Imola x262

Tiesse innovazione made in Italy

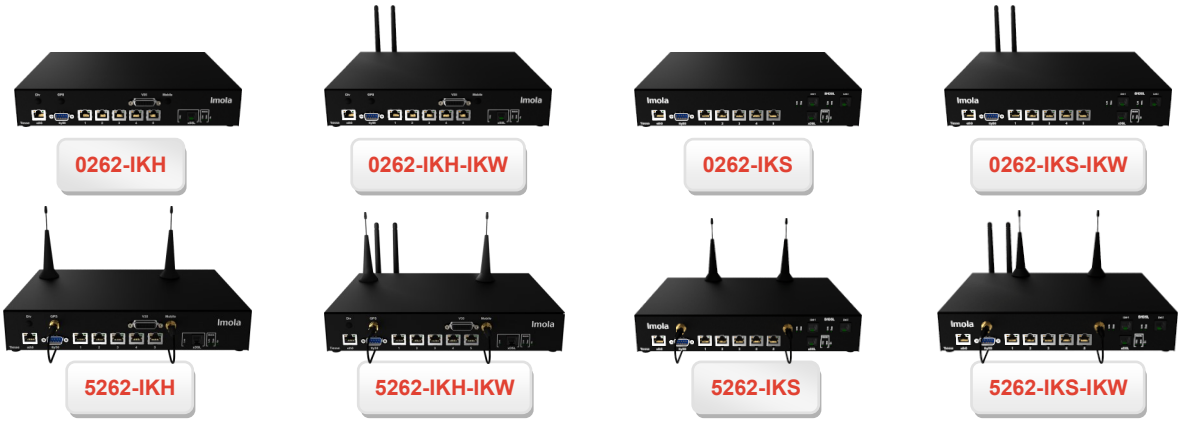
Next Generation Network & LTE Router

Wireless LAN, Broadband and radio mobile mission critical applications router

Tiesse is an italian leading company focused on innovative network devices, broadband and mobile routers and M2M/IoT enabling appliances. Tiesse designs, develops and manufactures all proprietary equipments in its italian locations.

All product series (**IMOLA**, **LIPARI** and **LEVANTO**) are innovative, competitive and telco certified.

Tiesse devices are present in the largest distributed networks at national levels: from petrol stations to retailers, insurances, banks and financial organizations. Last but not least, its products represent the core equipments inside the network scenario of gaming and energy market leader operators.



0262-IKH | 0262-IKH-IKW | 0262-IKS | 0262-IKS-IKW

5262-IKH | 5262-IKH-IKW | 5262-IKS | 5262-IKS-IKW

Imola x262

Is an innovative series of routers that provides connectivity over fixed (VDSL2, xDSL) and wireless LAN and WAN networks (LTE).

The **IMOLA x262** routers are designed for high performance and secure connections providing:

- Routing
- Switching
- Multi fail-over
- QoS
- VoIP
- Security

for the next generation networks.

Applications

IMOLA x262 is particularly suitable for business applications where security, continuity of service and network performance are of primary importance.

⇒ **Enterprise WAN network access**

⇒ **Bank / Assurance branches**

⇒ **Lottery**

⇒ **Gaming**

⇒ **Retail**

⇒ **Transport**

⇒ **Broadband backup**

Imola

Ver ENG 210220

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HIGH AVAILABILITY - MISSION CRITICAL
… "always on" communications …

Seamless backup

User is completely unaware of connection faults and backup transitions. The transitions from normal to backup and viceversa are done taking always into account operational costs.

Homogeneous Backup

A single router integrates all the wired and mobile ports

Heterogeneous Backup

A router can be added on an installed base of devices . VRRP (Virtual Router Redundancy Protocol) is used

Multiple Backup

By means of a couple of routers both hardware and network backup is realized

5262-IKH-IKW

Models

IMOLA	0262-IKH	0262-IKH-IKW	5262-IKH	5262-IKH-IKW	0262-IKS	0262-IKS-IKW	5262-IKS	5262-IKS-IKW
1 console port	•	•	•	•	•	•	•	•
5 Ethernet ports 10/100/1000 Mb Switch	•	•	•	•	•	•	•	•
1 eth0 WAN port 10/10/1000 Mb	•	•	•	•	•	•	•	•
ADSL 2/2+ VDSL2	•	•	•	•	•	•	•	•
HDSL 2 Mb	•	•	•	•				
G.SHDSL 4 Mbps					•	•	•	•
4G			•	•			•	•
Wi-Fi b/g/n		•		•		•		•

NGN & LTE

Mission Critical Applications

New Generation Networks, fixed and mobile networks, four backup mode

Imola x262

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VDSL2

- Support for all VDSL2 profiles: 8MHz up to 30MHz
- Compliance with the G.Vector standard (ITU-T G.993.5)
- Compatible with ADSL2 (backward compatibility)

5262-IKS-IKW

Cellular specification

Frequency	LTE 800/900/1800/2100/2600 Mhz
	WCDMA 900/2100 Mhz
	EDGE/GPRS/GSM 900/1800/1900
Radio interfaces	LTE data rate 100 Mbps Downlink and 50 Mbps Uplink
	HSPA+ data rate 21.1 Mbps Downlink e 5.7 Uplink with EDGE/GPRS fallback
	Dual Cell HSPA supported
	Support for Multiple Input/Multiple Output (MIMO)
	Possibility to configure and activate two APNs simultaneously

Interfaces

LAN	GE	5 x 10/100/1000 Mbps RJ-45 ports; with or without autonegotiation configurable
	Wi-Fi	1 x 802.11 b/g/n port (2.4 GHz)
WAN	GE-WAN	1 x RJ-45 10/100/1000 Mbps WAN port
	ADSL 2/2+ / VDSL	1 x RJ-11 port, Full rate ADSL 2/2+/VDSL2 ADSL2/2+ Downstream data rate up to 24 Mbps — Upstream data rate up to 3.5 Mbp G.992.1 annex A,B,C&I, G.992.2-g.Lite, G.992.3 annex A, B, I, J, M, G.992.4-g.Lite.bis, G.992.5 annex A, B, C, I, J, M, ANSI T1.413 issue2, ETSI TS 388 standards compliant ADSL-over-ISDN, ITU T-I361, ITU T-I.363.5, ITU T-I.432, ITU T-I610, ITU T-I731 standards compliant VDSL2 Supports for profiles VDSL2: 8MHz to 30MHz G.Vector standard (ITU-T G.993.5) compliant
	HDSL	1 x LFH 60 port Interface V.35 2Mbit
	G.SHDSL	2 x RJ-11 ports downstream up to 4Mbps upstream up to 4Mbps

Radio mobile port

GSM / GPRS / EDGE	Frequency band: 900/1800/1900 MHz GPRS multislot 10, EDGE multislot 12
UMTS / HSDPA / HSUPA / HSPA+	Frequency band: 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	Frequency band: 800/900/1800/2100/2600 Mhz Data rates (category 3, MIMO) Peek data rates 100 Mbps DL, 50 Mbps UL (actual throughput is dependent on network configuration, bandwidth assigned to the UE, the number of users and RF signal conditions) WCDMA 900/2100

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GE ADSL VDSL HDSL G.SHDSL 2.4 GHz 4G LTE

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Protocols

IP Features	TCP-UDP IPv4 IPv6 support Lan Bridging VLAN support on LAN interface 802.1q in Access mode, Trunk, native VLAN and Hybrid mode PVC Bonding
Routing & Multicast	Static, Policy routing, RIPv1, RIPv2; BGP-4, BGP-4+, OSPFv2 Routing redistribution and tagging VRRP (Virtual Routing Redundancy Protocol) with IPv4-IPv6 authentication IGMP v1-v2-v3, IGMP snooping, IGMP proxying Multicast routing with PIMv2 sparse-mode and PIMv2 dense-mode, MSDP IEEE 802.1d (Spanning Tree Protocol)
QoS	Traffic classification based upon source IP, based on a combination of source IP, destination IP, protocol (UDP, ICMP, TCP, etc), upon DSCP/IP precedence, ToS or Port DiffServ, CoS on VLAN QoS on ATM class Shaping with guaranteed allocated bandwith and redistribution of bandwith excess Committed Access Rate e Multicast rate Limit Mechanisms of traffic prioritization, ability to define an arbitrary number of priority classes Link aggregation IEEE 802.3ad
Security	NAT/PAT ACLs, Stateful Firewall SSL Tunnelling GRE Tunnelling with keep alive and key sequence numbering (radio mobile network optimization) VPN with IPSEC, 3 DES Encryption
Management and Configuration	Full support of SNMP v1, SNMPv2, SNMPv3 Telnet server with multiple simultaneous sessions SSH server with multiple simultaneous sessions (SSHv2) IP SLA support for: One Way Delay, Round Trip Delay, Jitter, Packet Loss SAA (Service Assurance Agent) Fault management Syslog /Trap Radius Support, TACACS+ Tracking for backup management, commands and events scheduled Software update via TFTP and FTP Configuration via command Line Interface (CLI), Text/Menu oriented and Telnet Possibility to keep an arbitrary number of configuration
Service	DHCP client DHCP server with antispoofing functions DHCP Layer Discovery Protocol IEEE 802.1ab Intelligent DNS Proxy, local and remote Traceroute, NTP Client and Server support Easy VPN, DDns (Flex IP)

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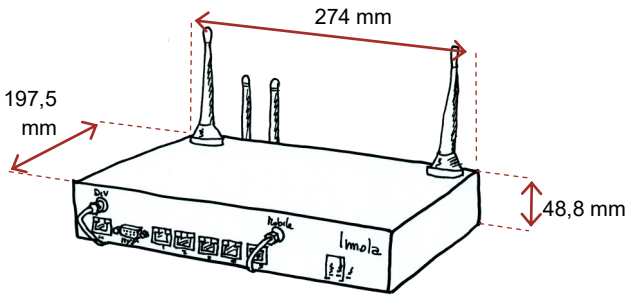
Hardware features

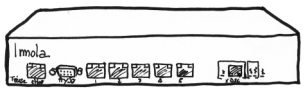
Processor	RISC Network processor
DRAM	Default 128/ MB fino a 256 MB - DDR2
Flash Memory	Da 32 MB fino a 1 GB
Standard weight	2.100 gr ±10%

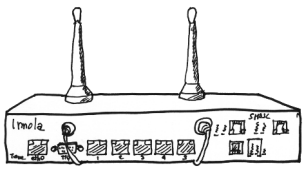


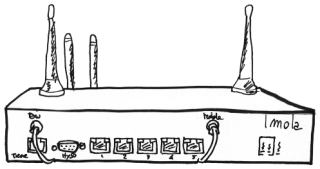
Features	
Power Supply	AC/DC (internal Universal 100-240 VAC) DC/DC 12V-24V-48V (multirange 9-75)
Power consumption	< = 12W (Full configuration)
Operating temperature	-5°C / + 50° -25°C / +70 ° (96 hours)
Storage temperature	-40°C / +70°C
Max operating humidity	93% (non condensing)

Antennas

- Support of Multiple Input/Multiple Output (MIMO)
- 2 removable high gain antennas (SMA male)
- Available also in outdoor version (omnidirectional and directional) with high gain

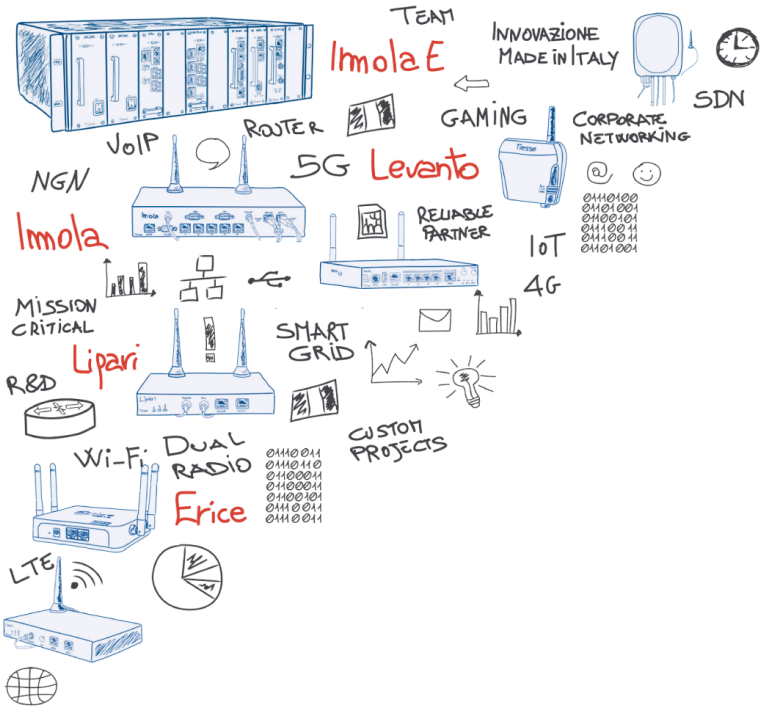






Radio mobile power transmission

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



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