

# Modular Access & xWDM System Chassis Versions

# MICROSENS

## Description

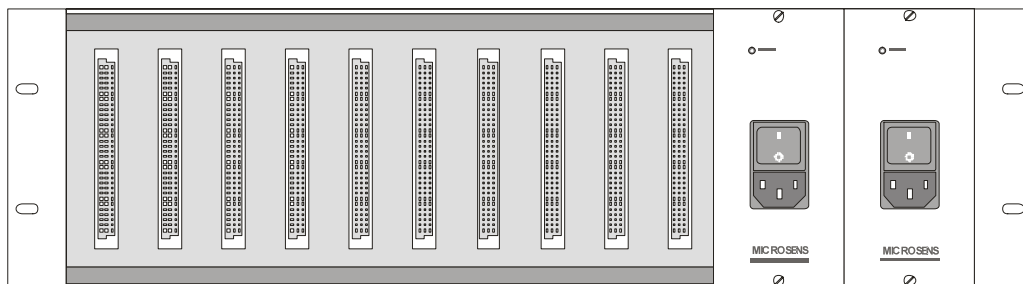
Constantly increasing demand for bandwidth, and the geographical spread of data networks, have increased the deployment of fiber optics at all application levels. Today's network infrastructures require open systems based on fiber optics that can be installed easily and adapted flexibly to changing requirements.

The MICROSENS Access & xWDM Platform offers a wide range of access and multiplexing modules for LAN and WAN applications as well as for the interfacing of telecommunications and industrial networks.

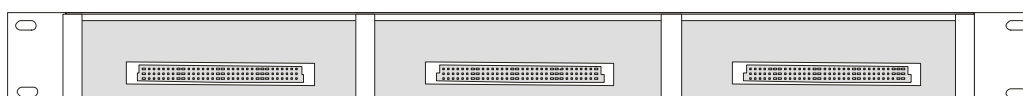
The modular Access & xWDM Platform from MICROSENS is based on universal communication modules for installation in various chassis types and the installation into 19" racks. One power supply supplies all modules via the backplane with power. For higher safety requirements it is possible to work with a second redundant power supply.

A large number of modules are available for the passive and active conversion and transport of all kind of protocols. The different modules can be combined together in one chassis. The product range includes e.g. multimode / single mode converter, Wavelength converter, fiber / copper long haul converter, bridges and switches, 3R signal regeneration, redundant converter, Gigabit Extender, transparent WDM converter, copper / fiber converter with WDM fiber interface and CWDM/DWDM transponders and multiplexers.

Depending on the requirement in terms of bandwidth and optical parameter it is possible to select the optimal solution for today's and tomorrows demands. All modules can be changed during operation (hot swap).



3HU Chassis (MS416001M) with two power supplies for redundancy (MS416004M):



1HU Chassis (MS416006M / MS416007M) with integrated power supplies:

## Technical Specifications

<b>Type</b>	Modular Access & xWDM System for 19" rack installation
<b>Dimensions</b>	<p>MS416001M (3 HU) 450 x 130 x 250 mm (w x h x d) 84 TE with 3 HU modules</p> <p>MS416010M (4 HU) 450 x 174 x 400 mm (w x h x d) 168 TE (1x84 TE front and 1x84 TE back) with 3 HU modules</p> <p>MS416015M (7 HU) 450 x 304 x 400 mm (w x h x d) 312 TE (2x60 TE front and 2x84 TE back) with 3 HU modules 12 TE (2x6 TE front) with 6 HU modules</p> <p>MS416006M / MS416007M (1 HU) 450 x 43 x 285 mm (w x h x d) 3x 6 TE with 1 HU</p>
<b>Power Supply</b>	Power Supply Module 230 V/ 50 Hz, also for redundancy, optional with 48 V DC und 24 V DC (not for MS416006/MS416007, integrated there)
<b>Operating temp.</b>	0°C to 55°C
<b>Storage temp.</b>	-20°C to 80°C
<b>Rel. humidity</b>	5% to 80% non condensing

## Combinations

The 19" chassis (MS416001M) can take with one power supply (MS416004x) inserted up to 12 modules. The power supply can be also be inserted redundant (2x MS416004x), in that case there are 10 slots available for modules. For the power redundancy it is also possible to combine 230 V AC and 24/48 V DC power supplies together.

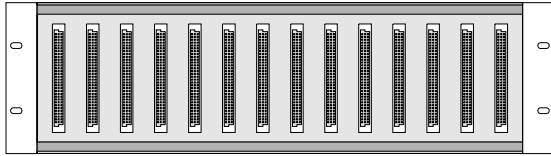
In the extended version (MS416010M, 4 HU) there are 14 slots on the front and 14 slots on the back side available (total 28 slots). For the airflow it is necessary in insert min two fan units (3 slot wide). So in combination with two power supplies and one management modules it is possible to insert up to 17 modules. This 4 HU chassis is optimised for the air flow and has larger insertion depth.

Furthermore there are smaller chassis for up to 3 modules available (MS416006M). this chassis has a fixed integrated power supply and can be also delivered with a second redundant power supply (MS416007M).

Additional there are desk6op chassis with one and two slots available. Here the power supply can be done either with an integrated or an external power supply. An optional wall mount bracket is also available.

**Chassis Types**

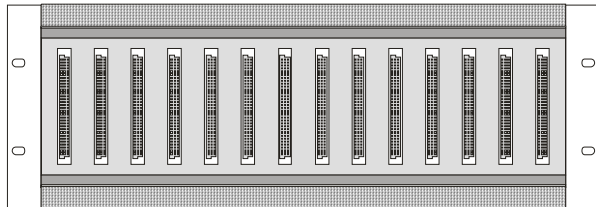
**MS416001M**  
**Chassis for 19" rack installation**



- backplane for power supply and management
- Delivered with 1 fan module (backside)
- Delivered without power supply
- for 12 modules with one power supply or 10 modules with two power supplies

height: 3 HU  
 depth: 250 mm

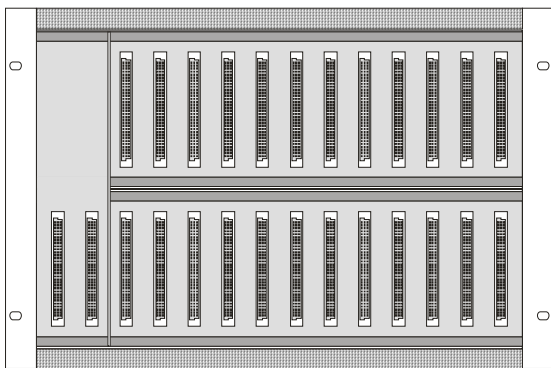
**MS416010M**  
**Chassis for 19" rack installation**



- backplane for power supply and management
- Delivered without power supply and air filter
- 28 slots
- optional power supply, fan modules and management-module can be inserted at the back side

height: 4 HU  
 depth: 400 mm

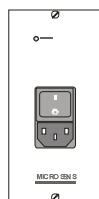
**MS416015M**  
**Carrier-Chassis for 19" rack installation**



- backplane for power supply and management
- Delivery without power supply and air filter
- 54 slots  
 (52 Slots for 3HU modules, 2 Slots for 6HU modules)

Einbauhöhe: 7 HU  
 Einbautiefe: 400 mm

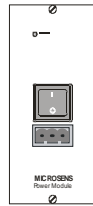
**MS416004 / MS416004M**  
**Power Supply for 19" racks**



- backplane connection for power supply and management
- optionally management ready (M version MS416004M)
- 100 - 230 V AC 90 W

height: 3 HU  
 width: 12 TE (takes 2 modules width)

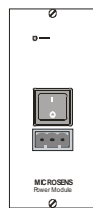
**MS416005 / MS416005M**  
**Power Supply for 19" racks**



- backplane connection for power supply and management
- optionally management ready (M version MS416005M)
- 48 V DC 90 W

height: 3 HU  
 width: 12 TE (takes 2 modules width)

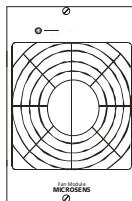
**MS416005M-24**  
**Power Supply for 19" racks**



- backplane connection for power supply and management
- optionally management ready (M version MS416004M)
- 24 V DC 90 W

height: 3 HU  
 width: 12 TE (takes 2 modules width)

**MS416040M**  
**Fan module for 19" racks**



- backplane connection for power supply and management
- management ready
- only for MS416010M und MS416015M chassis

height: 3 HU  
 width: 18 TE (takes 3 modules width)

**MS416006M**  
**Chassis for 19" rack installation**



- backplane for power supply and management
- with integrated power supply
- for 3 modules (horizontal)

height: 1 HU  
 depth: 285 mm

**MS416007M**  
**Chassis for 19" rack installation**



- backplane for power supply and management
- with two integrated power supplies
- for 3 modules (horizontal)

height: 1 HU  
 depth: 285 mm

**MS416100**  
Blind cover for 19" Chassis



- no connection to backplane, power supply or management

height: 3 HU  
width: 6 TE (takes 1 module width)

**MS417001**  
Desktop chassis for 1 module



- backplane for power supply  
- no active fan needed  
- incl. external power supply  
100 - 230 V AC, 1,3 A (MS700645)  
- for 1 module (3 HU, 6 TE wide)  
- opt. wall mounted (MS417001-WH)

dimensions (wxhxd): 38 x 132 x 240 mm

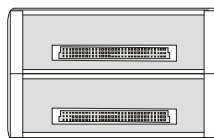
**MS417021**  
Desktop chassis for 1 module



- backplane for power supply  
- no active fan needed  
- internal power supply  
100 - 230 V AC, 1,25 A  
- for 1 module (3 HU, 6 TE wide)  
- opt. wall mounted (MS417001-WH)

dimensions (wxhxd): 38 x 132 x 240 mm

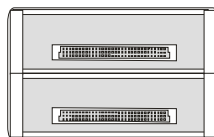
**MS417041M**  
Desktop chassis for 2 modules



- backplane for power supply  
- no active fan needed  
- incl. external power supply  
100 - 230 V AC, 1,3 A (MS700645)  
- for 2 modules (3 HU, 6 TE wide)  
- opt. wall mounted (MS417001-WH)

dimensions (wxhxd): 69 x 132 x 240 mm

**MS417051M**  
Desktop chassis for 2 modules



- backplane for power supply  
- no active fan needed  
- internal power supply  
100 - 230 V AC, 1,25 A  
- for 2 modules (3 HU, 6 TE wide)  
- opt. wall mounted (MS417001-WH)

dimensions (wxhxd): 69 x 132 x 240 mm

## Order Information

Art.-No.	Description	Connectors
MS416001M	19" Chassis 3HU (84 DU), max. 12 slots (84 DU) plus one power supply (2 slots), without accessories like power supply, blind covers, etc.	
MS416010M	19" Chassis 4HU (84 DU), max. 17 slots (84 DU) plus two power supplies (2 slots each), two fan modules (3 slots each) without accessories like power supply, blind covers, etc.	
MS416004	Switching Power Supply for MS416001M and MS416010M, 3 HU / 12 DU, prim.: 230 V AC 50 Hz, 90 VA (also for redundancy)	1x 230 V AC
MS416004M	Switching Power Supply for MS416001M and MS416010M, 3 HU / 12 DU, prim.: 230 V AC 50 Hz, 90 VA (also for redundancy), manageable	1x 230 V AC
MS416005	Switching Power Supply for MS416001M and MS416010M 3 HU / 12 DU, prim.: 48 V DC (also for redundancy)	1x 48 V DC
MS416005M	Switching Power Supply for MS416001M and MS416010M 3 HU / 12 DU, prim.: 48 V DC (also for redundancy), manageable	1x 48 V DC
MS416005M-24	Switching Power Supply for MS416001M and MS416010M 3 HU / 12 DU, prim.: 24 V DC (also for redundancy), manageable	1x 24 V DC
MS416006M	19" Chassis 1HU, 3 slots, backplane for power supply and management, integrated power supply, without blind covers	1x 230 V AC
MS416007M	19" Chassis 1HU, 3 slots, backplane for power supply and management, two integrated redundant power supplies, without blind covers	1x 230 V AC
MS416020-B	SNMP/Web based management module, 6DU, 1xRJ45 Ethernet 10/100Base-TX, RS-232 terminal	1x RJ-45 1x SUB-D9
MS416040M	Fan module 18 DU (for MS416010M required)	

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MS416100	Blind covers for unused slots	
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MS417001	Desktop chassis for modules, 1 module incl. External power supply 100-230 V AC, 1,3 A	1x 12 V DC
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MS417021	Desktop chassis for modules, 1 module integrated power supply 100-230 V AC, 1,25 A	1x 230 V AC
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MS417041M	Desktop chassis for modules, 2 modules incl. External power supply 100-230 V AC, 1,3 A	1x 12 V DC
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MS417051M	Desktop chassis for modules, 2 modules integrated power supply 100-230 V AC, 1,25 A	1x 230 V AC
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MS417001M-WH	Wall mounting kit for desktop chassis	
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