

TGR Series

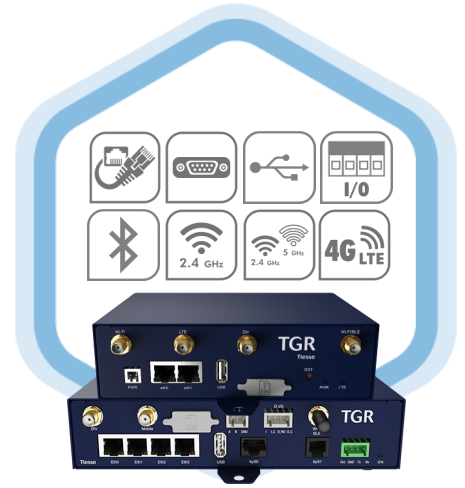
Industrial LTE gateway and EDGE router



Datasheet

TGR

Industrial LTE gateway and EDGE router series



The **TGR** product series is designed for use in industrial and security scenarios with open source or third-party software hosted directly on the hardware platform. They offer a wide range of connectivity and routing capabilities in a compact design. The products on the TGR line, based on the model, support multiple links, serial ports (RS-232 and RS-485) and digital inputs / outputs.

Thanks to the internal LTE port, they are suitable for "always-on" communications in mission-critical scenarios.

KEY BENEFITS

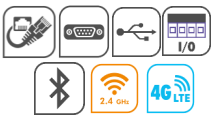
- ⇒ All-in-one
- ⇒ Multiple serial ports and digital I/O based on specific model
- ⇒ High availability
- ⇒ "Always-on" communication
- ⇒ Flexibility & versatility
- ⇒ Open

APPLICATIONS

TGR is particularly suited for business applications where security and continuity of service and are of primary importance, as in

- Smart cities
- Industry 4.0
- IoT
- Vertical market applications
- Renewable energy

Models



TGR 5432



TGR 5204

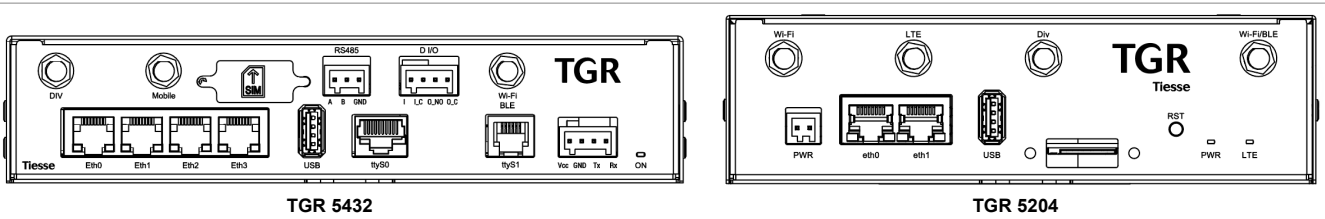


ADD-ONS



TGR is provided with optional add-ons like omnidirectional outdoor antennas; please, see the specific documentation on both add-ons for more information.

INTERFACES



	TGR 5432	TGR 5204
LAN ports	4	2
Serial ports	4	N/A
USB 2.0	1	1
Digital I/O	1 DI, 1 DO	N/A
Bluetooth & Wi-Fi	1 Wi-Fi	1 Wi-Fi
LTE	1	1

	TGR 5432	TGR 5204
LAN	4 x ports 10/100/1000 Mbps with RJ-45 connector	2 x ports 10/100 Mbps with RJ-45 connector
Serial ports	<ul style="list-style-type: none"> – 1x RS-232 (RJ11 female) - RX-TX-RTS-CTS – 1x RS-232 (RJ50 console port) - FULL – 1x RS-485 (3-pole external screw terminal) half duplex – 1x RS232 TX-RX 	N/A
USB	USB 2.0 Host (type A connector)	
Digital I/O	1x 4-pole external screw terminal	N/A
Bluetooth & Wi-Fi	<ul style="list-style-type: none"> – IEEE 802.11 b/g/n 20 MHz (1x1) – BLE 5.0 – Throughput up to 50 Mbps – Max number of client supported: 8 – Personal & Enterprise IEEE 802.11 WEP, WPA, WPA2 Security 	<ul style="list-style-type: none"> – Wi-Fi IEEE 802.11 a/b/g/n/ac (2x2) – BLE 5.0 – Throughput up to 867 Mbps – Max number of client supported: 32 – Personal & Enterprise IEEE 802.11 WEP, WPA, WPA2 Security
Radio Cellulare	GSM / GPRS / EDGE	Bands: 900 / 1800 / 1900 MHz GPRS multislot 10, EDGE multislot 12
	UMTS / HSDPA HSUPA / HSPA+	Bands: 900 / 2100 Mhz HSDPA data rates up to category 20 HSUPA data rates up to category 6
	DC-HSPA+	DC-HSPA+ (42 Mbps in DL)
	LTE	Bands: 800 / 900 / 1800 / 2100 / 2600 Mhz Data rates (category 4, MIMO)* Peak data rates 150 Mbps DL, 50 Mbps UL (actual throughput depends on network configuration, number of connected users and RF signal conditions) WCDMA 900/2100 <small>* category 6 and 12 available on request</small>

SOFTWARE

OS	Default: Debian Optional: other Linux versions	Software platform	Docker	Extended	Configurable via script based on Python or PERL
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RADIO-MOBILE TRANSMISSION POWER

LTE*	Band 1,3,7,8	22 dBm
	Band 20	23 dBm
UMTS	Band 1,8	23 dBm
GSM / EDGE	GSM900	32 dBm iGMSK mode
		27 dBm 8PSK mode
	DCS1800CS	29 dBm GMSK mode
		26 dBm 8PSK mode
	PCS1900CS	29 dBm GMSK mode
		26 dBm i8PSK mode

*related to CAT4 version

4G ANTENNAS

- 2x SMA male connectors
- Optional - Possibility to add external omnidirectional or directional antennas

Mounting options

The TGR products are provided with a specific bracket for easy mount on DIN rail.

Also, the chassis has two hooks used for wall mounting.



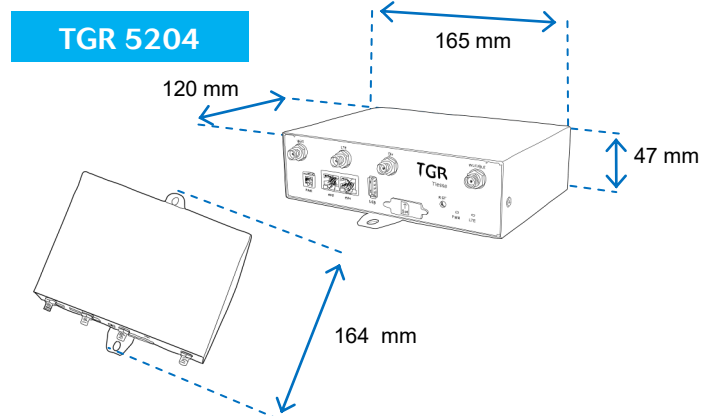
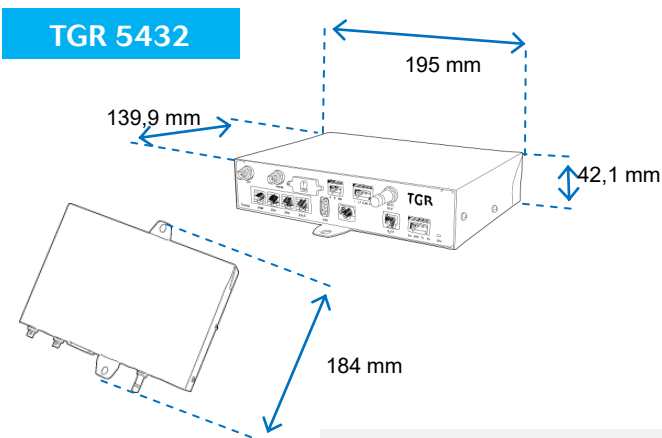
HARDWARE FEATURES

POWER SUPPLY	5432: 9-29 Vdc
	5204: 12-48 Vdc voltage
	230 Vac option available on request

ENVIRONMENT	Operating temperature: -20°C / +70° Storage temperature: -40°C / +70°C Humidity: 0/95% (non condensing)
CONSUMPTION	Average power consumption: 4 W Max power consumption: < 10 W

	TGR 5432	TGR 5204	LED INDICATORS
PROCESSOR	- 2x Cortex A7 core up to 1 GHz - +1 x Cortex-M4 core up to 200 MHz	- 4x Cortex-A53 core platforms up to 1.8GHz per core - + 1x Cortex-M4 core up to 400MHz	On both models: - 1 x power / operative status - 2 x each Ethernet ports for operative status TGR 5204 only - 1 x radio mobile connection link status
MAIN MEMORY	DDR3 1 GByte	LPDDR4 2GBytes	
STORAGE	eMMC Storage 8 Gbytes	eMMC Storage 8 Gbytes, + internal microSD	

SIZE



Tiesse is a 100% Italian company which has more than 20 years of expertise in designing, developing, and manufacturing M2M/IoT and network devices. The products series **IMOLA**, **LIPARI** and **LEVANTO**, which are innovative, competitive and certified, are present in the largest distributed national networks (from gas stations to large retailers, insurance companies and banks) as well as in the largest networks of the main gaming operators and energy sector.

Web site: www.tiesse.com

Information: mail@tiesse.com | Marketing & Sales: marketing@tiesse.com

Ivrea – Headquarter - Sales offices, Manufacturing facility and R&D: Via Asti 4, 10015 Ivrea (TO) - Tel +39.0125230544 - Fax +39.0125631923
Rome – Sales offices and R&D: Viale L. Gaurico 9/11, 00143 Roma EUR - Tel +39.0654832203 - Fax +39.0654834000
Turin - R&D: Via Livorno 60, 10144 Torino (TO) | **Avezzano** - R&D: Via C. Corradini 80, 67051 Avezzano (AQ)

