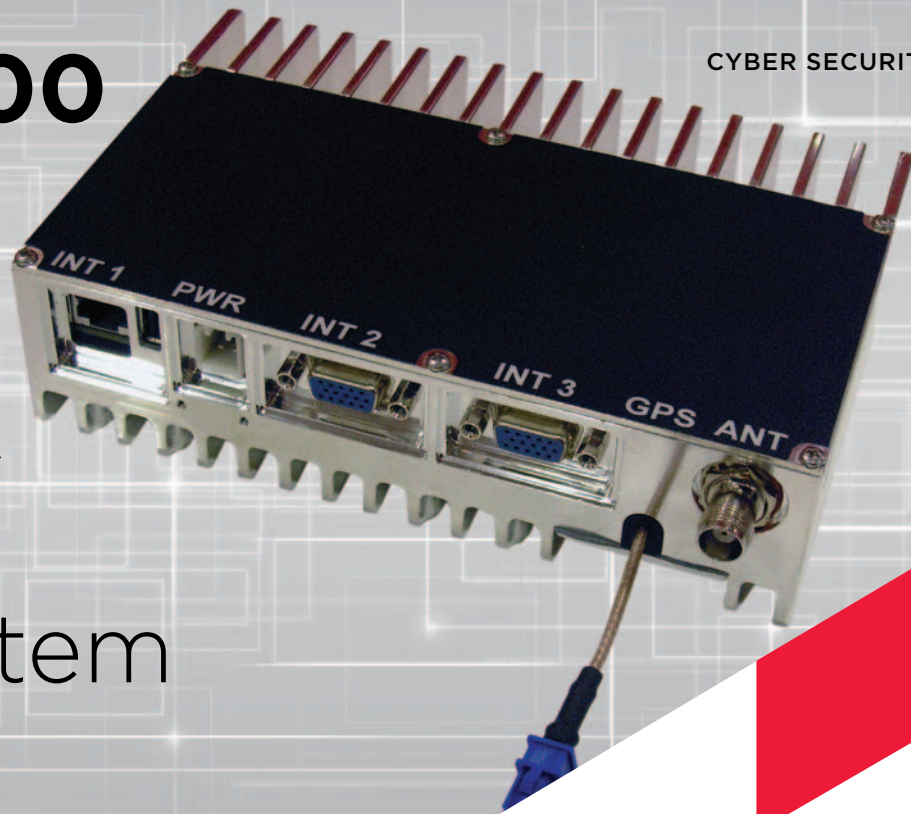


VS 4000

CYBER SECURITY DIVISION

TETRA mobile ecosystem



The ecosystem VS 4000 combines the power and performance of the VS 4000 TETRA radio unit with the new, flexible and user-friendly FPG3 series front panels.

A variety of interfaces (LAN, USB, CAN BUS) 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 VS 4000 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, CAN bus)
- › SD and SIM card support
- › Bluetooth® and Wi-Fi hot spot connectivity (inside FPG3 Plus)

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 (NMEA 0183 protocol)
- › TNC connector for RF antenna

TECHNICAL DATA

VS 4000 RADIO UNIT - SPECIFICATIONS

Frequency bands	380-470 MHz / 806-870 MHz
Operational modes	trunked, direct, repeater, Gateway (TETRA)
Channel bandwidths	25 kHz
Modulation schemes	II/4 D-QPSK
RF power	ETSI EN 300 392-2 / EN 300 396-2 class 2 (10W)
Receiver	ETSI EN 300 392-2 classes A+B compliant
Sensitivity	› Static: < -112 dBm › Dynamic: < -103 dBm
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)	45x170x115 mm [1,77x6,69x4,53 in]
Weight	500 g [1,1 lb]

GPS

Antenna	Integrated in TETRA antenna
Channels	20
Acquisition sensitivity	-155 dBm
Tracking sensitivity	-159 dBm
Position accuracy	5 m

SECURITY

Algorithms supported	› Air-Interface encryption › End-to-End encryption (AES 56/128-bit). Customized on demand › IDEA 128-bit, 128-256 bit
Tamper Proof detection	Integrated

CERTIFICATIONS

EC certification	Directive 2014/53/EU compliant
Safety	EN 60950-1 and EN 60950-22
EMC	ETSI EN 301 489-18 compliant
RoHS	Compliant

ENVIRONMENTAL CONDITIONS

Radio conformance tests	Compliant with mandatory tests defined in: ETSI EN 300-394-1, ETSI EN 300086, ETSI EN 300 113-2, CEPT T/R 2401 annex II
Climatic conditions	ETSI EN 300 019-1-5 5.1 class compliant (protect installation)
Operative temperature	ETSI EN 300 394-1 compliant (-30° to +60°C) [-22°F to 140°F]
Storage	ETSI EN 300 019-1-1 1.3 class compliant (-40° to +85°C, humidity 93% max) [-40°F to 185°F]
Transportation	ETSI EN 300 019-1-2 2.3 class compliant (-40° to +85°C, humidity 93% max) [-40°F to 185°F]
Protection degree	IEC 60529 IP54 class
Salt and fog protection	MIL STD 810 F - Method 509.4 compliant

ENVIRONMENTAL CONDITIONS (CONT.D)

Mechanical conditions	› ETSI EN 300 019-1-5 & IEC 721-3-7 class 5M3 compliant (ground vehicular installations) › MIL STD 810 E/F - Method 516.4/5, procedures I/V compliant › MIL STD 810 E/F - Method 514.4/5, procedure I, category 20 compliant (vibration tests for U.S. highway truck transportation and composite wheeled vehicle transportation)
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FPG3 PLUS (FRONT PANEL)

Power supply	+13.2 V (range +10.8 to +15.6 V)
Absorption	<250 mA
OS	Linux® 2.6 based (ready to Android® 2.2 OS)
Display	Backlighted - 2.7" to 262.000 RGB colour (640x480dpi max. res.)
Bluetooth and Wi-Fi	Backlighted - 2.7" to 262.000 RGB colour (640x480dpi max. res.)
Dimensions (HxWxD)	57x185x50 mm [2,24x7,28x1,97 in]
Weight	About 370 g [0,2 lb]

ENVIRONMENTAL CONDITIONS

Climatic conditions	ETSI EN 300 019-1-5 5.1 class compliant (protect installation)
Operative temperature	-20° to +60°C [-4°F to 140°F]
Storage	ETSI EN 300 019-1-1 1.3 class compliant (-40° to +85°C) [-40°F to 185°F]
Transportation	ETSI EN 300 019-1-2 2.3 class compliant (-40° to +85°C) [-40°F to 185°F]
Protection degree	IEC 60529 IP54 class

CERTIFICATIONS

EC certification	ETSI EN 55022 class B and ETSI EN 55024 (according to)
Safety	ETSI EN 60950: 2000 compliant
RoHS	Compliant

INTERFACES

User interface	› Knob for group/channel selection and volume adjustment › Functional keys for operations selection (near display) › Keys for acceptance/close audio conversation › Navigation pad to navigate inside the displayed menu › Alphanumeric telephonic keys › Functional keys (under telephonic keys) › Two operational LED's › One sensor for automatic display light regulation
I/O interfaces (front)	12 pins connector for audio accessories mini-USB (under rubber protection cover)
I/O interfaces (rear)	› 26 pins HD female for audio accessories › 26 pins HD male for connection to VS4000 radio unit



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