

Tiesse

Innovation made in Italy

Imola 5572

5G ultra broadband eVDSL
ROUTER



Datasheet

www.tiesse.com

Imola 5572



2

5G ultra broadband eVDSL Router



Imola 5572-IK2W is a state-of-the-art 4G/5G router (4G/5G release 15).

Thanks to the support of 5G networks as well as the LTE and WCDMA ones, it can be used globally taking advantage of the full benefits of 5G and Gigabit 4G networks; for high-performance, high-bandwidth applications, such as broadcasting and streaming.

Imola 5572-IK2W is designed to support 5G scenarios described by 3GPP, including 5G NR (SA), non-standalone (NSA), dual LTE-5G NR (EN-DC) connectivity, dynamic spectrum sharing between LTE and 5G.

FEATURES

Imola 5572-IK2W includes all the features below:

- **Routing**
- **Switching**
- **Multi fail-over**
- **QoS**
- **VoIP**
- **Sicurezza**

KEY BENEFITS

- ⇒ Security
- ⇒ High performances for Giga networks
- ⇒ Easy installation and factory pre-configuration
- ⇒ Multiple backup, always-on connections and e service continuity
- ⇒ Zero touch provisioning



Router IMOLA 5572



Imola 5572 is an integral part of the IMOLA series, routers certified and used in the networks of the main telecommunications operators.



IMOLA 5572 is a all-in-one **5G router**, equipped with eVDSL connectivity and is particularly suitable to be used in business applications where security, continuity of service and network performance are of particular importance.



In addition, 5572-IK2W routers have Giga Ethernet ports and is also supported a version with Wi-Fi port.



High-performance routing and switching capabilities enable broadband network speeds for data, voice, and video services applications.

Imola 5572- 5G Router

5G Gigabit connectivity, eVDSL for business applications

HARDWARE INTERFACES			5572
LAN	GE	10/100/1000 Mbps ports	4
		SFP port	1
WAN	GE / SFP	GE 10/100/1000 Mbps RJ45 port	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	1
RADIO CELLULAR	UMTS / HSDPA / HSUPA / HSPA+	– 3G HSPA+ Release 8 – Throughput 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 – Throughput 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 – Throughput 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		RJ45 connector	1
USB		USB 3.0 port	1

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

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

5G ANTENNAS

- Multiple Input/Multiple Output (MIMO) 4x4 supported on frequency bands 32, 4, 66, 3, 2, 25, 1, 30, 41, 7, 43, 42, 46, 48
- 4 antennas (SMA male) LTE/sub-6
- Optional: outdoor high gain antennas are also available (omnidirectional and directional) for outdoor installation

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

Homogeneous Backup

One single router is equipped with both wired and mobile

Multiple backup

Two routers connected with VRRP creates the physical backup of both network and

Heterogeneous Backup

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

Technical support

Tiese provides the user with two sites that are constantly updated:

Support.tiese.com: the site with technical documentation, assembly instructions, software updates, and how to request technical support.

Wiki.tiese.com: the site with manuals, instructions for installation, case studies, scenarios, FAQs, etc.

Imola 5572 - 5G Router

5G Gigabit connectivity, eVDSL for business applications

SWITCHING CAPACITY

- Single port capacity equal to the nominal port bandwidth (10/100/1000 Mbps or 10/100 Mbps)

FIBER ACCESS

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

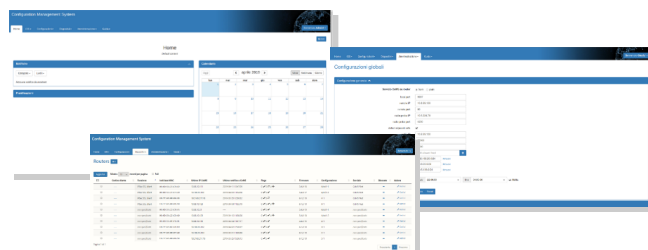
eVDSL

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)

Zero Touch Provisioning

Imola 5572 are integrated in the **TNA (Tiese Network Architecture)** suite, which is used for the remote and automated management of the configurations and firmware releases of the installed router park.



ADD-ONS



Please, refer to the specific documentation to learn about all the accessories and SFP modules supported, depending on the product series.

Imola 5572- 5G Router

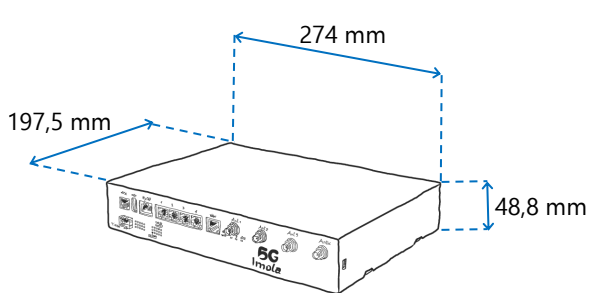
5G Gigabit connectivity, eVDSL for business applications

SOFTWARE

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

NETWORKING	<ul style="list-style-type: none"> - TCP-UDP IPv4 - IPv6 	SECURITY	<ul style="list-style-type: none"> - 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
LAYER 2 features	<ul style="list-style-type: none"> - 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 	SERVICES	<ul style="list-style-type: none"> - DHCP client, DHCP server with anti-spoofing functions, DHCP Layer Discovery Protocol IEEE 802.1ab - Intelligent DNS Proxy, local and remote - Traceroute - NTP Client and Server support - Easy VPN - DDns
ROUTING &	<ul style="list-style-type: none"> - 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) 	MANAGEMENT AND CONFIGURATION	<ul style="list-style-type: none"> - 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 - 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
QoS	<ul style="list-style-type: none"> - 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 bandwidth and redistribution of bandwidth 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 		

SYSTEM FEATURES

EXTERNAL HARDWARE FEATURES	DIMENSIONI
<p>Material Metal - black color</p> <p>Antennas 5G Radio cellular 4 x external removable antennas SMA male connectors</p> <p>Mounting Desktop / horizontal plane</p>	 <p>The diagram shows a perspective view of the router with dashed lines indicating its dimensions: a width of 274 mm, a depth of 197.5 mm, and a height of 48.8 mm. The router is a rectangular device with a front panel featuring various ports and a 5G logo.</p>

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. 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)

© Copyright Tiesse S.p.A. - All rights reserved.
Any disclosure, derivation or reproduction of this document, even partial, is strictly prohibited without prior written authorization by Tiesse S.p.A.

Disclaimer – The informations in this document may contain predictive statements including, without limitation, statements regarding the future financial and operating results, future product portfolio, new technology, etc. There are a number of factors that could cause actual results and developments to differ materially from those expressed or implied in the predictive statements. Therefore, such information is provided for reference purpose only and constitutes neither an offer nor an acceptance. Tiesse may change the informations at any time without notice.