

# Levanto 520

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



Datasheet

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It 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 520**, 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 520 maintain **always-on connections**, eliminating the need for interventions in peripheral offices by operators.

## 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**

## 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

## INTERFACES - Hardware features

<b>LAN</b>	2 Ethernet ports 10/100 Mbps , RJ45 connector	
<b>Radio Cellular</b>	Band	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

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



## SOFTWARE

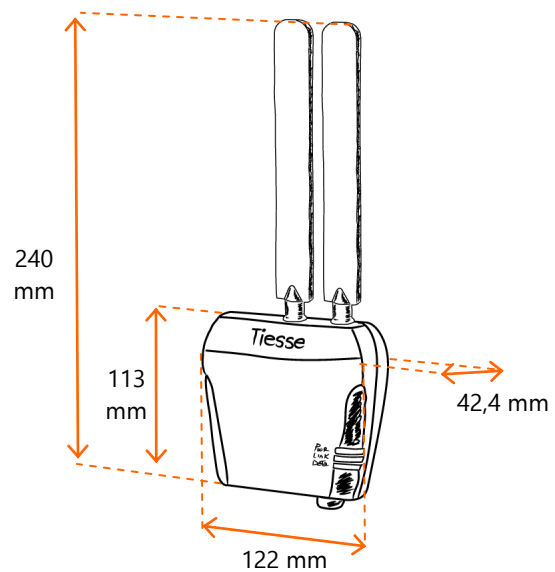
<b>NETWORKING</b>	<ul style="list-style-type: none"> <li>IPv4, IPv6</li> <li>TCP, UDP</li> <li>ICMP</li> <li>ARP</li> <li>801.q (VLAN)</li> </ul>	<b>SERVICES</b>	<ul style="list-style-type: none"> <li>DHCP client, DHCP server</li> <li>HTTPS</li> <li>Ping, Traceroute</li> <li>NTP Client and Server support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

## SYSTEM FEATURES

<b>POWER</b>	9-30 Vcc or version with a AC/DC 12V power adapter also available
<b>CONSUMPTION</b>	< 3 W
<b>ENVIRONMENT</b>	<b>Operating temperature:</b> -25° C / +55° C Operating range limit: -40° C / +70° C <b>Storage temperature:</b> -40° C / +70° C <b>Max operating humidity:</b> 93% (non condensing)

<b>PROCESSOR</b>	ARM up to 400 MHz
<b>MEMORY</b>	DRAM 128 MB
<b>FLASH MEMORY</b>	256 MB

## SIZE



<b>STANDARD WEIGHT</b>	240 gr ± 10% (without antennas)
	293 gr ± 10% (with antennas)

## LED INDICATORS

- 1 x power / operative status
- 1 x radio cellular link status
- 1 x radio cellular data connection activity
- 2 x each Ethernet port for operational status

## ANTENNAS

- 2 x external removable antennas (SMA male)
- Frequency: 700-960 / 1710-2700
- VSWR less than 2.2 - Impedance 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

## 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.



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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.

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