

Levanto

M2M/IoT device with mobile connectivity
for telecontrol, smart metering and industrial applications

510 and 520 models

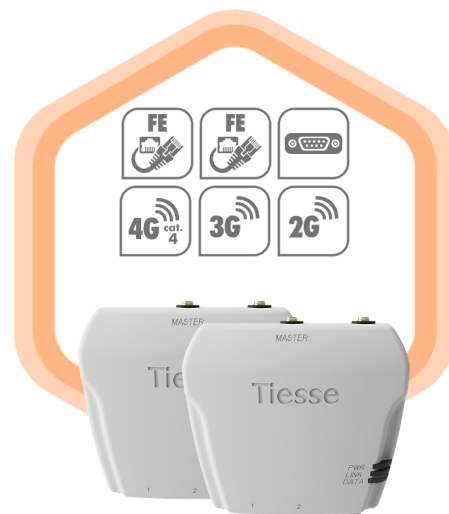


Datasheet

Serie Levanto

510 and 520 models

M2M/IoT device with mobile connectivity for telecontrol, smart metering and industrial applications



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Levanto is a series of products that provides connectivity between remote devices and centralized control systems, via a mobile cellular radio network, ensuring service continuity.

ALWAYS-ON

Levanto models, through the WAN connection on the GSM / GPRS / EDGE / HSPA / LTE networks, it guarantees reachability and data exchange between peripheral assets and central control and monitoring platforms.

The numerous mechanisms present on the Levanto devices maintain **always-on connections**, eliminating the need for interventions in peripheral offices by a operators.

Levanto optimizes and improves the quality of mobile radio transmission. In particular, it supports:

- control messages (SMS)
- inactivity timer
- asynchronous notifications
- integrated external antenna to improve signal quality

KEY BENEFITS

- ⇒ Continuity of service
- ⇒ Industrial class with long component life cycle and high reliability
- ⇒ Security
- ⇒ Compact and small size
- ⇒ Factory pre-configurations
- ⇒ SIM are installed and tested in factory for each single device

APPLICATIONS

Levanto 520 is particularly suitable for business applications in the industrial and energy sectors, where safety and continuity of service are of primary importance, as well as reliability and durability for installations in noisy environments.

It is designed to meet the requirements and needs for the following applications:

- ⇒ **Smart Metering**
- ⇒ **Remote assets monitoring and management**
- ⇒ **Remote telereading**
- ⇒ **Remote telecontrol**
- ⇒ **Environmental monitoring**
- ⇒ **Smart City**
- ⇒ **Industry 4.0**

MODELS



Levanto 510

Levanto 520

INTERFACES

	Levanto 510	Levanto 520
LAN ETH 10/100 ports	1	2
2G	•	•
3G	•	•
4G	•	•
RS-232 serial port	1	-

INTERFACES - Hardware features

	Levanto 510	Levanto 520
LAN	1 x Ethernet 10/100 Mbps port	2 x Ethernet 10/100 Mbps ports
Seriale	1 x DB Asynch up to 115.2 Kbps - It allows the use as COM Modem (via AT command)	
Radio Cellular	Bands	LTE FDD: B1/B3/B7/B8/B20/B28 WCDMA: B1/B8 GSM: B3/B8
	LTE	Support up to CAT4 LTE FDD: 150 Mbps (DL) - Max 50 Mbps (UL)
	UMTS	DC-HSDPA: max 42 Mbps (DL) HSUPA: max 5.76 Mbps (UL) WCDMA: max 384 Kbps (DL) - max 384 Kbps (UL)
	GSM	EDGE: max 296 Kbps (DL) - max 236.8 Kbps (UL) GPRS: max 107 Kbps (DL) - max 85.6 Kbps (UL)

RADIO CELLULAR POWER TRANSMISSION AND SENSITIVITY

Radio cellulare 4G	Power	Class 3 (23dBm±2dB) for LTE-FDD bands Class 3 (24dBm+1/-3dB) for WCDMA bands Class 4 (33dBm±2dB) for EGSM900	Class 1 (30dBm±2dB) for DCS1800 Class E2 (27dBm±3dB) for EGSM900 8-PSK Class E2 (26dBm±3dB) for DCS1800 8-PSK
	Sensitivity	LTE FDD B1: -101.4dBm (10M) LTE FDD B2: -102.1dBm (10M) LTE FDD B3: -101.5dBm (10M) LTE FDD B4: -102.1dBm (10M) LTE FDD B5: -103.1dBm (10M) LTE FDD B7: -101.3dBm (10M) LTE FDD B8: -101.2dBm (10M) LTE FDD B12: -102.7dBm (10M) LTE FDD B13: -102.6dBm (10M)	LTE FDD B20: -101.3dBm (10M) LTE FDD B28A: -101.4dBm (10M) WCDMA B1: -112.5dBm WCDMA B2: -109.7dBm WCDMA B4: -109.6dBm WCDMA B5: -110.2dBm WCDMA B8: -112.5dBm EGSM900: -108.6dBm DCS1800: -109.4dBm

SOFTWARE

NETWORKING	<ul style="list-style-type: none"> IPv4, IPv6 TCP, UDP ICMP ARP 801.q (VLAN) 	SERVICES	<ul style="list-style-type: none"> DHCP client, DHCP server HTTPS Ping, Traceroute NTP Client and Server support DNS
ROUTING & MULTICAST	<ul style="list-style-type: none"> Static routing Dynamic routing protocols RIPv1, RIPv2 	MANAGEMENT AND CONFIGURATION	<ul style="list-style-type: none"> SNMPv2, SNMPv3 Telnet client and server SSHv2 sFTP client Syslog server Different logging levels Radius Support TACACS local authentication Configuration via command Line Interface (CLI)
SECURITY	<ul style="list-style-type: none"> Boot non interrompibile NAT/PAT PAP, CHAP IPSEC, GRE TLS 1.2 e 1.3 ACLs, Stateful Firewall Port forwarding Service enabling/disabling 		

Wherever the installation is...

Robust

Robust industrial grade design. Designed to operate under extreme conditions and temperature, even on disturbed environments.

Access

Wherever installed, **Levanto** accesses public network (Internet) with the proper security level. Connections can be activated using call over TCP-IP / GPRS / EDGE / HSPA / LTE. It is also usable as a GPRS modem.

Maintenance and Configuration

- Both local or remote configuration are easy and fast (available via radio mobile SMS on specific models)
- Factory configured or later via remote download from a remote control center
- Risk free system for avoiding wrong configuration in effecting reachability of remote networks

SYSTEM FEATURES

POWER	9-30 Vcc. Version with a AC/DC 12V power adapter also available.
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CONSUMPTION	< 3 W
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ENVIRONMENT	Operating temperature: -25°C / +55° Operating range limit: -40° / +70° Storage temperature: -40°C / +70°C Max operating humidity: 93% (non condensing)
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PROCESSOR	ARM up to 400 MHz
MEMORY	DRAM 128 MB
FLASH MEMORY	256 MB

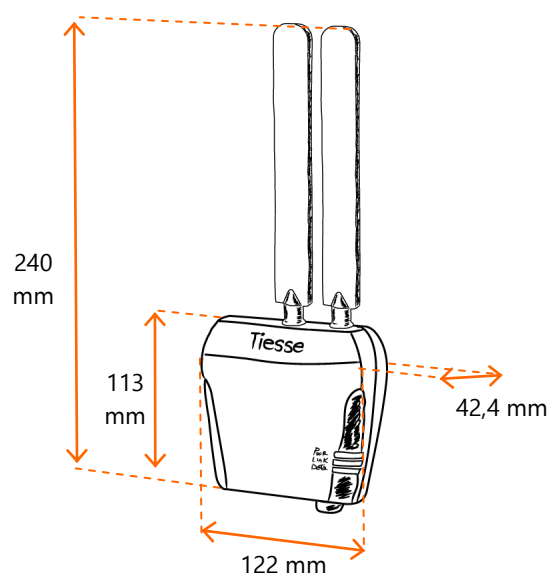
LED INDICATORS

- 1 x power / operative status
- 1 x radio cellular link status
- 1 x radio cellular data connection activity

ANTENNAS

- 2 x external removable antennas (SMA male)
- Frequency: 700-960 / 1710-2700
- VSWR less than 2.2 - Impedence 50 ohms
- Vertical polarization - Gain 2.14 dBi
- Support for external antennas both directional and high gain omnidirectional (optional); connectable via cable with SMA male connector

SIZE



ADD-ONS

Levanto series is provided with optional add-ons like directional / omnidirectional antennas for outdoor installations as well as brackets for wall or DIN mounting. Please, see the add-ons documentation for specific information.



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.

www.tiesse.com

Info: 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. Gauroico 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)

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