

Layer 2+

Managed

Ethernet Switch

# FlexDSL MiniFlex

## Ethernet Switch



### Features

- Layer 2+ Managed Ethernet Switch
  - 2 x Gigabit Ethernet for SFP module
  - 2 x Gigabit Ethernet, electrical
  - 8 x Fast Ethernet, electrical
- Spanning Tree and Ethernet Ring Protection
- Jumbo Frames support, QoS (8 queues)
- VLAN, Trunk Support, Multicast, MVR
- Trunk and Link Aggregation
- Access Control and DoS protection
- Fan-less Din-Rail housing with Table Top option
- 24/48VDC on board power option
- 110/230VAC Power option with external adapter
- CLI, Telnet, SSH and SNMP management

- The FlexDSL **MiniFlex Ethernet Switch** appears a part of MiniFlex Family. It was designed as a stand-alone solution for Ethernet networks construction with quality in mind and could be used as feature-rich network device like **Access Switch** with VLAN, Multicast support and DoS protection; as **Edge Aggregation Switch** on a Metro Ethernet Network with Q-in-Q and QoS support. For small corporate and utility networks it could be used as **Core Switch** with RSTP and Ethernet Ring Protection support. All Ethernet functions of MiniFlex Ethernet Switch are compatible with MiniFlex Access Platform.
- The MiniFlex Switch is based on a **high performance System on Chip (SoC)** IC builds with 65-nm CMOS technology. It has 24.8 Gbps non-blocking wire-speed performance and has 1.0 Mb internal memory for packet buffering. It supports L2 and L3 protocol stack by hardware and has 16K MAC address table, 8K IP address table and 2K multicast table. IPv6 protocol support is included as well. The SoC IC has hardware support for Class of Service (CoS) with 8 queues in ingress and egress directions on every port. Build-in anti-DoS protection will help system administrators to keep enterprise network save and secure.
- The MiniFlex Switch could be used in various power scenarios. Due to its **wide range from -18 to -72V DC** it can be used in Telco rooms as well as in Industry. **AC power** could be used with external power adapter (has to be ordered separately). Power connector has special design to prevent accident unplugging.
- Like every product from FlexDSL Telecommunications AG, the MiniFlex Ethernet Switch manufactured according to highest quality standards providing additional value due to selection of special components. The combination of comprehensive functions, providing maximum flexibility, together with the higher quality of the FlexDSL MiniFlex Ethernet Switch, make it the perfect choice for all your Ethernet needs.

Specifications are subject to change without notice

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## MiniFlex Ethernet Switch

**Model:** MF-SW-12Eth-RL,V1

Switch Interfaces: 8x Ethernet 10/100BaseT (Auto Sensing)

2x Gigabit Ethernet 1000Base-T

2x Gigabit Ethernet SFP

1x USB 2.0 (Local Console Port)

Physical Interfaces: RJ45 (Ethernet), SFP (Ethernet), Mini-B (USB)

Management: Local Console Port, Telnet/SSH, SNMP v1 and V2c, RMON V1

L2 Features: **Spanning Tree and Ethernet Ring**

IEEE 802.1D Spanning Tree Protocol (STP)

IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)

IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)

Ethernet Ring Protection Mechanism, 50ms rapid switching and protection

Port Mirroring, Jumbo Frames support (up to 9216 bytes)

**VLAN**

4K IEEE 802.1q VLANs

Port-based VLAN, MAC-Based VLAN, Private VLAN

GVRP, Q-in-Q, VLAN Translation

**Link Aggregation**

Static Trunk, Dynamic Trunk, IEEE 802.3ad LACP, Load Balancing

**Multicast Features**

IGMP v1, v2, v3, IGMP Snooping, IGMP Groups

Multicast VLAN

**Qos: Quality of Service**

8 Priority Queues/port

WRR, Strict Priority

WRR/WDDR+Strict Priority

802.1p, Port-Based CoS, CoS based on MAC DA/SA, Bandwidth Control per Port

**Security: Access Control List**

MAC+Port binding, IP+Port binding, IP+MAC binding, TCP/UDP port allow/deny

VLAN + Port Binding

**Port Security**

Trust Port, Port Blocking, Private VLAN, Port Powering Off

MAC address learning limit per port, DoS check, Management IP list

**User Management Authorization and Authentication**

Radius

IEEE 802.1x support

**Electrical specification: Power supply**

Specification ETSI ETS 300 132-2

Input Voltage 18-72VDC

Connector Type Molex MiniFit, 4 pins

Power Consumption Typ. 15W

**Mechanical specification: Dimensions and weight**

Dimensions: 216(W)x150(D)x43(H) mm

Weight: 1.1 kg

**Environment: Climatic conditions**

Storage: ETS 300 019-1-1 Class 1.2 (-25°C ... +55°C)

Transportation: ETS 300 019-1-2 Class 2.3 (-40°C ... +70°C)

Operation: ETS 300 019-1-3 Class 3.2 (-5°C ... +45°C)

Higher Operation Temperature range available on request (-20°C ... +70°C)

**EMC: EMC and Safety Standards**

EN 300386 V1.4.1:2008 EN 61000-4-2/A2:2001

EN 50121-4:2006 EN 61000-4-3:2006

EN 60950-1:2006 EN 61000-4-4:2004

EN 55022:2006, Class B EN 61000-4-5:2006

EN 55024/A2:2003 EN 61000-4-6:2007 EN 61000-4-6/A1:2001

## Ordering

MF-SW-12Eth-RL,V1

MiniFlex Switch RL FlexDSL

4xETH (Gigabit) and 8xETH(10/100BaseT)

Input 18-72VDC

FG-PA48/1A

AC Desktop Power Supply

100-240VAC/48VDC,1.1A,Molex

AC IEC 320, DC 1.8m Cable

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