 Fast Ethernet  | <b>Dimensions (W x D x H)</b> |   |
|                       | 1 x SHDSL (up to 2.3Mbps; ITU-T G.881.2 Coding and G.994 Handshaking), optional | RSW-202                       | 280 x 393 x 88 mm (stand alone)           |
| <b>Environmental</b>  | <b>MIL-STD-810F</b>   |                               | 295 x 397 x 154 mm (with vehicular mount) |
| Operating Temperature | -20 °C to +55 °C  | <b>Weight</b>                 |   |
| Storage Temperature   | -40 °C to +85 °C  | RSW-202                       | 6.5 Kg (stand alone)                      |
| Shock                 | method 516.5  |                               | 11.1 Kg (with vehicular mount)            |
| Vibration             | method 514.5  |                               |   |
| Leakage               | EN 60529 IPX5   |                               |   |

# TMC Tactical Media Converter

The **TMC – Tactical Media Converter** is a compact device that converts two Ethernet copper twisted pair channels into light signals for communication over optical fibre cable.

It is ideal for tactical scenarios where electro-optic media conversion is needed, like optical links between deployed shelters or base stations, vehicles with turret (avoiding the need of optical slip rings), etc.

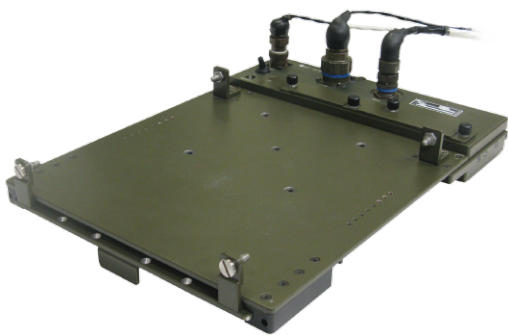
The TMC is available in two variants: a single mode version (Ethernet 100Base-LX10) and a multimode version (100Base-FX), both ruggedized versions compliant with Military Standards.



# DS-101 Docking Station for Laptop

The **DS-101** is a docking station for rugged laptops in mobile and fixed applications; the unit provides mechanical mounting with shock absorbers and easy and fast hold and release mechanism designed for rugged laptops.

The unit provides the power voltage to the laptop from a 24 VDC input according to MIL-STD-1275B; three RS232 and one Ethernet port from the laptop are available in rugged connectors to the vehicle or shelter harness.



## Technical Characteristics

| Electrical        |  | Environmental          | MIL-STD-810F      |
|-------------------|--|------------------------|-------------------|
| Power Supply      | 19 to 33 VDC (MIL-STD-1275B)                                   | Operating Temperature  | -20°C to +55°C    |
| LAN Interfaces    | 1 x 10/100 Fast Ethernet (bypass from the laptop)              | Storage Temperature    | -40°C to +85°C    |
| Serial Interfaces | 1 x RS232 (bypass from the laptop)                             | Shock                  | Method 516.5      |
|                   | 2 x RS232 (Virtual serial ports from one laptop USB connector) | Vibration              | Method 514.5      |
|                   |  | Leakage                | EN 60529 IPX5     |
|                   |  | Mechanical             |                   |
|                   |  | Dimensions (W x D x H) |                   |
|                   |  | DS-101                 | 316 x 430 x 82 mm |
|                   |  | Weight                 |                   |
|                   |  | DS-101                 | 6.0 Kg            |

# EA-1025 Tactical Power Unit

The **EA-1025** is a 1KW Tactical Power Unit able to supply 24VDC up to 5 communication equipments and charge simultaneously 2 laptops from 230V AC or external 24 VDC battery. It also implements a power distribution system with individual fuse protection on each output.

Other features such as battery voltage monitor / alarm and 24 VDC battery charge from the mains 230 VAC are also built in a watertight housing. Other tactical power units are available such as EA-522 for 500W systems.

EID also provides custom power solutions such as laptop chargers, battery chargers, power inverters, power distributors and power suppressors (MIL-STD-1275B compliant) designed under specific costumer requirements.



# Full Product Range

## Operational Scenario



- Voice Path
- Data Path
- BMS Battle Management System
- MMHS Military Message Handling System
- SHDSL Symmetric High-Speed Digital Subscriber Line

## Tactical Network Communication Solution

- Radio VoIP Gateway
- Radio Access Point
- Server
- Router / Switch
- Media Converter
- Docking Station
- Power supply

P.O. Box 535  
2821-901 Charneca da Caparica · Portugal  
Tel.: (+351) 21 294 86 00 · Fax: (+351) 21 294 87 00  
E-mail: [eid@eid.pt](mailto:eid@eid.pt) · [www.eid.pt](http://www.eid.pt)

