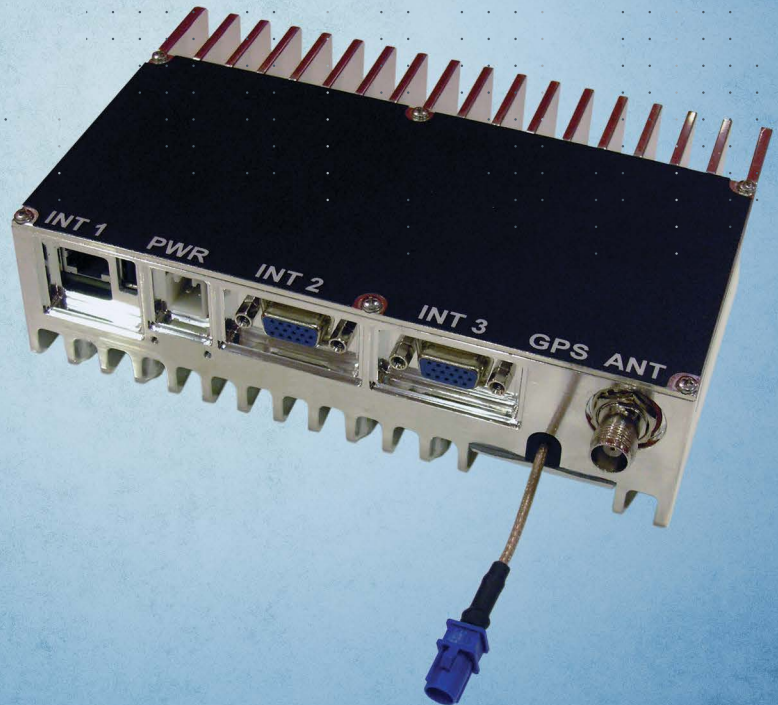


# VS4000

## TETRA MOBILE ECOSYSTEM



The ecosystem VS4000 combines the power and performance of the VS4000 TETRA radio unit with the new, flexible and user-friendly FPG3 series front panels.

A variety of interfaces (LAN, USB) is provided for flexibility and ease of installation and maintenance.

Additionally, DMO Repeater/Gateway, Air-Interface, End-to-End Encryption features and integrated GPS receiver make VS4000 fulfil the most demanding mobile communications requirements of mission critical users.

### KEY FEATURES

- DMO Repeater/Gateway feature makes it possible to facilitate communications even outside the network coverage
- Air-Interface and End-to-End Encryption
- Embedded GPS positioning and TETRA standard LIP protocol support

- Richness of interfaces (LAN, USB)
- SD card support
- Wireless audio and Wi-Fi hot spot connectivity (inside FPG3 Plus front panel).

### ACCESSORIES

- Antennas for vehicle (TETRA, TETRA/GPS integrated, GPS)
- Remote microphone with PTT
- Handset with PTT and support (telephone like)
- Various brackets for radio and front panel installation
- Hands-free kit
- Data and connection cables.

### MOBILE UNIT I/O INTERFACES

- RJ45 LAN connection (IEEE 802.3 protocol)
- Micro SD card slot
- USB-2
- Power supply connector
- HD female connectors 15 pins, for all audio and data signals
- GPS antenna connector
- TNC female connector for RF antenna.

# TECHNICAL SPECIFICATIONS

## RADIO UNIT

Frequency bands	380–470 MHz
Operational modes	Trunked, Direct, Repeater, Gateway
Channel bandwidths	25 kHz
Modulation schemes	π/4 D-QPSK
RF nominal power	10W (class 2 TETRA)
Receiver	ETSI EN 300 392-2 classes A+B compliant
Sensitivity	<ul style="list-style-type: none"> <li>static: &lt;-112 dBm</li> <li>dynamic: &lt;-103 dBm</li> </ul>
Power supply	Nominal +12Vdc (range +10.8 to 15.6Vdc)
Power consumption	Up to 65W with terminal active in multi-slot TX condition
AF power	8W @1 kHz into a 4 Ohm load
Dimensions (HxWxD)	47x176x130 mm [1,85 x 6,92 x 5.11 in]
Weight	1,29 kg [2,84 lb]

### GPS

Antenna	FAKRA “C” male blue connector
Channels	20
Sensitivity	Acquisition -148 dBm Tracking -165 dBm
Position accuracy	5 m [16,40 ft]

### Security

Algorithms supported	<ul style="list-style-type: none"> <li>Air-Interface encryption</li> <li>End-to-End encryption (AES 128-bit). Customized on demand</li> <li>IDEA 128-bit</li> </ul>
Tamper-proof	Integrated

### Regulatory Directives and Standard

Directives and Regulations	<ul style="list-style-type: none"> <li>Directive 2014/53/EU (Radio)</li> <li>Directive 2011/65/UE (RoHS)</li> <li>UNECE Regulation 10</li> </ul>
Radio	<ul style="list-style-type: none"> <li>ETSI EN 300 394-1</li> <li>ETSI EN 301 561, ETSI EN 303 413</li> </ul>
Safety	EN 62368-1, EN 62311
EMC	ETSI EN 301 489-1, 489-5, 489-19

### Environmental Conditions

Shock and vibrations	<ul style="list-style-type: none"> <li>MIL-STD-810G (514.5 Proc I; 516.5 Proc I, V)</li> <li>ETSI EN 300 019-2-5 (Class 5M3)</li> </ul>
Operative temperature	<ul style="list-style-type: none"> <li>-25°C to +55°C [-13°F to 131°F] (conformance tested)</li> <li>-30°C to +60°C [-22°F to 140°F] (operative use)</li> </ul>
Humidity	+40°C [104°F] @ 93 % RH
Storage & Transport temperature	-40°C to +70°C [-40°F to 158°F]
Protection degree	IEC 60529 IP54 class
Salt Fog	MIL STD 810-G - Method 509.4

## FPG3 PLUS (FRONT PANEL)

Power supply	+12 V (range +9 to +15.6 V)
Power consumption	Up to 4,5W
OS	Linux® based
Display	2.8" TFT LCD, 240x320, colour
Wireless audio and Wi-Fi	Built-in module
Dimensions (HxWxD)	57x185x68 mm [2,24 x 7,28 x 2,67 in]
Weight	400 g [0,88 lb]

### Regulatory Directives and Standard

Directives and Regulations	<ul style="list-style-type: none"> <li>Directive 2014/53/EU (Radio)</li> <li>Directive 2011/65/UE (RoHS)</li> </ul>
Radio	ETSI EN 300 328
Safety	EN 62368-1, EN 62311
EMC	ETSI EN 301 489-1, 489-17

### Environmental Conditions

Shock and vibrations	ETSI EN 300 019-2-5 (Class 5M3)
Operative temperature	-20°C to +60°C [-4°F to 140°F] (conformance tested)
Humidity	+40°C [104°F] @ 93 % RH
Storage & Transport temperature	-40°C to +85°C [-40°F to 185°F]
Protection degree	IEC 60529 IP54 class

### Interfaces

User interface	<ul style="list-style-type: none"> <li>Knob for group/channel selection and volume adjustment</li> <li>Functional keys for operations selection (near display)</li> <li>Keys for acceptance/close audio conversation</li> <li>Navigation pad to navigate inside the displayed menu</li> <li>Alphanumeric telephonic keys</li> <li>Functional keys (under telephonic keys)</li> <li>Two operational LED's</li> </ul>
I/O interfaces (front)	12 pins connector for audio accessories mini-USB (under rubber protection cover)
I/O interfaces (rear)	<ul style="list-style-type: none"> <li>26 pins HD female for audio accessories</li> <li>26 pins HD male for connection to VS4000 radio unit</li> </ul>



Front panel (FPG3 Plus)



For more information:  
cyberandsecurity@leonardo.com

Leonardo Cyber and Security Solutions Division  
Via R. Pieragostini, 80 - Genova 16151 - Italy

leonardo.com

This publication is issued to provide outline information only and is supplied without liability for errors or omissions. No part of it may be reproduced or used unless authorised in writing. We reserve the right to modify or revise all or part of this document without notice.

2024 © Leonardo S.p.a.

MM08080 01-24

