Tiesse
Innovation made in Italy

Imola 5572-SGR

Ultra broadband 5G router
With Fiber and eVDSL connectivity

Datasheet

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Imola
5572-SGR

5G ultra broadband router
with Fiber and eVDSL connectivity
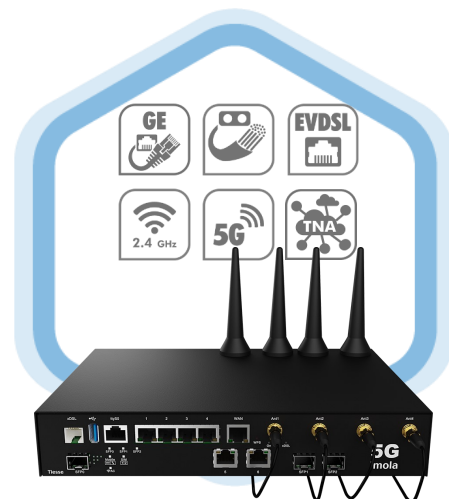
Imola 5572-SGR is a latest generation 4G/5G router (release 15).

It's an integral part of the IMOLA series, certified routers used in the networks of major telecom operators.

Imola 5572-SGR is an all-in-one 5G router with fiber and eVDSL connectivity; it is particularly suitable to be used in business applications where security, service continuity and network performance are of primary importance.

The 5572-SGR model is also available in a dual Wi-Fi version (b/g/n at 2.4 GHz and ac 5ghz).

High-performance routing, switching, and modem capabilities allow you to leverage broadband network speeds for data, voice, and video service applications.

PUNTI DI FORZA

⇒ Safety
⇒ High performance for Giga networks
⇒ Reliability of hardware and software
⇒ Quality of service (Qos)
⇒ Ruggedness (fanless, internal power supply, metal chassis, operation at extended temperature ranges)
⇒ Zero Touch provisioning
⇒ Factory preconfigurations, differentiated by customer
⇒ 100% factory tested equipment (including SIM cards for 4G models)
⇒ Minimum energy consumption

SCENARI D'USO

Thanks to the support for 5G, LTE, and WCDMA networks, **Imola 5572-SGR** can be used globally to take advantage of the benefits of 5G and Gigabit 4G networks for high-performance, bandwidth-intensive applications, such as broadcasting and streaming.

Imola 5572-SGR is designed to support 5G scenarios described by 3GPP, including standalone 5G NR (SA), non-standalone (NSA), dual connectivity LTE-5G NR (EN-DC) and dynamic spectrum sharing between LTE and 5G.

BACKUP: high availability mission critical

Seamless backup - The user doesn't notice any service interruption and the following passage to backup mode.
This passage from Standard mode to backup mode (and viceversa) is accomplished with taking care of operative costs.

Multiple backup - Two routers connected with VRRP creates the physical backup of both network and hardware.

Homogeneous Backup - One single router is equipped with both wired and mobile ports.

Heterogeneous Backup - You can upgrade the devices installed base with a mobile router and use the VRRP protocol (Virtual Router Redundancy Protocol).

Zero Touch Provisioning

Imola routers are integrated in the **TNA (Tiesse Network Architecture)** suite, for remote and automated management of configurations and firmware releases of the installed park.
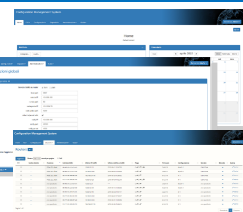
FIBER ACCESS & GPON CONNECTIONS

• Supported different models of SFP module (transceiver)
  • Data rate max 1000 Mbps (SX, BX, LX, ZX)
  • Supported connectors: LC simplex, LC duplex, RJ45

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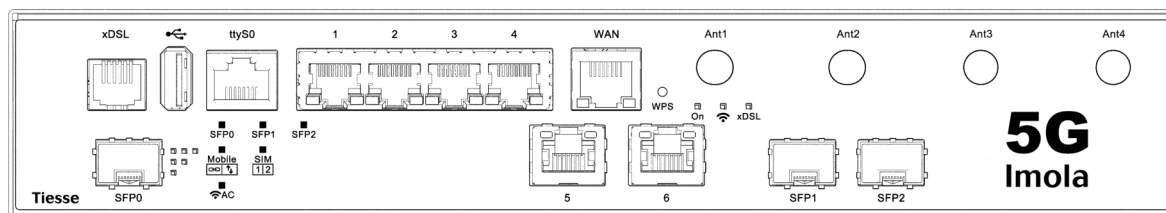
INTERFACES

HARDWARE INTERFACES			
LAN	**GE**	6	10/100/1000 Mbps ports, RJ45 connectors
	Wi-Fi	1	WLAN 802.11 b/g/n (2.4 Ghz) port
	Fiber	2	SFP cage for fiber connections (SFP module not included)
WAN	**GE / SFP**	1	GE 10/100/1000 Mbps (RJ45 connector) combo port with WAN SFP port (label SFP0)
	ADSL 2/2+ **VDSL** **eVDSL**	1	Full rate ADSL2/2+ / VDSL2, RJ11 connector **ADSL2/2+** — Downstream data rate up to 24 Mbps andupstream data rate up to 3.5 Mbps — Compliant to Standards 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 — ADSL-over-ISDN, ITU T-I361, ITU T-I.363.5, ITU T-I.432, ITU T-I610, ITU T-I731 **VDSL2** — Supports for profiles VDSL2: 8 MHz to 30 MHz — Complaint to G.Vector (ITU-T G.993.5) standard — Complaint to ITU-T G.998.4 G.INP standard — Compatible to ADSL2 (backward compatibility) **eVDSL** Support of 35 MHz ITU-T G993.2 Annex Q (35b or Vplus) profile profile with aggregate rates up to 400 Mbps
RADIO CELLULAR	**UMTS / HSDPA / HSUPA / HSPA+**	•	— 3G HSPA+ Release 8 — Throughtput 3G: 42 Mbps download and 11 Mbps upload (*)
	WCDMA	•	Frequencies: 5, 8, 3, 4, 2, 1, 9, 19
	LTE	•	— Data rates: 7 CA up to 20 layers in download and3 CA in upload, 256-QAm in download/upload — Frequency range : 1, 2, 3, 4, 5, 8, 9, 12, 13, 14, 17, 18, 19, 20, 26, 28, 71, 25, 66, 39, 29 (DL), 30, 32, 7, 38, 40, 41, 42, 43, 46, (LAA), 48 (CBRS), 34, 27 — Throughtput 4G: up to 1 Gbps in download and 211 Mbps in upload (*)
	5G	•	— 5G sub-6 FDD and TDD supported — 5G core network Opt. 3a/3X and Opt 2 — Throughtput 5G: up to 1 Gbps in download and 1 Gbps in upload (*) — Frequency range 1 (FR1): n1, n2, n3, n5, n7, n12, n14, n20, n28, n30, n41, n66, n71, n77, n78, n79
CONSOLE		1	RJ45 connector
USB		1	USB 3.0 port

* NOTE: the throughput value depends on the network configuration, the assigned bandwidth, on the number of users and on the RF signal conditions.

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SOFTWARE

Note: the list below is purely indicative; the features depend on the NoS version and update.

NETWORKING
- TCP-UDP IPv4
- IPv6

LAYER 2 features
- LAN Bridging
- VLAN support on LAN interface 802.1q in Access mode, Trunk, native VLAN and Hybrid mode
- Layer 2 Protocol Tunneling (L2PT)
- 802.1Q-in-802-1Q

ROUTING &
- Static, Policy routing, RIPv1, RIPv2
- BGP-4, BGP-4+
- OSPFv2
- 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 PIMv2 sparse-mode and PIMv2 dense-mode, MSDP
- IEEE 802.1d (Spanning Tree Protocol)

QoS
- Traffic classification based on source IP, on a combination of source IP, destination IP, protocol (UDP, ICMP, TCP, etc) ports, application recognition, IP Precedence and DSCP
- DiffServ
- IP Precedence remarking, DSCP and CoS
- 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/ESP or IPSEC/AH IKEv1/IKEv2

SERVICES
- DHCP client, DHCP server with antispoofing functions, DHCP Layer Discovery Protocol IEEE 802.1ab, DHCP relay
- Intelligent DNS Proxy, local and remote
- Traceroute
- NTP Client and Server support
- Easy VPN
- DDns

MANAGEMENT AND CONFIGURATION
- SNMP v1, SNMPv2, SNMPv3
- Telnet server with multiple simultaneous sessions
- SSH server with multiple simultaneous sessions (SSHv2)
- Netflow
- IP SLA support for: One Way Delay, Round Trip Delay, Jitter, Packet Loss
- Fault management Syslog /Trap
- Radius Support, TACACS+
- Tracking for backup management, commands and scheduled events
- Software update via TFTP and FTP
- Configuration via command Line Interface (CLI), Text/Menu oriented and Telnet
- TNA (Tiesse Network Architecture) suite for auto-provisioning and remote automated management
- Management of an arbitrary number of configurations

eVDSL

Support of the new generation networks (NGN) and ensuring:

- Support for VDSL2 profiles: from 8 MHz up to 35 MHz, in accordance with ITU-T G993.2 Annex Q standard (35b profiles or Vplus) capable of aggregating rates up to 400 Mbps
- G.Vector standard-compliant (ITU-T G.993.5)
- ITU-T G.998.4G.INP standard-compliant (impulse noise protection)
- ADSL2 compatible (backward compatibility)

RADIO CELLULAR FREQUENCIES

5G FR1
- n1, n2, n3, n5, n7, n12, n14, n20, n28, n30, n41, n66, n71, n77, n78, n79

5G LTE
- 1, 2, 3, 4, 5, 8, 9, 12, 13, 14, 17, 18, 19, 20, 26, 28, 71, 25, 66, 39, 29 (DL), 30, 32, 7, 38, 40, 41, 42, 43, 46, (LAA), 48 (CBRS), 34, 27

WCDMA
- 5, 8, 3, 4, 2, 1, 9, 19

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HARDWARE FEATURES

| POWER	AC/DC (internal Universal 100-240 VAC) Power Switch ON/OFF
CONSUMPTION	< = 12W (Full configuration)
ENVIRONMENT	**Operating temperature**: 25° C / +70° C (96 hours) –40° C / +70° C (4 hours) **Storage temperature**: –40° C / +70° C **Max operating humidity**: 93% (non condensing)

PROCESSOR	Dual CORE 1 GHz
MEMORY	DRAM 256 MB DDR3
FLASH MEMORY	256 MB

EXTERNAL FEATURES

Material	Metal - black
Antennas	**Radio WLAN** 2 external removable antennas - SMA male connector **Radio cellulare 4G** 4 external removable antennas - SMA male connector connettori SMA maschio
Mounting	Horizontal plane Rack mouting available via optional kit

LED INDICATORS

Status LED	1 x power / operative status
Ethernet	2 x operative status - for each port
SFP	1 x operative status - for each port
xDSL	1 x connection status
Wi-Fi	1 x 2.4 GHz radio signal activity
Radio cellulare	1 x radio cellular connection status
	1 x radio cellular data exchange activity
	1 x operational SIM

SIZE

197,5 mm   274 mm   48,8
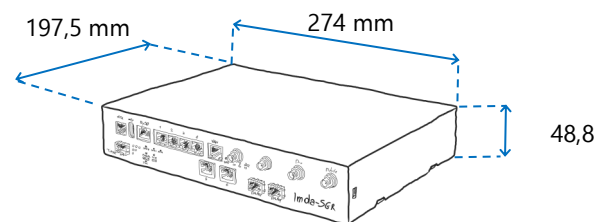
TECHNICAL SUPPORT

Tiesse provides the user with two sites that are constantly updated:
Support.tiesse.com: the site with technical documentation, assembly instructions, software updates, and how to request technical support.
Wiki.tiesse.com: the site with manuals, instructions for installation, case studies, scenarios, FAQs, etc.

ADD-ONs
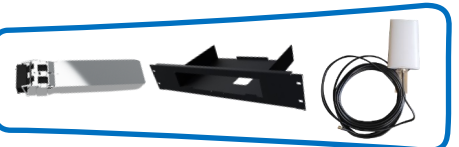
Accessories add-ons are optionally available, like SFP modules, omnidirectional or directional antennas (indoor and outdoor - only for cellular models) as well as rack mounting kits.

Please, refer to the specific documentation available on our website www.tiesse.com.