



# Lipari 5200



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## Dual SIM LTE router

### LIPARI SERIES

Lipari is an innovative series of routers that provides LTE connectivity to the user accessing the public or private data network (Internet/Intranet) with the appropriate level of security.

Using the operator with the best network coverage, depending on the installation location, also increases the reliability of the end-to-end solution.

### LIPARI 5200

Lipari 5200 provides LTE connectivity, with the appropriate level of security, to the user accessing the public or private data network (Internet/Intranet).

It is equipped with two (mutually exclusive) SIM slots to support failover and backup scenarios.

Thanks to the Dual SIM functionality, it is possible to choose the operator with the best network coverage depending on the installation location, increasing the reliability of the end-to-end solution.

### KEY FEATURES



#### Certified

Validated for inclusion in business offering profiles and use within the networks of major telecom operators.



#### Secure by design

Right from the design phase for robust and natively secure solutions.



#### Eco-efficient

Minimal consumption, lower environmental impact and higher operating cost savings.



#### Robust and reliable

Designed to run for a long time: hardware and software at the highest levels of reliability and durability.



#### Smart value

Maximum value for your business thanks to excellent performance/price ratio.



#### Zero Touch Provisioning

Zero Touch Provisioning facilitates remote management and agile configuration of the installed base.



#### Factory pre-configurations

Receive your product pre-configured according to your specific case.



#### 100% factory-tested

We test all our equipment, including SIM cards for models with a cellular radio connection.



## LIPARI 5200



4 LAN Fast Ethernet ports



Dual SIM



Radio cellular connection up to LTE cat. 4



Zero Touch Provisioning



Rack-mountable with optional kits



Desktop mounting

## SUGGESTED SCENARIOS AND APPLICATIONS



### Where a mobile network is needed

- Temporary installations
- Outdoor installations
- Disadvantaged locations, not reached by a fixed network



### As a connection to/from...

- Sales points and shops
- Totem
- Vending machines
- ATM
- Digital signage



### Service continuity and Mission Critical applications

- Backup to the core network
- Video surveillance
- Telecontrol
- Telelemetry
- Remote Monitoring

## DIGITAL DIVIDE and MOBILITY.... Wherever the user is

### Access

- It is possible to access company data from any external location even on the move (agents, branch offices, temporary offices in fairs or construction sites).
- It is possible to guarantee immediate access to the network without waiting for the activation of the fixed line
- In case of temporary or itinerant installations (fairs, events, events, seasonal services)
- Access to the network is immediate and does not require special equipment or infrastructure
- It is the ideal and optimized solution for single unattended workstations (Kiosk) for payment services, advertising, information points, gaming.

### Security

Guaranteed secure VPN communication even over public networks. IPSEC with 3DES - Data protection

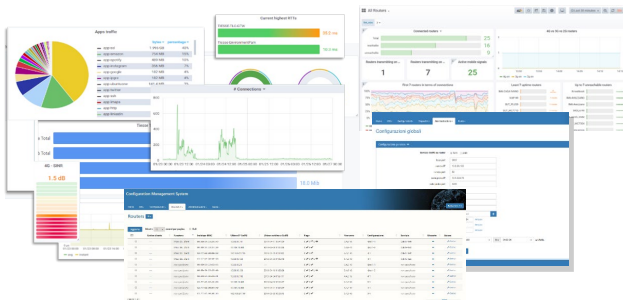
### Installation

Easy and straightforward installation, plus the possibility of factory configuration

### Performances

Optimisation of mobile channel use to control traffic costs and improve transmission quality: asynchronous notifications, control messages, downtime, removable antenna to allow use of high-gain or outdoor antennas.

## ZERO TOUCH PROVISIONING



Tiesse's router are integrated in the **TNA (Tiesse Network Architecture)** suite.

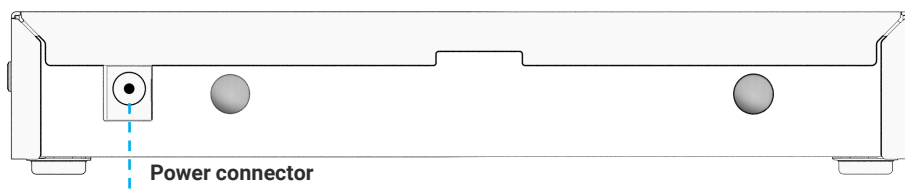
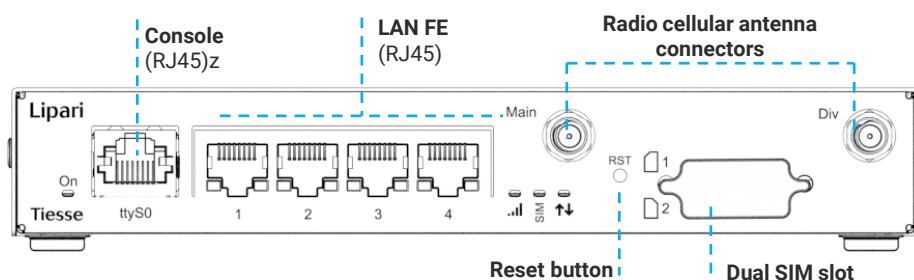
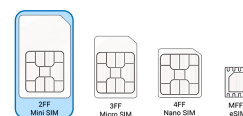
**TNA** is the modular software suite that enables Zero Touch Provisioning network architecture, including monitoring, remote and automated web-based management of configurations and firmware releases of the installed fleet; it enables traffic engineering, network overlays, and many other functionalities.

A complete datasheet of the solution is available at [www.tiesse.com](http://www.tiesse.com).



## HARDWARE INTERFACES

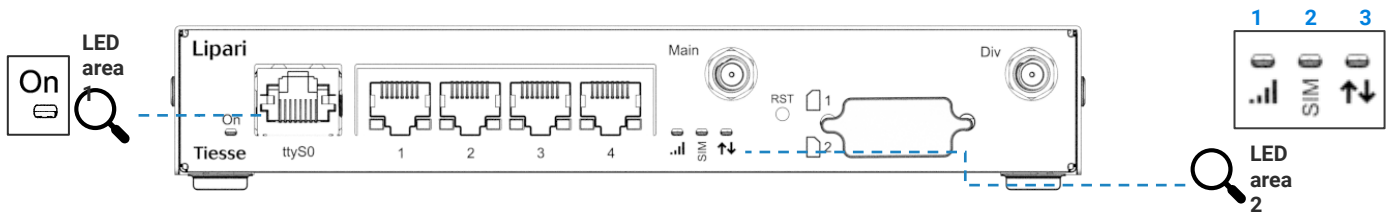
Port	N°	Type	Details
LAN	4	FE	10/100 Mbps, with or without auto-negotiation and configurable
RADIO CELLULAR	1	GSM / GPRS / EDGE	<ul style="list-style-type: none"> <li>- Frequency bands: B3/B8</li> <li>- Max. data transmission rate: <ul style="list-style-type: none"> <li>- EDGE: 296 (DL)/236.8 (UL)</li> <li>- GPRS: 107 (DL)/85.6 (UL)</li> </ul> </li> </ul>
		DC-HSPA+	Max. data transmission rate: 42 (DL)/5.76 (UL)
		WCDMA	<ul style="list-style-type: none"> <li>- Frequency bands: B1/B8</li> <li>- Max. data transmission rate: 384 (DL)/384 (UL)</li> </ul>
		UMTS HSDPA HSUPA HSPA+	<ul style="list-style-type: none"> <li>- Frequency bands: B1 (2100 MHz), B8 (900 MHz)</li> <li>- DC-HSDPA: max 42 Mbps (DL)</li> <li>- HSUPA: max 5.76 Mbps (UL)</li> </ul>
		LTE	<p><b>Model with modem LTE cat. 4</b></p> <ul style="list-style-type: none"> <li>- Dual Cell HSPA supported</li> <li>- Possibility of configuring and activating two APNs simultaneously</li> <li>- Frequency bands: B1/B3/B7/B8/B20/B28</li> <li>- Data transmission rate: category 4, MiMo</li> <li>- Max. data transmission rate: 150 (DL)/50 (UL)</li> </ul> <p>- Model with LTE cat.6 modem is available on request</p>
	2	ANTENNAS	<ul style="list-style-type: none"> <li>- 2 removable antennas, male SMA connector, product front</li> <li>- Multiple Input/Multiple Output (MiMo) support</li> <li>- Outdoor version antennas (omni-directional and directional), high-gain and vandal-proof (optional) are also available</li> </ul>
	2	SIM	<ul style="list-style-type: none"> <li>- 2 SIM slot for 2FF mini SIM cards, external access</li> <li>- The SIM cards are mutually exclusive</li> <li>- SIM connector type: push-push</li> </ul>



Lipari 5200 with the SIM flap opened



### LED DESCRIPTION



LED	Color	Position		Description
Power	Green	LED area 1	On	Indicates power supply operating status
LAN	Yellow	On the LAN port		One for each ETH port, indicating operational status 100 Mbps connection
	Green	On the LAN port		Indicates data traffic
Radio cellular	Green	LED area 2		1) Indicates operational status and quality of cellular radio signal
	Green	LED area 2		2) Indicates use of the second SIM
	Green	LED area 2		3) Indicates IP address status (No IP, being assigned, assigned)

Note: the full description of LED behaviour can be found both on the technical support site (<https://wiki.tiesse.com>) and on the general instruction flyer, which can be downloaded from <https://supporto.tiesse.com>

### OTHER INFORMATION AND SUPPORT

[SUPPORTO.TIESSE.COM](https://supporto.tiesse.com)



- Technical documentation, installation instructions, quick start guide, first access data
- Firmware updates
- Declaration of conformity EMC, RED, RoHS, ...
- Technical support request
- End of sale and end of product support information
- Warranty repair and product reconditioning

[WIKI.TIESSE.COM](https://wiki.tiesse.com)

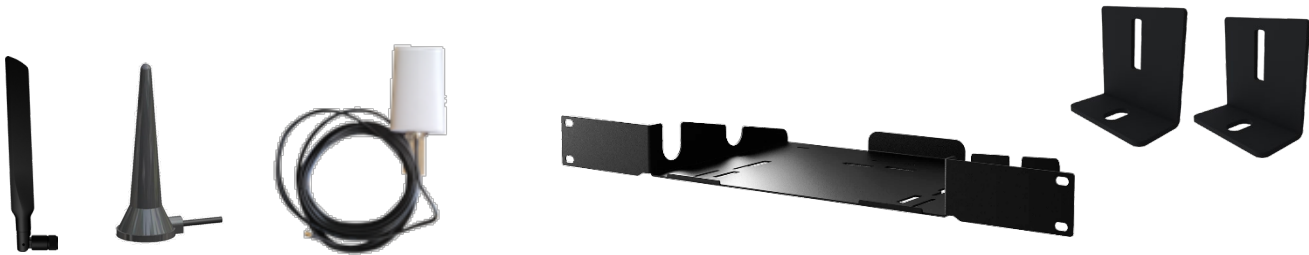


- Website dedicated to software documentation
- User manuals
- First access guides
- Case studies, tutorials and other useful resources for product use

### ADD-ONS

Optional accessories such as antennas for both indoor and outdoor installations, omnidirectional and directional antennas, and rack or wall mounting kits are available.

Please consult the relevant datasheets, which can be downloaded from [www.tiesse.com](http://www.tiesse.com).



Images for illustrative purposes



## SOFTWARE

Note: the following list is purely indicative, active features depend on version and software update (NOS).

## NETWORKING

- TCP-UDP IPv4
- IPv6
- ARP

## LAYER 2

- LAN Bridging
- VLAN over LAN 802.1q interface in Access mode, Trunk, native VLAN and Hybrid mode

## ROUTING &amp; MULTICAST

- Static
- BGP-4, BGP-4+
- OSPFv2
- RIPv1, RIPv2
- Policy-based routing (PBR)
- VRF Lite
- Routing redistribution and tagging
- VRRP (Virtual Routing Redundancy Protocol) with IPv4-IPv6 authentication
- IGMP v1-v2-v3, IGMP snooping, IGMP proxying
- Multicast routing with sparse-mode PIMv2 and PIMv2 dense-mode, MSDP
- IEEE 802.1d (Spanning Tree Protocol)

## SECURITY

- NAT/PAT
- ACLs, Stateful Firewall
- SSL Tunnelling
- L2TP
- GRE Tunnelling with keep alive and key sequence numbering (cellular network optimization)
- VPN with IPSec
- 3 DES Encryption

## SERVICES

- DHCP client, DHCP Relay, DHCP server with antispoofing functions, DHCP Layer Discovery Protocol IEEE 802.1ab
- Intelligent DNS Proxy, local and remote
- Traceroute
- Support of NTP Client and Server
- Easy VPN
- Dynamic DNS

## MANAGEMENT AND CONFIGURATION

- SNMP v1, SNMPv2, SNMPv3
- Telnet server with multiple simultaneous sessions
- SSH server with multiple simultaneous (SSHv2)
- IP SLA with support of: One Way Delay, Round Trip Delay, Jitter, Packet Loss
- Fault management Syslog /Trap
- RADIUS, TACACS+
- Tracking for backup management, commands and events scheduling
- Software update via TFTP and FTP
- Configuration via Command Line Interface (CLI), Text/Menu oriented and Telnet
- Configuration via HTTP WEB GUI
- Ability to maintain an arbitrary number of configurations
- TNA (Tiesse Network Architecture) suite per auto-provisioning e gestione automatizzata remota con API



## SPECIFICHE DI SISTEMA

**PROCESSOR** CortexA7- 528 MHz

**MEMORY** - Default 128 MB  
- Optional: fino a 512 MB

**FLASH MEMORY** - 256 MB  
- Optional: EMMC (8 GByte) version with Linux Debian

**CHASSIS** Metal material, colour black

Desktop

**FORM FACTOR** Optional:  
- Kit for wall mounting  
- Kit for 1U rack mounting



## SUSTAINABILITY

### SYSTEM

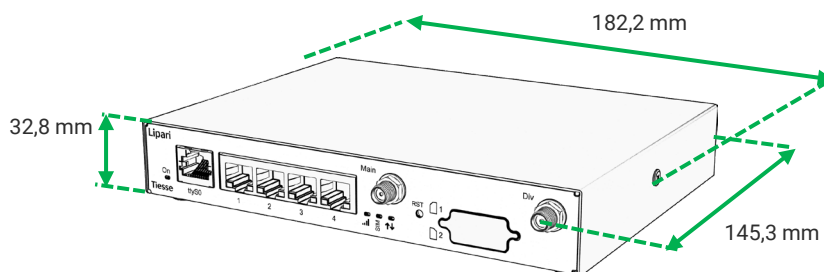
<b>Power</b>	- AC Adapter Desktop 12V 2,5A RoHS3 , external power supply - 12-24 VDC (range 9-28)
<b>Cooling</b>	Fanless
<b>Consumption</b> (full functions)	≈ 3W
<b>EEE</b> (Energy-Efficient Ethernet)	Tiesse products comply with the EEE (802.3az) standard, which saves energy by automatically reducing the consumption of Ethernet ports during periods of low traffic, without altering their performance.
<b>Dynamic Power Scaling</b>	Tiesse products use control mechanisms to automatically reduce power consumption by lowering the CPU clock frequency when the load is low.
<b>Mean Time Between Failure (MTBF)</b>	878628 hours

### ENVIRONMENT DATA

<b>Operating temperature</b>	-25° C / +70° C -40° C / +70° C (limited functionalities)
<b>Storage temperature</b>	-40° C / +70° C
<b>Maximum relative operating humidity</b>	95% (non condensing)
<b>Protection grade</b>	IP40

### SIZE and WEIGHT

<b>Machine body</b>	182,2 x 145,3 x 32,8 (L x P x A mm)		
	≈ 880 gr (maximum weight including packaging and accessories)		
<b>Total weight</b>	<b>Product</b>	<b>Accessories</b>	<b>Packaging</b>
	≈ 566 gr	≈ 176 gr	≈ 136 gr



### OTHER INFORMATION

<b>Packaging and wrapping</b>	The packaging of the individual Lipari 5200 product is 92% paper/cardboard and the incidence of plastic packaging is 8% or less. 100% of Tiesse's packaging material is recyclable
<b>RAEE waste</b>	For the correct disposal of Waste Electrical and Electronic Equipment (WEEE), pursuant to Article 26 of Legislative Decree No. 49 of 14 March 2014 'Implementation of Directive 2012/19/EU': contact <a href="mailto:raee@tiesse.com">raee@tiesse.com</a>

# Tiesse

Innovation made in Italy®

Tiesse is a totally Italian company with more than 25 years of experience in the design, development and production of network equipment and IoT devices, suitable for use in mission-critical and industrial scenarios. Tiesse's most successful series, Imola, Lipari and Levanto, are innovative, competitive and certified, and are present in the networks of the major telecommunications operators, in the energy sector, large-scale distribution and vertical sectors, both in the Italian and foreign markets.

Further information on Tiesse solutions can be found on the company website [www.tiesse.com](http://www.tiesse.com).



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Ver. ENG 201125

