# Tiesse
Innovation made in Italy®

# Imola LX
# 0272-IKF

**GE**

**EVDSL**

**FIBER**

# Imola LX

# 0272-IKF

## eVDSL and fiber router

Imola LX 0272-IKF is part of the IMOLA series of products, routers certified and used in the networks of major telecom operators. It is a highly innovative line of routers for ultrabroadband and fiber data networks.

Imola LX 0272-IKF is equipped with 4 Gigabit Ethernet ports, 1 fiber port (SFP cage) for connectivity including GPON, 1 xDSL port supporting enhanced VDSL profile (35b vPlus), 1 Gigabit Ethernet (copper) WAN port. It offers advanced QoS (Quality of Service), security and routing features.

| FEATURES | KEY FACTORS | APPLICATION |
|---|---|---|
| ⇒ Routing | ⇒ Security | ⇒ Data services for small and medium-sized enterprises |
| ⇒ Switching | ⇒ Easy installation and factory preconfigurations | ⇒ Banking and Insurance |
| ⇒ QoS | ⇒ Remote management and provisioning | ⇒ Retail |
| ⇒ Security | ⇒ Fiber and GPON connectivity | |

## Next-generation eVDSL networks

In our router supports next-generation networks (NGN), ensuring:

- Support for all VDSL2 profiles: 8 MHz up to 35 MHz in accordance with ITU-T G993.2 Annex Q standard (35b or Vplus profiles), capable of aggregate rates up to 400 Mbs)

- G.Vector support (ITU-T G.993.5)

- Compliance with ITU-T G.998.4 G.INP standard (protection from impulsive noise)

- Backward compatibility up to ADSL
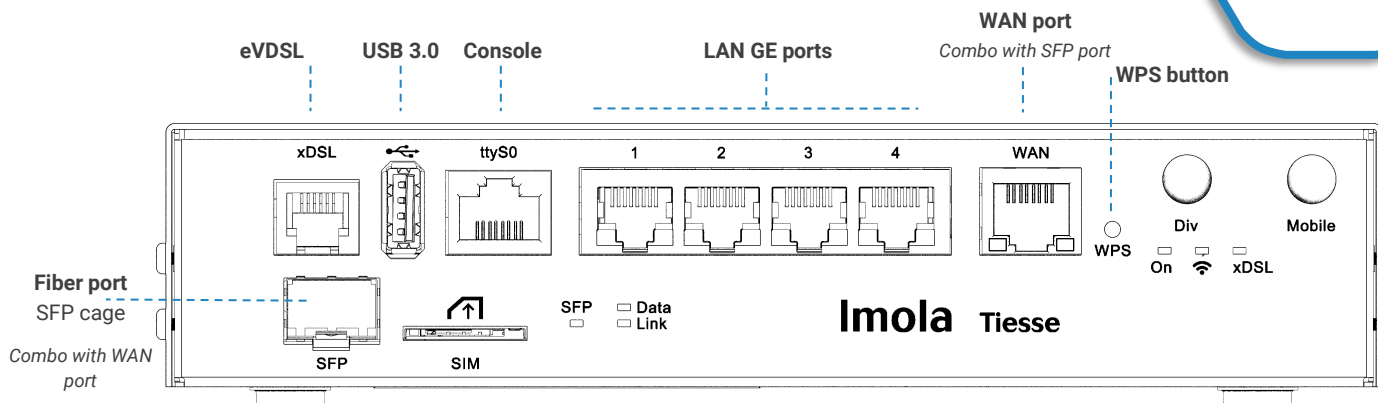
## FIBER ACCESS & GPON CONNECTIONS

WAN access via fiber:

- GPON connections support

- Support for multiple SFP modules (transceivers)

  - Maximum data rate 1000 Mbps (SX, BX, LX, ZX)

  - Supported connectors: LC simplex, LC duplex
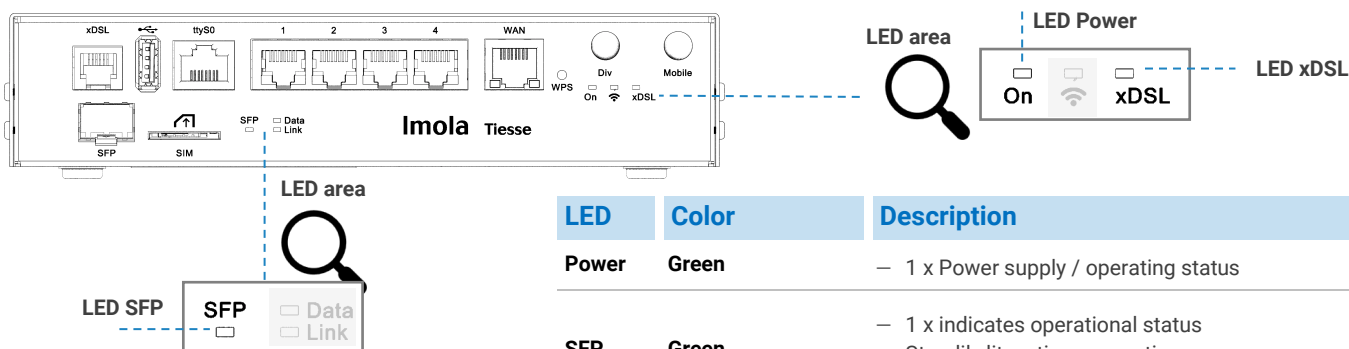
## Imola LX 0272-IKF - eVDSL and Fiber router

Connectivity for ultrabroadband data networks and fiber optics.

### HARDWARE INTERFACES



| Port | Description | Details |
|---|---|---|
| **LAN** | — **GE** | — 4 Ethernet 10/100/1000 Mbps ports and Switch, RJ-45 auto sensing connector |
| | — **GE** | — 1 GE 10/100/1000 Mbps port, RJ45 (label WAN) connector, combo with the SFP port |
| | — **Fibra** | — 1 SFP cage port for fiber and GPON connection - combo with WAN GE port (SFP transceiver module not included) |
| **WAN** | — **ADSL 2/2+**<br>— **VDSL**<br>— **eVDSL** | 1 port with RJ-11 connector, Full rate ADSL2/2+ / VDSL2<br><br>**ADSL2/2+**<br>— Downstream data rate up to 24 Mbps and upstream data rate up to 3.5 Mbps<br>— Conformity to Standard 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<br><br>**VDSL2**<br>— Support for all VDSL2 profiles: 8 MHz up to 30 MHz ITU-T G993.2<br>— Complies with the G.Vector standard (ITU-T G.993.5)<br>— Compliant with ITU-T G.998.4 G.INP standard<br>— Compatible with ADSL2 (backward compatibility)<br><br>**eVDSL**<br>— 35MHz ITU-T G993.2 Annex Q profile support (35b or Vplus profiles) with aggregate rates up to 400 Mbps |
| **Console** | — **RJ45** | — 1 port, RJ45 connector |
| **USB** | | — USB 3.0 port |

### LED DESCRIPTION

| LED | Color | Description |
|---|---|---|
| **Power** | **Green** | — 1 x Power supply / operating status |
| **SFP** | **Green** | — 1 x indicates operational status<br>Steadily lit: active connection<br>Blinking: presence of data traffic |
| **xDSL** | **Green** | — 1 x indicates operational status |
| **LAN** | **Yellow/Green** | — 2 for each LAN port, indicates operational status |

**Tiesse** | Router series datasheet

## Imola LX 0272-IKF - eVDSL and Fiber router

Connectivity for ultrabroadband data networks and fiber optics.

## SOFTWARE

*\* Note: Software functionality depends on the version and upgrade level of the product firmware*

| Area | Main features |
|------|---------------|
| **Networking** | — TCP-UDP IPv4, IPv6 support<br>— ICMP |
| **Layer 2 features** | — LAN Bridging<br>— VLAN on802.1q LAN interfaces in Access mode, Trunk, native VLAN and Hybrid mode<br>— Layer 2 Protocol Tunneling (L2PT)<br>— 802.1Q-in-802-1Q |
| **Routing & multicast** | — Static, Policy routing, RIPv1, RIPv2<br>— BGP-4, BGP-4+<br>— OSPFv2<br>— VRF Lite, Routing redistribution and tagging<br>— VRRP (Virtual Routing Redundancy Protocol) with IPv4-IPv6 authentication<br>— IGMP v1-v2-v3, IGMP snooping, IGMP proxying<br>— Routing Multicast with sparse-mode PIMv2 and PIMv2 dense-mode, MSDP<br>— IEEE 802.1d (Spanning Tree Protocol) |
| **QoS** | — Traffic classification based on source IP, destination IP, protocols (UDP, ICMP,TCP, etc.) and ports, and their combinations, on application recognition, on IP Precedence and DSCP<br>— DiffServ<br>— Layer 2 Remarking COS<br>— QoS on ATM classes<br>— Shaping with guaranteed allocated bandwidth and redistribution of excess bandwidth<br>— Committed Access Rate and Multicast rate limitation<br>— Traffic prioritization mechanisms, definition of an arbitrary number of priority classes<br>— IEEE 802.3ad link aggregation |
| **Security** | — NAT/PAT<br>— ACLs, Stateful Firewall<br>— IP Filtering<br>— SSL Tunnelling<br>— L2TP<br>— PPTP<br>— GRE Tunnelling<br>— VPN with IPSEC 3 DES Encryption |
| **Services** | — DHCP client, DHCP server with antispoofing functions<br>— Intelligent DNS proxy, local and remote<br>— Traceroute<br>— NTP Client and Server support<br>— Easy VPN |
| **Management and configuration** | — SNMP v1, SNMPv2, SNMPv3<br>— Telnet server with multiple concurrent sessions<br>— SSH server with multiple concurrent sessions (SSHv2)<br>— IP SLA with support for: One Way Delay, Round Trip Delay, Jitter, Packet Loss<br>— SAA (Service Assurance Agent)<br>— Fault management Syslog /Trap<br>— PAP/CHAP user authentication, RADIUS, TACACS+<br>— Tracking for backup management, commands and event scheduling<br>— Software update via TFTP and FTP<br>— Configuration via command Line Interface (CLI), Text/Menu oriented and Telnet<br>— TNA (Tiesse Network Architecture) suite for auto-provisioning and automated remote management<br>— Ability to maintain an arbitrary number of configurations |

**Tiesse** | Router series datasheet

## Imola LX 0272-IKF - eVDSL and Fiber router

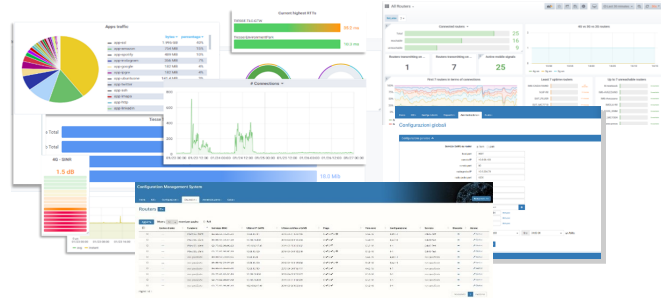Connectivity for ultrabroadband data networks and fiber optics.

## ZERO TOUCH PROVISIONING

Imola LX 0272-IKF routers are integrated into the **Tiesse Network Architecture (TNA) suite**.

TNA is the modular software suite that enables Zero Touch Provisioning network architecture, including monitoring, remote and automated web-based management of configurations and firmware releases of the installed fleet; enables traffic engineering, network overlays, and many other features.

A complete datasheet of the solution is available at www.tiesse.com.

## SYSTEM FEATURES

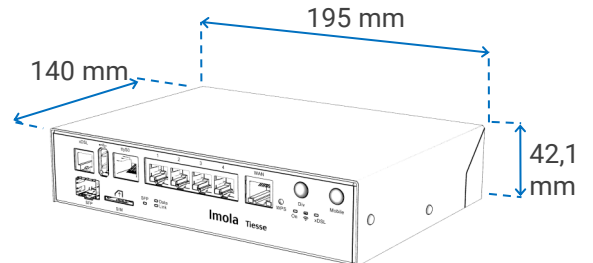| | |
|---|---|
| **POWER** | – 12V AC/DC Adapter <br> – Pulsante ON/OFF |
| **CONSUMPTION** | – < 20 W  Full Configuration |
| **FANS** | – Fanless |
| **PROCESSOR** | – RISC Network processor |
| **MEMORY** | – RAM: 256 MB - DDR3 <br> – FLASH: 256 MB |
| **ENVIRONMENT** | – Operating temperature: −5°C / +50° C <br> – Storage temperature:  −40°C / +70°C <br> – Maximum relative operating humidity: 93% (non-condensing) |

## EXTERNAL FEATURES

| | |
|---|---|
| **MATERIAL** | – Metal chassis |
| **COLOR** | – Black |
| **FORM FACTOR** | – Desktop |

### SIZE

195 mm

140 mm

42,1 mm

## Add-ons

Tiesse products offer a range of optional accessories, available according to the specifications of each model; these include omnidirectional and directional antennas for outdoor use, mounts for various mounting options, and SFP transceiver modules.

Complete documentation on supported accessories can be downloaded directly from www.tiesse.com.

## Technical support

On line support on:

**Supporto.tiesse.com**: portal with technical documentation, installation instructions, software updates, and ways to request technical support.

**Wiki.tiesse.com**: site dedicated to software documentation; includes user manuals, first-time user guides, case studies, tutorials, and other useful resources for using the products.

**Tiesse** | Router series datasheet

# Tiesse
## Innovation made in Italy®

Tiesse is a totally Italian company with more than 25 years of experience in the design, development and production of network equipment and IoT devices, suitable for use in mission-critical and industrial scenarios. Tiesse's most successful series, Imola, Lipari and Levanto, are innovative, competitive and certified, and are present in the networks of the major telecommunications operators, in the energy sector, large-scale distribution and vertical sectors, both in the Italian and foreign markets.

Further information on Tiesse solutions can be found on the company website www.tiesse.com.

**Info**: mail@tiesse.com

**Marketing & Sales**: marketing@tiesse.com

# www.tiesse.com

**Ivrea**
**Headquarter,**
**Sales offices,**
**Manufacturing**

**Turin**
**R&D**

**Avezzano**
**R&D**

**Rome**
**Sales offices**
**R&D**

Via Asti 4
10015 Ivrea (TO)

Viale L. Gaurico 9/11
00143 Roma EUR

Via Livorno 60
10144 Torino (TO)

Tel +39.0125230544
Fax +39.0125631923

Tel +39.0654832203
Fax +39.0654834000

Via C. Corradini 80
67051 Avezzano (AQ)

Ver. ENG 141124