Tiesse

Innovation made in Italy

Imola

0872-IK2V-IK2F

Ultra broadband dual eVDSL and dual Fiber router

Datasheet

www.tiesse.com

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Ultra broadband
dual eVDSL and dual Fiber router

It is an innovative line of ultra broadband eVDSL dual link routers, FTTH (2 SFP cage) WAN Giga Ethernet.

FEATURES

Imola 0872-IK2V-IK2F models, whose fit into the evolution of the **Imola** series, are an innovative series of routers with ultra broadband eVDSL double link, FTTH (2 SFP cages), WAN Giga Ethernet, dual Wi-Fi and LTE features.

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

For the fiber and eVDSL new generation networks.

KEY BENEFITS

⇒ Double eVDSL link, two fiber ports and dual Wi-Fi
⇒ Always-on connectivity and service continuity
⇒ Security
⇒ Easy installation and factory pre-configuration
⇒ SIMs are installed and tested in factory on each device
⇒ Remote management and provisioning
⇒ Scalability
⇒ Multiple backup
⇒ Zero touch provisioning

APPLICATIONS

Imola 0872-IK2V-IK2F models are particularly suited for business applications where security, continuity of service and network performances are of primary importance.

- Enterprise WAN network access
- Branches and remote offices of banks and insurance companies
- Lottery
- Gaming networks
- Retail
- Backup for broadband networks

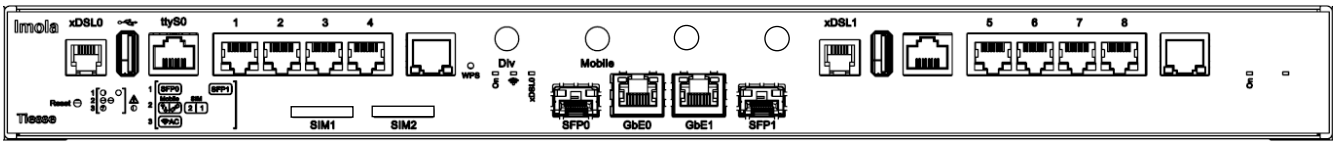
Intelligent Policy Based Routing (IPBR)

All **Imola** routers are equipped with network traffic routing and distribution features that dinamically adapts to the status of the network, link and services.

Thanks to the network traffic classification, the link quality control by measuring Jitter values, One Way Delay, Round Trip Delay and Packet Loss as well as in-band link quality evaluation it is possible to redirect the routing process to the best alternative network path.

Moreover, in case of link fault all *seamless switch-over* features are preserved.

INTERFACES



HARDWARE INTERFACES			0872-IK2V-IK2F
LAN	**GE**	10/100/1000 Mbps ports - RJ45 connectors	8
WAN	**GE-WAN**	10/100/1000 Mbps WAN port- RJ45 connector	2
	SFP WAN	SFP Cage for Fiber and GPON connections (SFP module not included)	2
	ADSL 2/2+ **VDSL2** **eVDSL2**	Full rate ADSL2/2+ / VDSL2 - RJ11 connector **ADSL2/2+** – Downstream data rate up to 24 Mbps — upstream data rate up to 3.5 Mbps – Compliant 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 – 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) **eVDSL2** Support of 35 MHz ITU-T G993.2 Annex Q (35b or Vplus) profile with aggregate rates up to 400 Mbps	2
CONSOLE		RJ45 connector	1
USB		USB 3.0 port	1

FIBER ACCESS

- Single and/or multiple fiber access for LAN and WAN via fiber and optic cables
- GPON connections are supported
- Different types of transceivers supported:
  - max data rate 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)

SWITCHING CAPACITY

- Single port capacity equal to the nominal port bandwith (10/100/1000 Mbps or 10/100 Mbps)
- Total capacity per switching matrix 5,9 Gbps

SDN

For all Imola 0872-IK2V-IK2F models Network Configuration Protocol (**NETCONF**) with **YANG** data model is available.

BACKUP: high availability - mission critical

Seamless backup

The user doesn't notice any service interruption and the following passage to backup mode; all 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).

SOFTWARE

Nota: l'elenco sottostante è indicativo; le funzionalità dipendono dalla versione e aggiornamento NoS.

NETWORKING

- TCP-UDP IPv4
- ARP; CMP, IPv4 Path MTU Discovery
- IPv6
- ICMPv6, IPv6 Path MTU Discovery, IPv6 Neighbor Discovery, IPv6 Stateless Address Auto Configuration

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 & MULTICAST

- 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
- CoS on VLAN
- QoS on ATM classes
- IPSLA based on QoS
- Remarking di IP Precedence, DSCP and CoS
- 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
- 3 DES Encryption

SERVICES

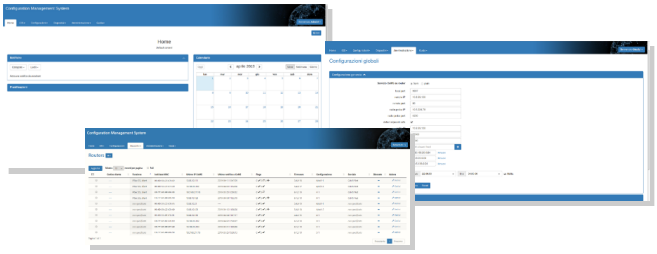
- DHCP client, DHCP server with antispoofing functions, DHCP Layer Discovery Protocol IEEE 802.1ab
- Intelligent DNS Proxy, local and remote
- Traceroute
- NTP Client and Server support
- Easy VPN

MANAGEMENT AND CONFIGURATION

- 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
- Support of Network Configuration Protocol (NETCONF)
- Support of YANG Data Modeling Language for NETCONF

Zero Touch Provisioning

Imola 0872-IK2V-IK2F are integrated in the **TNA (Tiesse Network Architecture)** suite, which is used for the remote and automated management via WEB of the configurations and firmware releases of the installed device park.



SYSTEM FEATURES

POWER	AC/DC adapter (internal Universal 100-240 VAC) Power Switch ON/OFF Optional: DC/DC 12V or DC/DC 24V-48V version
CONSUMPTION	< = 15W (full configuration)
ENVIRONMENT	**Operating temperature**: –25°C / +70° (96 hours) –40°C / +70°C (4 hours) **Storage temperature**: –40° C / +70° C **Max operating humidity**: 93% (non condensing)

PROCESSOR	Dual core ARM A9 - 1 GHz
MEMORY	Default 256 MB DDR2
FLASH MEMORY	32 MB up to 1 G

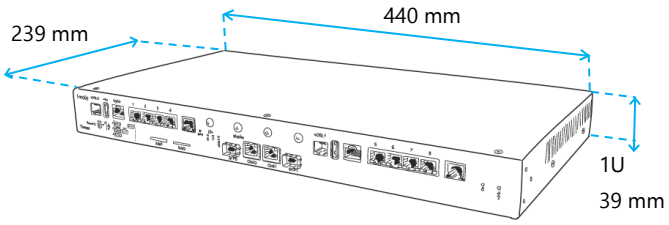
EXTERNAL HARDWARE FEATURES

Material	Metal - black color
Mounting	Desktop / horizontal plane and rack 1U thanks to the mounting kit supplied within the package

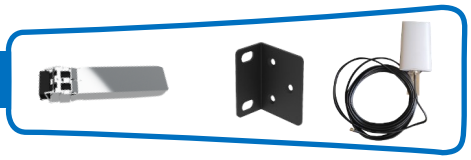
LED INDICATORS

Status LED	1 x power / operative status for the primary card 1 x power / operative status for the secondary card
Ethernet	2 x operative status - for each port
SFP	1 x operative status - for each port
xDSL	1 x connection status for the primary card 1 x connection status for the secondary card

SIZE



ADD-ONs



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

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.

Tiesse
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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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