DEFENDING WORLD SECURITY

M9665 C 3G IDO

Independant Digital Repeater 3G Indoor (IDR 3G IDO)

CASSIDIAN

AN EADS COMPANY

The CASSIDIAN® M9665 C 3G IDO is designed to provide secure group data and voice communica¬tion. It is used to create RIP radio coverage independently of or as an extension to TETRAPOL network coverage (coupled with the radio AG) and is compatible with every type of TETRAPOL radio terminal.

In addition it has the benefit of high quality radio coverage over a wide area, by interconnecting RIP cells over an IP link.

As it is easy to install and quick to use, the M9665 C 3G IDO is instantly operational. Compact (19") and rackable, it can be installed in a building or in a vehicle.

It is an ideal solution for public services, such as the fire service, working in critical conditions.

Features

Activation

- 100 - 240V AC or 10 - 24V DC power supply
- Internal equipment alarm information provided by a contact for remote supervision

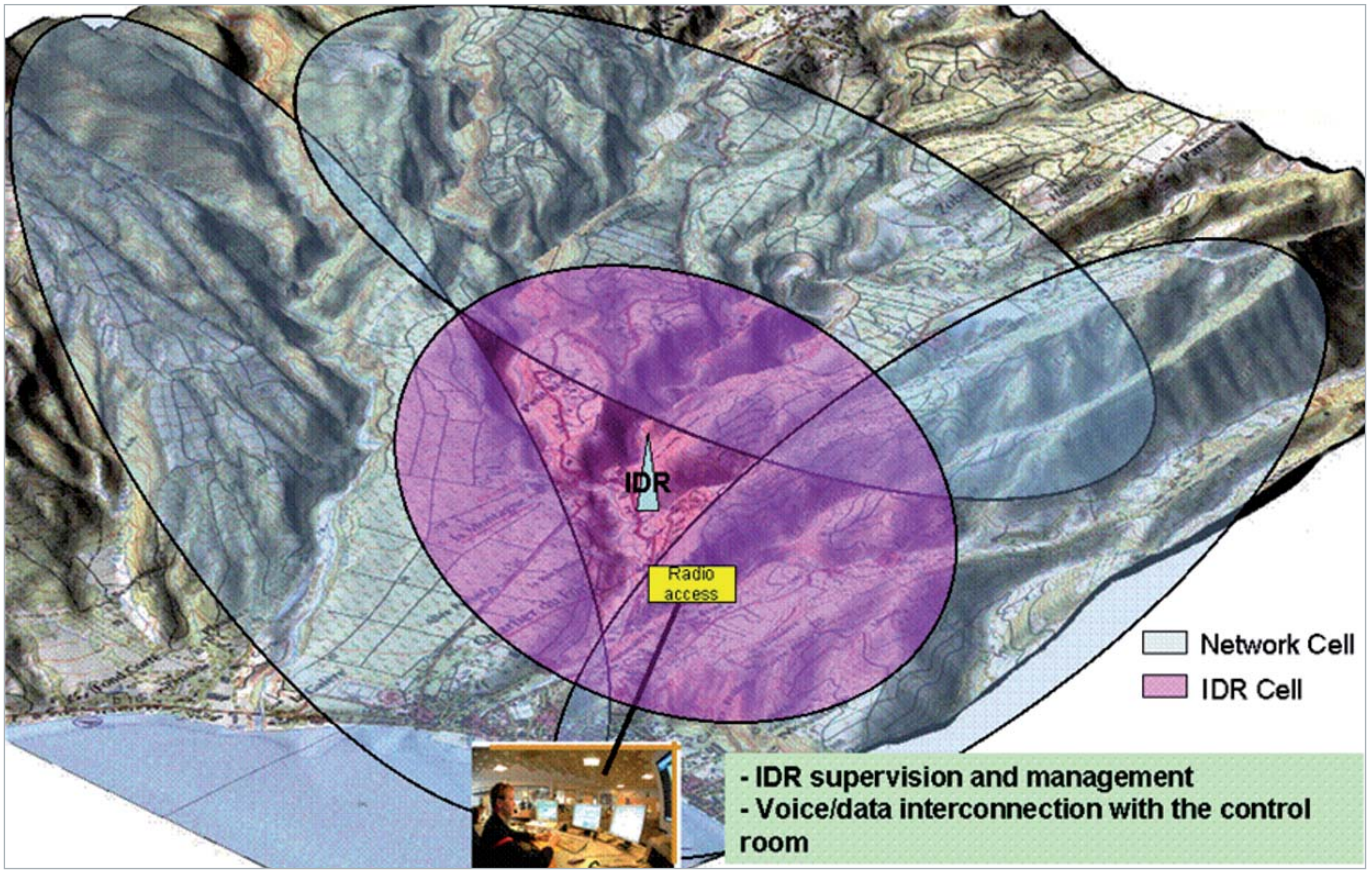
TETRAPOL® features

- Implementation of independent TETRAPOL® radio coverage (1,5W/3W/10W/15W)
- Operation (activation and alarm supervision) over an Ethernet link via a web browser. The internet configuration pages are installed in the equipment
- Extension of relayed TETRAPOL network coverage when a GATEPRO interoperability case is attached
- Communication operator with the RIP cell via a radio AG (voice and data)
- Open channel in semi-duplex mode
- Dedicated RIP mode channels
- Voice communications in¬dependent of TETRAPOL relayed network communications
- TETRAPOL® key-based end-to-end call encryption independent of the RIP-IDO

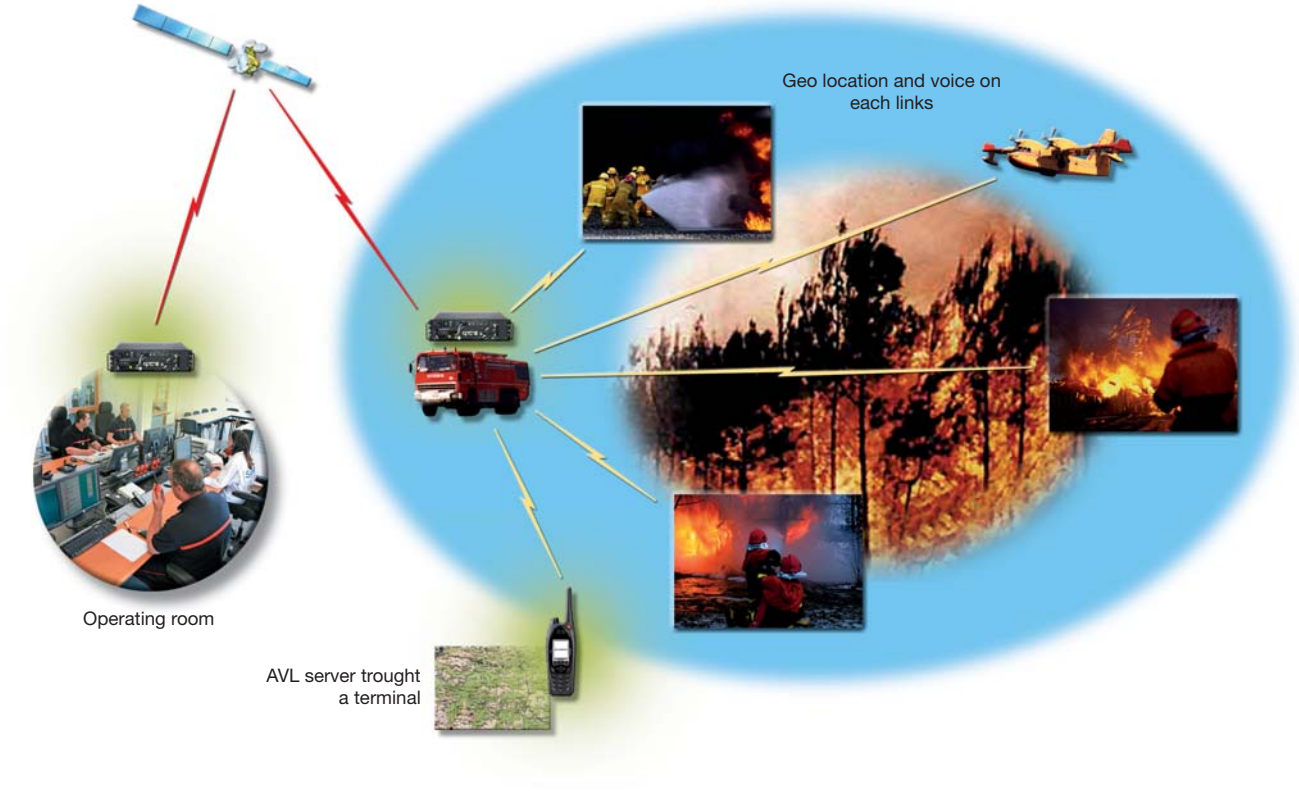
Options

- Optional second duplexer to allow the use of a second antenna (same reception performances, transmission at 0,75W/1,5W/5W/7,5W)
- Ethernet link used to connect 2 RIP cells. This feature allows the option of having voice and data communication common to both cells
- Data possibilities of transmitting SMS, of Status and geo location

Add-in radio coverage at a TETRAPOL network coverage



Interconnection of field IDR cell with the IDR cell of the crisis cell at the control room



Components and interfaces

- The accessories following are included in the product IDR 3G IDO. It does not need any additional accessory to use the IDR:
  - A magnetic antenna with her cable
  - A power supply cable 100-240 V if AC option is chosen
- Several possible configurations:
  - Indoor posed on a support or installed in a cabinet with 19" format with AC power supply 100-240 V AC
  - In a vehicle with DC power supply 12-24 V
  - With his own magnetic antenna or an external antenna

Standard configurations

Reference	Description
M9665 C 3G UL AC	IDR with Ethernet port 380-430 MHz 100 - 240 V AC
M9665 C 3G UL DC	IDR with Ethernet port 380-430 MHz 12 - 24V DC

Availability according to frequency sub-bands and relevant duplexers (see technical specs below).

Standard sub band (NB02): uplink: 380-385 Mhz/downlink: 390-395 Mhz.

Standard sub band (LU08): uplink: 385-390 Mhz/downlink: 395-400 Mhz.

Standard sub band (LU12): uplink: 413-418 Mhz/downlink: 423-428 Mhz.

Options to be ordered separately

Options are not mandatory and depend on the customer's requirements.

Reference	Description
M9665 C OPT POWER	Back up power supply
M9665 C OPT DC POWER	DC power supply module 12V DC
M9665 C OPT lien inter RIP	Licence validating the link with an other IDR
M9665 C OPT Data	Licence validating the data on IDR mode
M9665 C OPT DP AN	Antenna cable (20 m)
M9665 C OPT DX2	Second duplexer

Technical specifications

- Size: 400 x 480 x 135 mm
- Weight: < 20 kg
- Power supply: 240-100 V AC 50-60 Hz
- Consumption
  - 12-24 V DC on order
  - AC: 150 W max TX at 15 W
  - DC: 180 W max TX at 15 W
- Cable: Cable AC (2.1 m)
- 2 éthernet ports 100base-TX
- Applicable Standards
  - TETRAPOL PAS
  - ETSI EN 300-113
  - ETSI EN 300-489
  - IEEE 802.3

Radio specifications

- Transmitter
  - Power: 1,5W/3W/10W/15W
  - Frequency stability: better than ± 2 ppm
  - Spurious emissions: better than – 36 dBm
  - Adjacent channel power:
    Step 12.5 kHz: better than – 60 dBc
    Step 10 kHz: better than – 33 dBc
  - Access mode: FDMA
  - Transmission type: duplex
  - Antenna: magnétic λ/4, gain de 0 dBi, plug N, Cable (7.5 m)
- Receiver
  - Static sensivity: better than – 118 dBm
  - Typical sensivity: – 120 dBm
  - Dynamic sensivity: better than – 112 dBm
  - Adjacent channel selectivity:
    Step 12.5 kHz: better than 60 dB
    Step 10 kHz: better than 45 dB
  - Spurious responses rejection: better than 70 dB
  - Spurious emissions: better than – 57 dBm
- Frequency band
  - Standard: 380-385/390-395 MHz
  - Sub-bands 5Mhz (duplexer) within 380-430 MHz
- Duplexer
  - Duplex spacing: between 5 and 15 MHz (10 MHz typical)
  - Bandwith: between 1.5 MHz (duplex spacing = 5 Mhz) and 5 MHz (duplex spacing = 10 Mhz)
- Channel spacing: 10 or 12.5 kHz
- Modulation: 0.25 GMSK
- Channel bit rate: 8 kbit/s
- Technology: Numérique
- Encryption: end to end

Environmental specifications (IEC Standards)

Standard	Test standards	Severity
In operating mode, conform with: ETSI EN300-019-1-3 class 3.1		
Operating température	IEC 60068-2-2 IEC 60068-2-1	Dry heat +55 °C unlimited time at 15 W, 30 % RH without solar ray (65 °C at 2 W) Cold – 10 °C
Mechanical: class 3M1	IEC 60068-2-6 IEC 60068-2-29	Sinusoidal vibrations: 0.3 mm from 2 to 9 Hz; 1 m/s2 from 9 to 200 Hz Bump: 10 g/11 ms on 3 axes
In storage, conform with: ETSI EN300-019-1-1 class 1.2		
Storage temperature	IEC 60068-2 IEC 60068-1 IEC 60068-56	Dry heat: +70 °C/30 % RH Cold: – 25 °C Damp heat: + 55 °C/93 % RH
In transport (In his packing), conform with: ETSI EN300-019-1-2 class 2.2		
Mechanical: class 2.2	IEC 60068-2-6 IEC 60068-2-64 IEC 60068-2-29 IEC 60068-2-32	Sinusoidal vibrations: 3,5 mm from 2 to 200 Hz; 10 m/s2 from 9 to 200 Hz, 15 m/s2 from 200 Hz to 500 Hz Random vibrations: 1 m2/s3 from 10 to 200 Hz, 0.3 m2/s3 from 200 to 2000 Hz Bump: 10 g/11 ms on 3 axes Falls: 0.25 m
Tightness	IEC 60529	IP20
Electrical safety	EN 60950	CE label
ROHS compliant **REACH compliant**		

For more information please contact:

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