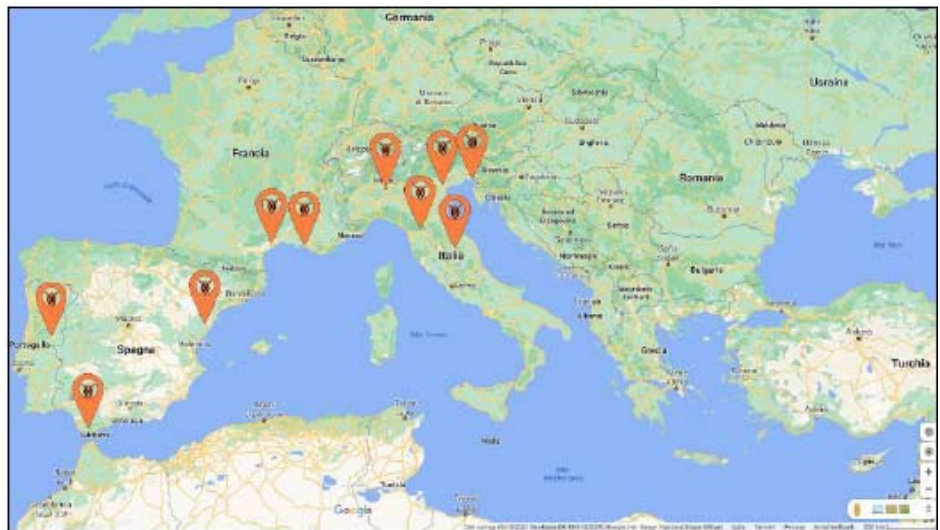# TMPSYS-BTE Network Radios

Network radios offer the innovative opportunity to communicate through cellular or wi-fi networks, without using dedicated radio frequencies. Therefore, these are the main advantages:
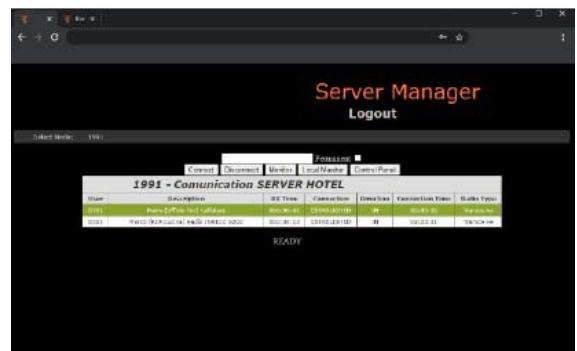
1) It is not necessary to make a radio frequency request to local government authorities
2) Quick and simple assembly (no need for on-site infrastructure)
3) Worldwide coverage through global cellular data network
4) High flexibility in service configuration (intercommunicating or isolated groups)
5) Straightforward design
6) Guaranteed communication security through data encryption process
7) Telemetry management (real-time location system, log of connected devices)

Thanks to TMPSYS-BTE technology it is then possible not only to communicate in a linear and fast way, but also to transmit specific data such as the location of the vehicles where the radio has been installed. Moreover, it is possible to set fall detection alarms ("man down" alarm), to limit the access to a precise geographical location or group of people. Everything can be supervised on the Server Manager web interface.

TMPSYS-BTE technology has multiple fields of application. It can be used in contexts where communication is essential inside and outside such as perimetral security controls, road traffic management for construction sites, concierge service in hotels, lifeguard service on beaches and in pools, frontline policing in amusement parks, etc.

Such fields of application can be redistributed into a list of broader areas which depend on a number of main services and types of public corporations and private companies.

Public and private security

TMPSYS-BTE technology is available for facilities which must guarantee order and security in public or private areas, such as discotheques, shopping centres, concierge and security services for tall buildings, private perimetral security controls, VIP security,

or any private security agency in need of a communication system between its units, spread out over a given territory.

Production activities

In large and medium-sized companies, TMPSYS-BTE technology allows the production managers not only to supervise the production processes with each department, but also to promptly manage any potential alarm, while even production logistics are made easier by communicating with the handling units.

Construction, building and digging sites, etc.

Communication is key both inside and outside a construction site, as well as in between different sites. It is essential in organizing processing stages, and it is also an integral part of safety management. Thanks to emergency procedures consisting in SOS by network radio, it is possible to prevent accidents, in case of fall ("man down") an alarm signal will be sent out. Our radios can be employed in roadworks as well, for traffic interruption management or communication between teams and working vehicles.

Tourism and building management

Taking into consideration the clients' security as well as their necessities, an efficient management of tourist facilities or civil buildings implies swift communication within a sector or between different departments. TMPSYS-BTE can be placed on a fast track due to its versatility in concierge and security services, both in hotels and on cruise ships, together with parking space management, porterage, room cleaning services.

All of the aforementioned possibilities are applicable to airport facilities: check-in desk service, ground services or internal airport communications.

Sports, outdoor activities and events

In activities such as hunting, hiking, biking and making excursions it is vital to stay in touch. TMPSYS-BTE technology makes it possible to communicate in case of necessity, or to signal one's location in an emergency call to rescue services.

In case of sporting events which include stops or several stations dedicated to security presence and operations, TMPSYS-BTE can support the organizer in monitoring the event.

The same technology can be extended to public events in general and concerts.

Courier and delivery service, transportation and logistics

Road transportation is one of the main fields where radio communication devices are mostly utilized, together with the branch of logistics and delivery.

Besides the "classic" radio concept as a communication device, the coverage is expanded to a global cellular data network, and it is now possible to obtain the real-time location of every unit thanks to the sharing of GPS position, which corresponds to the vehicle itself in the case of a vehicular radio model.

The radios

In addition to the TMPSYS-BTE servers, the system includes both vehicular and handheld radio models.

Every transceiver is TAC, CE and FCC certified, in order to be available for sale in Europe and worldwide.

The aforementioned certifications guarantee the high quality of products and constructive processes as

well. In particular, our handheld radios are built to resist to the most extreme conditions and are IP67 certified.

Technical specifications of the radios

TMPSYS-BTE550

The most important functions are all grouped at the top of the radio. An OLED screen to make it easier to know the status of the battery, the connection and the information that servers can pass to the terminal, an intuitive mechanical channel selector. On this radio we have put everything necessary for fast and professional use without sacrificing ease of use.

It is a radio terminal designed to work in the most hostile environments: dust, humidity, sun, cold .... There are no limits for use!
The quality of B550 meets the IP67 waterproof standard.

PTT button and dedicated SOS button, make work and communication easy, flexible and safe. Thanks to the computing power of its processor, the TMPSYS-BTE software is able to ensure very high encrypt standards without compromising the quality of communication..

M6 Connector
The M6 connector is used for connection with various accessories such as wired headset, RSM speaker, pneumatic headset, "speak / listen" microphone. Widely used in different communication fields such as security, shipbuilding, airports, leisure, etc.

BELT ANCHORING SYSTEM AND POWERFUL BATTERY
a powerful and removable 3600mAh long-life battery, to allow the user to communicate continuously.
Flexible buckle designed for quick and easy removal.

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Emails: info@i4-s.com / sales@i4-s.com
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Feature	Description
processor	MTK6737M
language	Multi language
RAM + ROM	1GB + 8GB （up to 32GB)
SD card	32 GB
LCD	0.97 ''OLED
LCD resolution	128x64 RGB
LCD colors	B / W
Sensors	3D Sensor / G-Sensor /
Mobile network	GSM, WCDMA, FDD, TDD
EU band:	GSM: B2 / B3 / B5 / B8 WCDMA: B1 / B2 / B5 / B8 TD-SCDMA: B39 / B34 FDD-LTE: B1 / B3 / B7 / B8 / B20 / B28 (a & b) TDD-LTE: B38 / B39 / B40 / B41
US band:	GSM: B2 / B5 WCDMA: B1 / B2 / B4 / B5 / B19 FDD-LTE: B1 / B2 / B4 / B5 / B7 / B12 / B13 / B17 / B19 / B28 (a & b)
Wifi	IEEE802.11a (5G) IEEE802.11b (2.4G) IEEE802.11g (2.4G) IEEE802.11n (2.4G e 5G)
Bluetooth	BT V4.0 with BLE / BT2.1 + EDR (High speed) Class 2, 10 meters
GPS standard	GPS and A-GPS
speaker	Φ36mm, 2.0W, 98dB
MIC type	Single pole microphone -42 dB ± 3
SIM card slot	Micro SIM
USB type	USB 2.0, Micro USB, OTG, battery charging
Ear-jack interface type	M6 connector
Indicator LED	3 colors (red, green, blue）
Dimensions	117 x 60 x 29.2 mm
Insulation and drop test	IP67 1,5m
button keys	PTT key / Volume up / down key / Function key / SOS key / Power key
Battery Type	Removable Li-Po 3600mAh
Battery charging terminal （For the base)	yes
Charging Port Specifications	DC 5V / 2.0A, Micro USB
Environmental conditions	-20 ° C ~ 60 ° C use, -30 ℃ ~ 70 ℃ storage, humidity 20% ~ 90%
ESD	Contact: ± 8KV Air: ± 12KV
Compliant with ROHS 6	Yes
certification and spec. Safety	CE,FCC

TMPSYS-BTE760

Advanced and robust version of the classic 4G radio network. It is resistant to water, dust and drop. These features combined with electronic performance allow you to work in any environment from normal to critical.

Suitable for use in areas such as security, emergencies, construction, industry and event organization. In addition, the E760 model has a 4200mAh high-capacity battery, an improvement in speaker sound quality and incorporates an 8mpx rear camera.
This model maintains a compact size and is easy to carry.

Connectivity	Specifications:
Net	GSM / GPRS / EDGE, TD-SCDMA, WCDMA, TDD-LTE, FDD-LTE supportati
EU band:	GSM: B2 / B3 / B5 / B8 WCDMA: B1 / B2 / B5 / B8 TD_SCDMA: B39 / B34 CDMA2000 1XEVDO BCO FDD-LTE: B1 / B3 / B5 / B7 / B8 / B20 / B28 (a & b) TDD -LTE: B38 / B39 / B40 / B41
US band:	WCDMA: B1 / B2 / 4/5/8 FDD-LTE: B2 / 4/5/7/8/12/17 / 28AB / B66
Bluetooth	4.0
Hardware	Specifications:
CPU	MTK6739
LCD	3.0 inch QVGA 480x854MM
Memory	1GB RAM / 8GB ROM (SD card up to 16GB)
Camera	Front 5mpx / rear 8mpx camera
Speaker	2w speaker
Connector	Motorola M6 connector

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Battery	4200 mAh
Software	Specifications:
OS	Android 8.1 operating system (later Android 10)
Dimension	125,5 * 61,6 * 25,3 mm
Weight	182g
Accessories	USB cable * 1, charger * 1, battery * 1, user manual * 1, package

TMPSYS-BTE610

The B610 is a 4G / WIFI mobile network radio designed for use in a vehicle or as a base station.

The device is equipped with a large 5.5-inch touch screen, four programmable buttons to facilitate the selection of channels between talk groups and a dedicated emergency button that increases user safety.

Other features include the external LTE antenna for a better signal and the interface for external microphone, GPS geolocation system, great audio power and the possibility of interfacing on a dedicated port.

Clear voice even in noisy environment, φ50mm 4Ω 5W speaker, loud and powerful audio.

5.5-inch LCD for easy use, GPS, associated with our location and map software becomes an irreplaceable all-in-one tool.

DB9 INTERFACE

For Upgrade, external USB camera, 3.3V Uart, Possibility of external speaker.

EXTERNAL MICROPHONE INTERFACE

Microphone with 4Pin GX16 connection, for a simple and natural use.

Feature	Technical description
processor	MTK6739
Android	Android8.1 or higher
Operating system language	Italian, English, German, Chinese ...
RAM + ROM	2GB + 16GB
SD card	64 GB
LCD	5.5 "TFT
LCD resolution	1280 X 720 dpi WVGA
LCD colors	16M color IPS TFT
Touch type and size	5.5 "/ capacitive
Glass type	Coning generation 3
Multi touch	5-point touch screen
Sensor	G-Sensor / Gyroscope / Compass
Net	GSM. WCDMA, FDD, TDD
EU version:	GSM: 850 MHz / 900 MHz / 1800 MHz / 1900 MHz WCDMA: B1 / B2 / B5 / B8 TD-SCDMA: B34 / B39 CDMA2000: BC0 LTE-TDD: B38 / B39 / B40 / B41 LTE-FDD: B1 / B3 / B7 / B8 / B20 / B28 (A&B)
US version:	GSM: 850MHz / 1900MHz WCDMA: B1 / B2 / B4 / B5 （B19) LTE-FDD: B1 / B2 / B4 / B5 (B19) / B7 / B12 (B17) / B13 / B28
Front and rear camera	Anteriore: 200 M.
Wi-Fi	IEEE802.11a (5G) IEEE802.11b (2.4G) IEEE802.11g (2.4G) IEEE802.11n (2.4G e 5G)
Bluetooth	BT V4.0 con BLE / BT2.1 + EDR (Alta velocità) Classe 2, 10metri
GPS standard	GPS, A-GPS e GLONASS
Speaker	Φ50mm, 4Ω, 5W 106dB
MIC type	Dual MIC -42 dB ± 3
SIM	NANO SIM Card
Connector interface	DB9 connector
LED indicator	3 colors (red 、 green 、 blue)
Dimensions	190 x 93 x 66 mm
Weight	486g
IP code	IP54
Drop test	Standard
keys	PTT, SOS, Channel, Power, Volume ...
data interfaces	DP9
Microphone interface	4-pin GX16 microphone
POWER SUPPLY interface	12V input voltage
operating temperature	-20 ℃ ~ 80 ℃

Storage temperature	-30 ℃ ~ 90 ℃
Humidity	20 ~ 90%
ESD	Contact: ± 6KV Air: ± 8KV
Compliant with RoHS 6	Yes
certification	CE and FCC

TMPSYS-B529

The most important functions are all grouped together at the top of the radio. an intuitive mechanical channel selector. On this radio we have put everything you need for fast and professional use without sacrificing ease of use.

It is a radio terminal designed to work in the most rigorous environments: dust, humidity, sun, cold…. There are no limits for use!

The quality of B529 meets the IP54 standard

4G DEVICE WITH A UNIQUE DESIGN, DURABLE AND HANDY

B529 has a long-lasting battery and excellent performance, the terminal has an easy-to-use and extremely intuitive rotary selector for the channels.

PTT button and dedicated SOS button, make work and communication easy, flexible and safe. Thanks to the computing power of its processor, the software is able to ensure very high encryption standards without sacrificing the quality of communication.

3.5mm + 2.5mm JACK CONNECTOR

The 3.5mm + 2.5mm JACK connector is used for connecting with different accessories such as wired headset, RSM speaker, Speak / Listen pneumatic microphone headset. Widely used in different communication fields such as security, shipbuilding, airports, leisure, etc.,

BELT ANCHORING SYSTEM AND POWERFUL BATTERY

a powerful and removable 4000mAh long-life battery, to allow the user to communicate with each other continuously.

Convenient and quick belt clip for quick usability.

TECHNICAL FEATURES:

Main CPU	
processor	MTK6739 1.5GHz, Quad core
language	Multi language
Memory	

RAM + ROM	1GB + 8GB
Sensors	
Sensors	3D Sensor / G-Sensor / Accelerometer
Frequency / bands	
Network (GSM, WCDMA, FDD, TDD)	EU band: GSM: B2 / B3 / B5 / B8 WCDMA: B1 / B2 / B5 / B8 TD-SCDMA: B39 / B34 FDD-LTE: B1 / B3 / B7 / B8 / B20 / B28 (a & b) TDD- LTE: B38 / B39 / B40 / B41 US band: GSM: B2 / B5 WCDMA: B1 / B2 / B4 / B5 / B19 FDD-LTE: B1 / B2 / B4 / B5 / B7 / B12 / B13 / B17 / B19 / B28 (a & b)
Wifi	
IEEE802.11a	Yup
IEEE802.11b	Yes (2.4G)
IEEE802.11g	Yes (2.4G)
IEEE802.11n	Yes (2.4G and 5G)
WIFI antenna type	Internal antenna Wi-Fi and BT coexistence
Bluetooth	
Version	BT V4.0 with BLE / BT2.1 + EDR (High speed)
Power level	(Max) Class 2
Operating distance	(Max) 10 meters
GPS and A-GPS	
GPS support	Yes

AGPS support	Yes
Antenna type	Internal antenna
Loudspeaker and microphone	
speaker	Φ36mm, 2.0W
SPL	98dB
Receiver	1506
MIC type	Single pole microphone
MIC sensitivity	-42 dB ± 3
SIM card	A Micro-SIM card
USB	
USB type	Micro USB
USB	Micro USB2.0
USB	OTG
Ear-jack interface type	Multiple Jack connector
Indicator LED	2 colors (red, green)
3.1 Dimensions	
Height (H * W * D)	
Weight	135 * 58 * 35mm
Isolation	IP54
Buttons	
button keys	PTT key / Volume up-down knob / Function key / SOS key / Channel selector knob
battery	

Battery Type	Li-Po
Battery capacity	4000 mAh
Removable battery	Yes
Reload	
Micro USB (for handset)	Yes
Battery charging terminal （For the base)	Yes
5.2 Charging Port Specifications	
Input voltage	DC 5V / 2.0A
Type of interface	Micro USB
Environmental conditions	
Humidity	-20 ℃ ~ 60 ℃
ESD	-30 ℃ ~ 70 ℃
Compliant with ROHS 6	20% ~ 90% Contact: ± 8KV Air: ± 12KV
certification and spec. Safety	
Europe	THERE IS
American	FCC

TMPSYS-PDR-Net High Security Protocol

Communications all over the world with maximum security

Global Protection
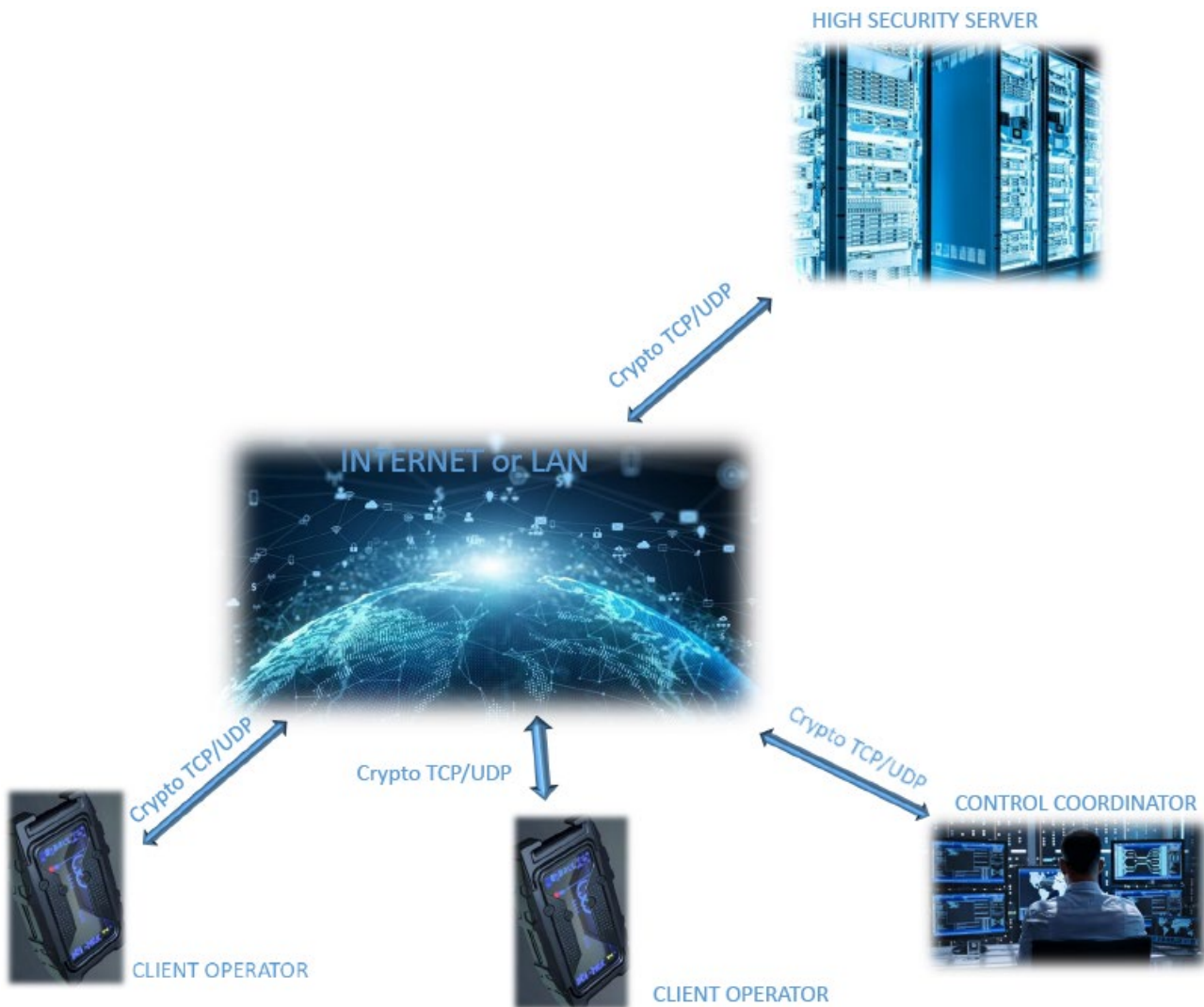Emails: info@i4-s.com / sales@i4-s.com
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TMPSYS-PDR-NET
Last millennium planetary communication

FROM SERVERS TO CLIENTS ON THE FIELD

HIGH SECURITY SERVER

Crypto TCP/UDP

INTERNET or LAN

Crypto TCP/UDP

Crypto TCP/UDP

Crypto TCP/UDP

CONTROL COORDINATOR

CLIENT OPERATOR

CLIENT OPERATOR

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TMPSYS-PDR-NET

2channels of communication, TCP for reliably transfer control data between the client and the server. UDP for low latency transfer of voice data.

BOTH CHANNELSARE PROTECTED BY STRONG CRYPTOGRAPHY

CONTROL COORDINATOR

HIGH SECURITY SERVER

UDP Voice channel
OCB-AES128

TCP Control channel
TLSV1-AES256-SHA

CLIENT OPERATOR

TMPSYS-PDR-NET

TCP connection is mandatory the UDP connection can be compensated by tunneling the UDP packets through the TCP connection,