

# MICROSENS

## MS430501M and MS430503M – manual

### Overview

The MS430501M and MS430503M are 2HU chassis which are part of MSP3000 Platform

### Product features:

- 2 RU chassis
- Up to 400 Gb/s aggregation and transport
- SNMP Management
- Command Line interface SSH and Telnet
- Three 100M Ethernet management ports
- NEBS compliant
- Carrier Class
- -48VDC and 220/110VAC chassis version

### Description

The **chassis** consists of a 2RU chassis containing:

- One management card (MGNT)
- One FAN unit with three fans
- One dust filter
- One to six generic slot PMs (Pluggable Modules).

## **Introduction**

This technical specification applies to the 2RU chassis which is capable of hosting up to six aggregation and transport PMs (Pluggable Modules). Depending on PM types, they will occupy one, two or three slots in the chassis

This part gives technical specifications as well as a functional description of the chassis made of:

- Management: MGNT4 means MS430520M-B
- Fan Unit: FAN

This technical specification does not describe the different aggregation and transport PMs which can be plugged in the generic slots of the chassis. For that purpose, refer to these PMs specific documentation.

## Functional Description

### **General**

The block diagram of the 2HU DC chassis is given in Figure 1 and 2HU AC in Figure 2. The chassis is composed of eight PM slots. Two of them are dedicated to management and fan and are mandatory for the operation. The six remaining are generic slots capable of hosting any traffic aggregation and transport family.

The two dedicated slots are hosting the following modules

- MGNT4: management board, hosting the SNMP agent allowing the management of the different modules of the chassis including the PMs. It also hosts the craft terminal as well as the CLI (Command Line Interface)
- FAN: Fan unit for heat dissipation

In addition the backplane provides distribution of control signals and power for the different generic PM slots. (There is no traffic carried by the backplane)

The six additional generic slots available in the chassis are capable of hosting various types of aggregation and transport PMs (Pluggable Modules).

The interfaces of the 2HU chassis, other than those of the PMs in generic slots are:

- Power supplies connectors:
  - Two -48VDC power supply connectors on the front panel for the DC variant
  - Two 110/240VAC power supply connectors on the back panel for the AC variant
- MGNT:
  - Three Ethernet connectors for the SNMP management of the chassis and equipped PMs.
  - One RS232 for the CLI console port

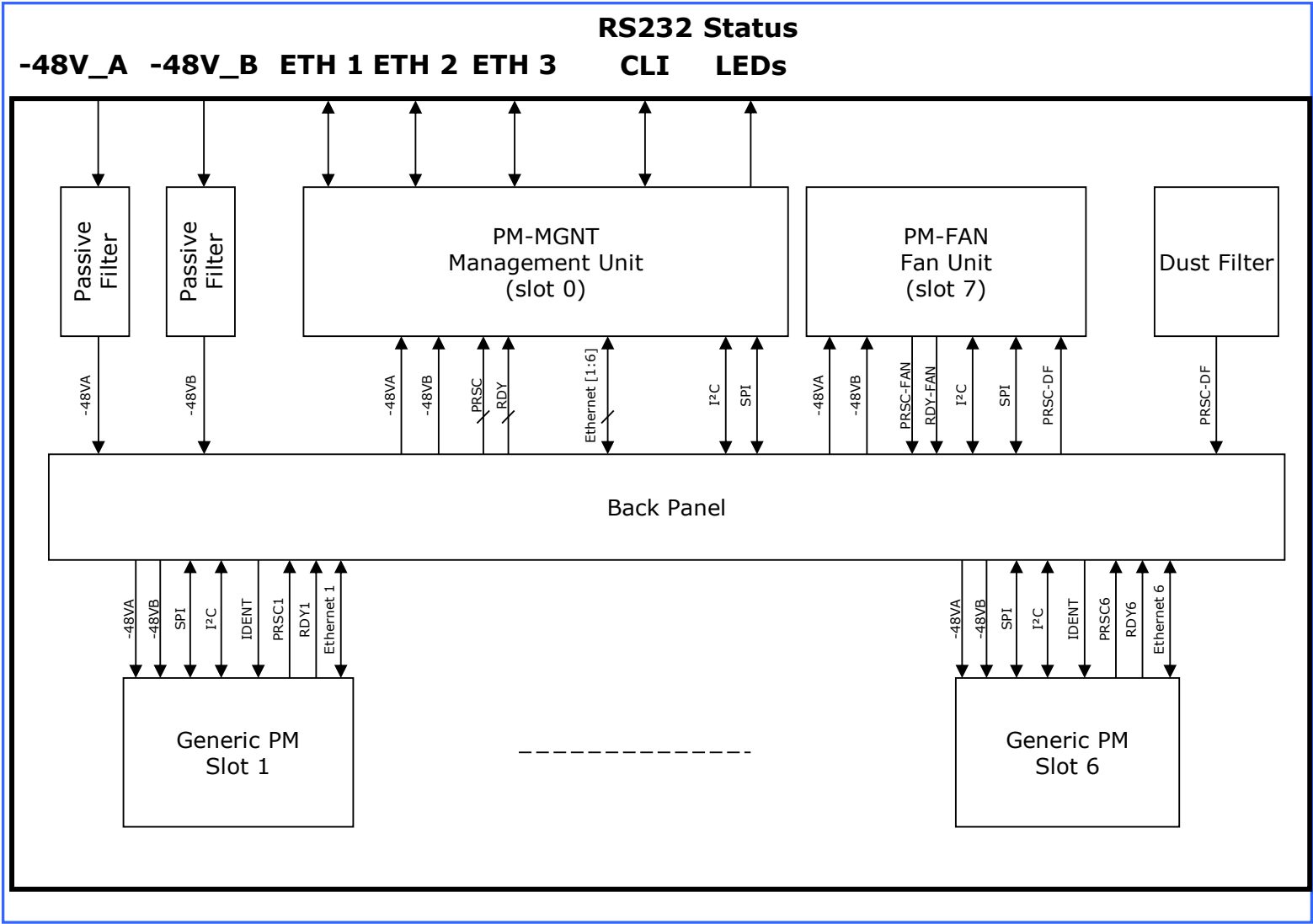


Figure 1 Chassis General Block diagram – DC supply

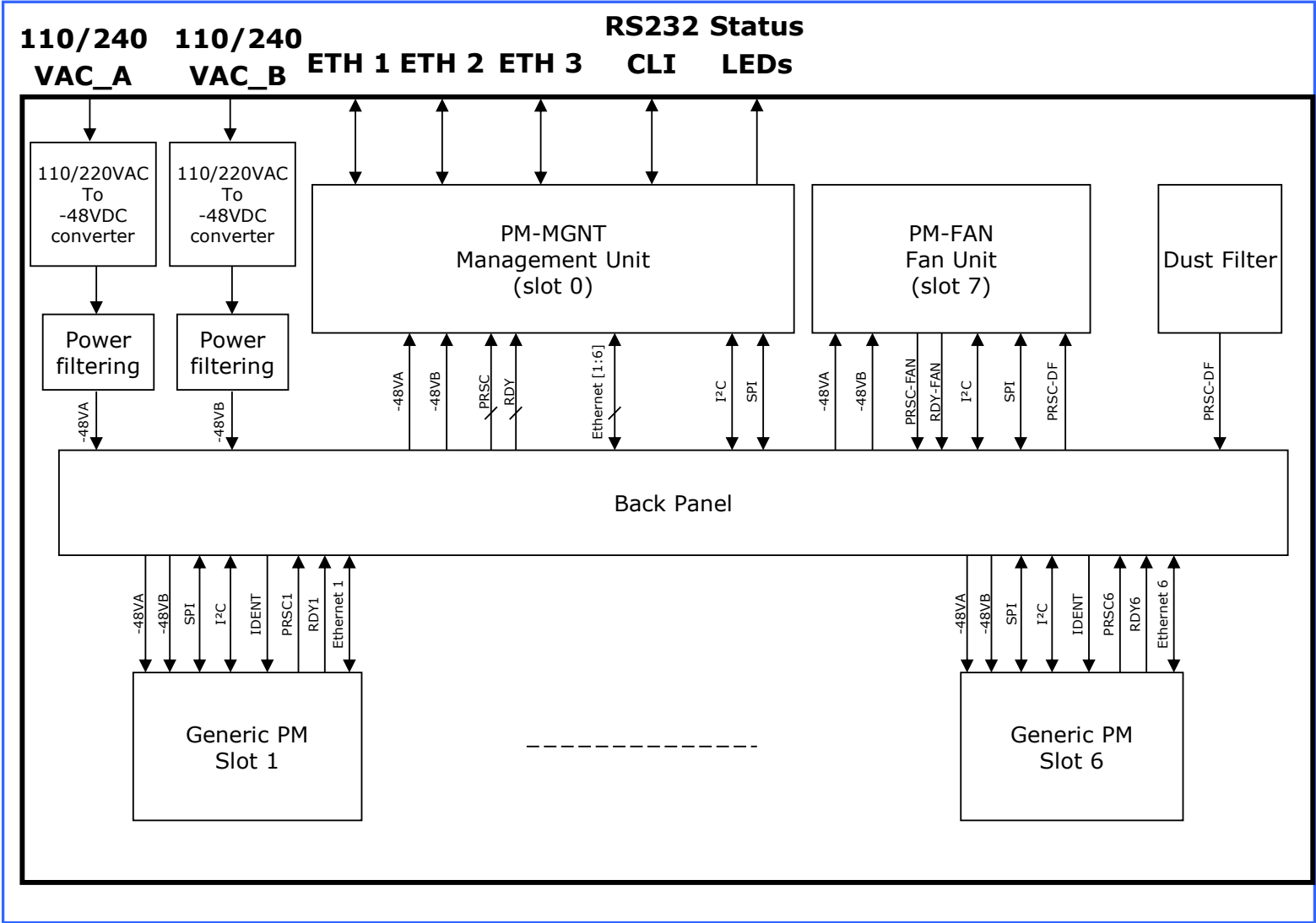


Figure 2 Chassis General Block diagram – AC supply

## ***MGNT4 Management Unit***

The block diagram of the MGNT4 unit is given in Figure 3

The Front panel description of the MGNT4 is given in Figure 4

The MGNT4 management unit has six main functions:

- It hosts the SNMP agent
- It hosts the embedded web based http craft terminal
- It hosts the console port giving access to the CLI (command Line Interface)
- It provides three external Ethernet interfaces through an internal Ethernet switch.
  - Two External Ethernet interfaces are used for connection to a management network and for daisy chaining several chassis
  - The third External Ethernet interface is reserved for Node Controller feature (future use).
- It provides 6 internal Internal Ethernet interfaces dedicated to PM slots.
- It provides the interface between the SNMP agent and the PM generic slots for managing the equipped PMs.
- It provides the interface between the SNMP agent and the FAN unit.

The main characteristics of the MGNT4 management unit are:

- Processor: 32 bit, 1.1 GHz
- RAM memory: 512 Mbytes
- Flash memory: 512 Mbytes
- Operating System: Linux

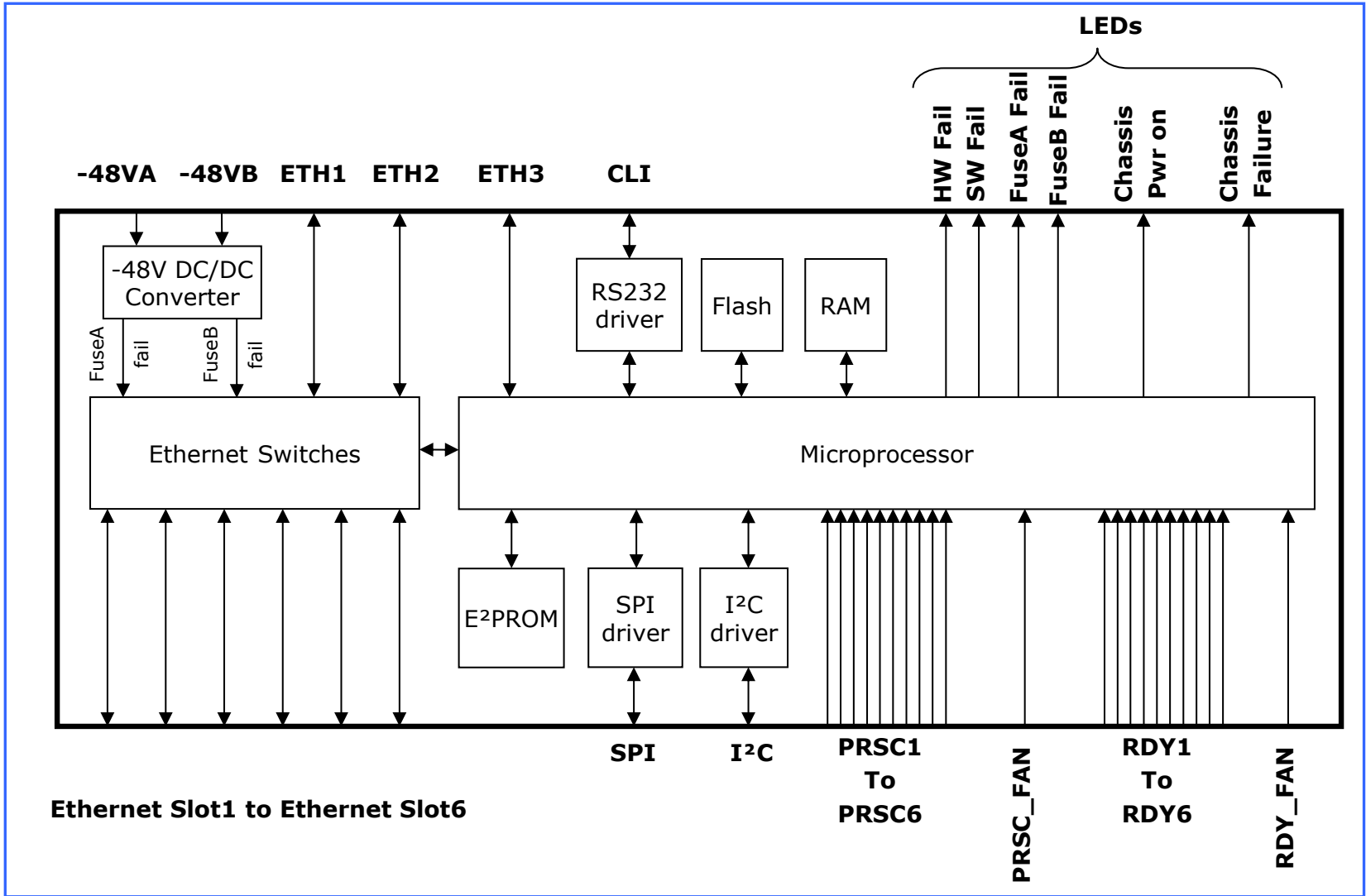


Figure 3 2HU Chassis MGNT4 board block diagram

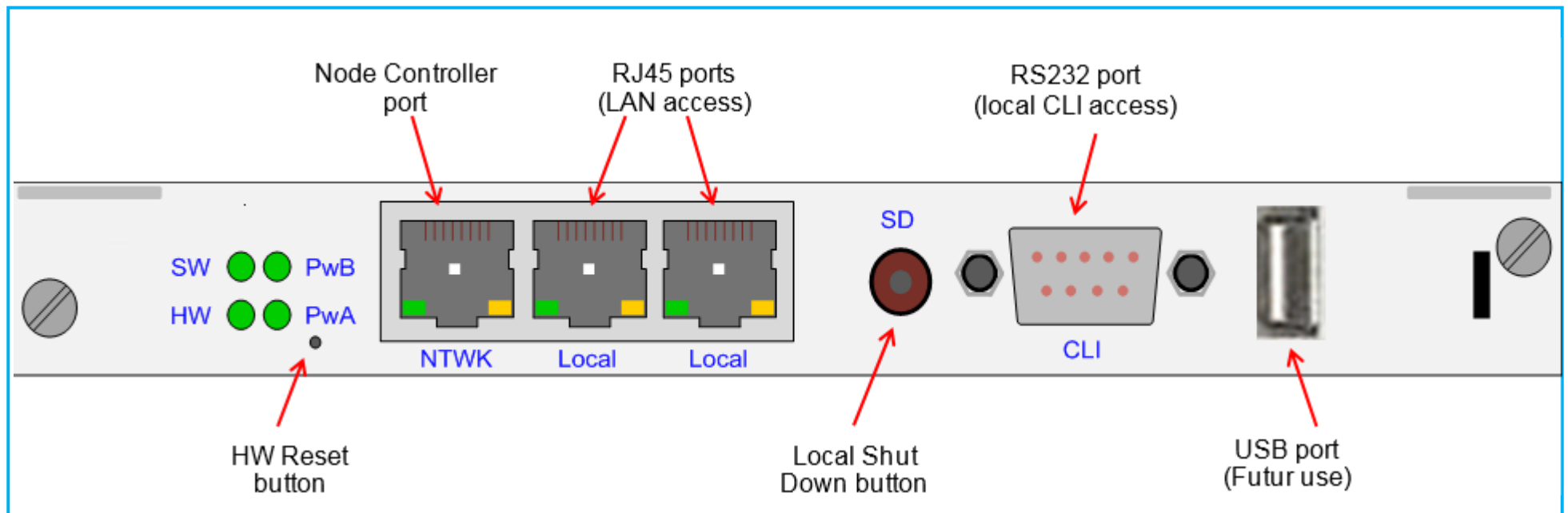


Figure 4 MGNT4 front panel description



## FAN

The FAN hosts three separate fans with one power converter per fan. Each fan generates a fan failure signal in event no rotation.

The FAN embeds also chassis monitoring features:

- One synthesis alarm LED is dedicated to each slot of the chassis. This synthesis alarm LED indicates if the module plugged in the associated slot is functional or not.
- Three severity alarms LED: A red LED for the Critical severity, an orange LED for the Major severity and a yellow LED for the Minor severity. These three LEDs indicated if there is at least on Critical/Major/Minor alarm detected in the complete chassis (including MGNT board, FAN and Pluggable Modules).

The FAN module is monitored by the management board plugged in slot 0.

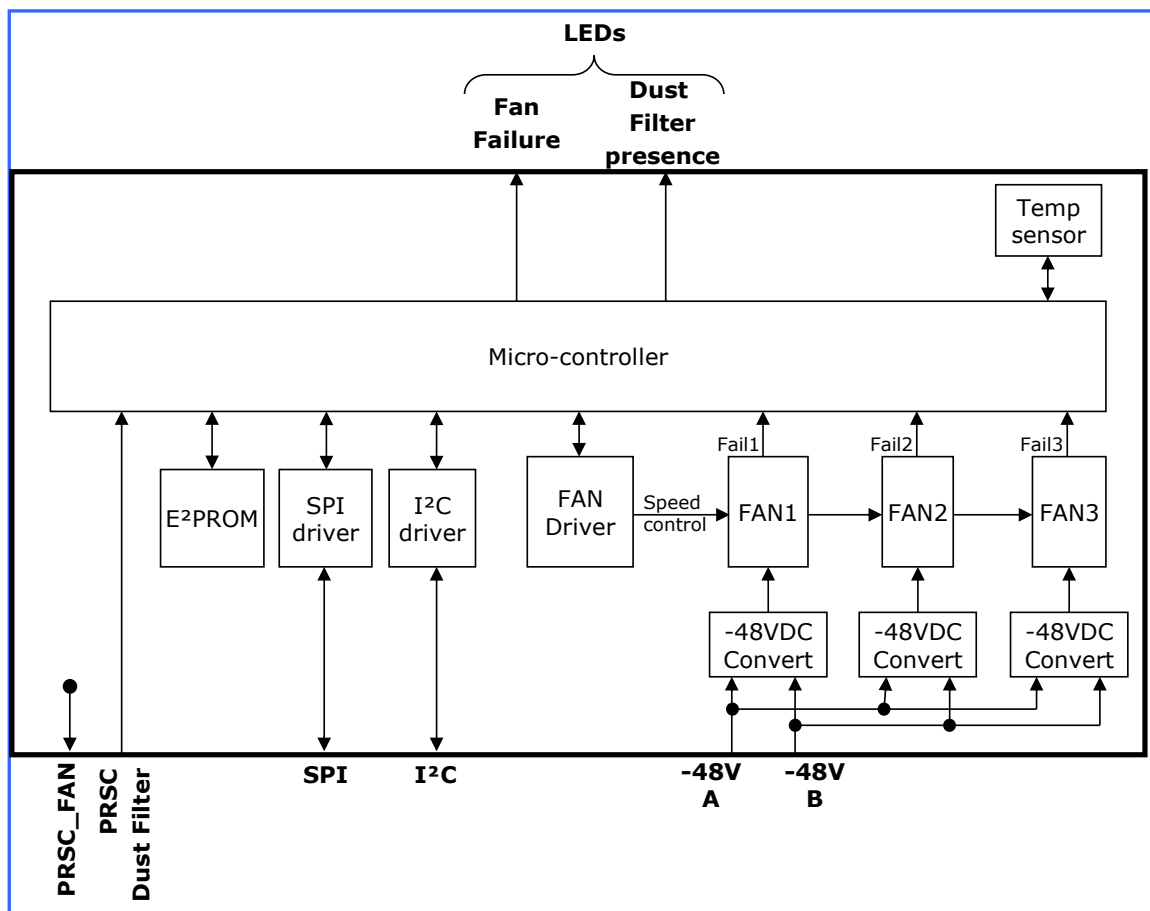
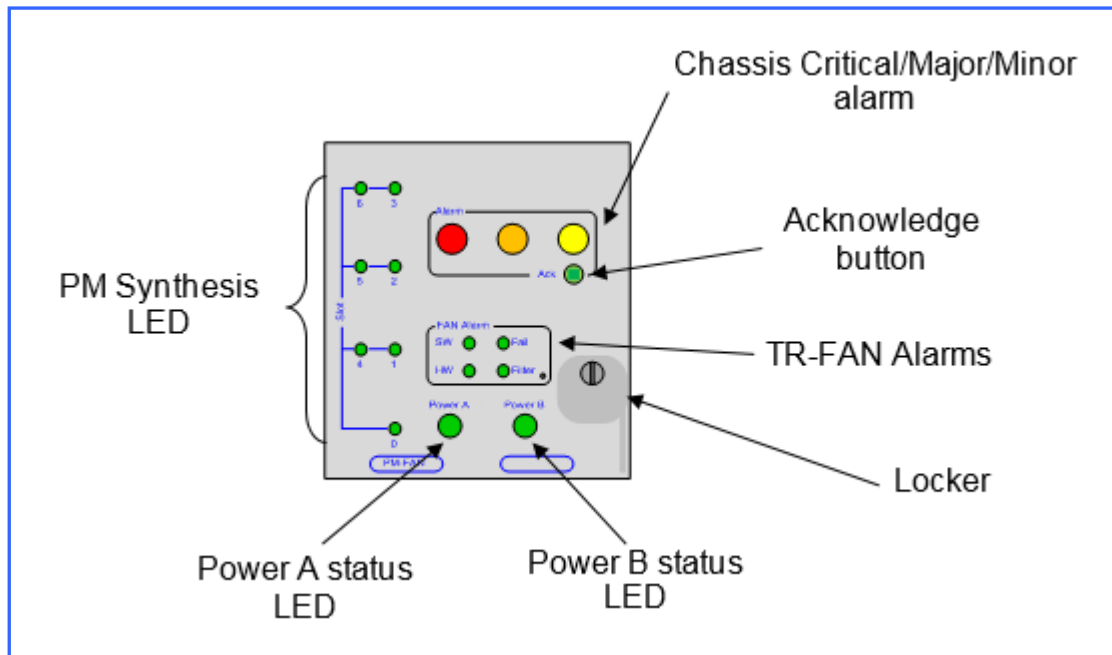


Figure 5 Chassis FAN Unit block diagram

The following drawing presents the FAN front panel



### ***Aggregation and transport PMs***

This section describes the management of the PM generic slots.  
Each PM generates its internal power supply from the two provided -48V.

The control bus from the MGNT to each PM generic slot is an SPI bus. Each PM generic slot obtains its physical address from the IDENT pins in the backplane.

A ready (RDY) signal and a presence (PRSC) signal are sent from each PM generic slot to the MGNT when it is ready for communication with the MGNT.

An Ethernet connection is also provided from each generic PM slot to the MGNT. It is used for getting Ethernet traffic from the PMs providing a DCC (Data Communication Channel) transport.

## Interface Specifications

### ***Power Supply***

#### **DC input power range:**

minimum: -40.8V <sup>1</sup>

maximum: -57.6V

<sup>1</sup> there is an hysteresis of 7.2 Volts on the -40Volts. This means when plugging a module in the chassis, the minimum voltage amplitude required is -48 Volts

#### **AC input power range:**

minimum: 85 VAC

maximum: 265 VAC

Frequency range: 47-63 Hz

### ***Ethernet/ SNMP***

Ethernet 10/100/1000BASE-T interface

SNMP v2c over UDP transport.

### ***CLI Port***

RS232

## DC chassis Mechanical Description

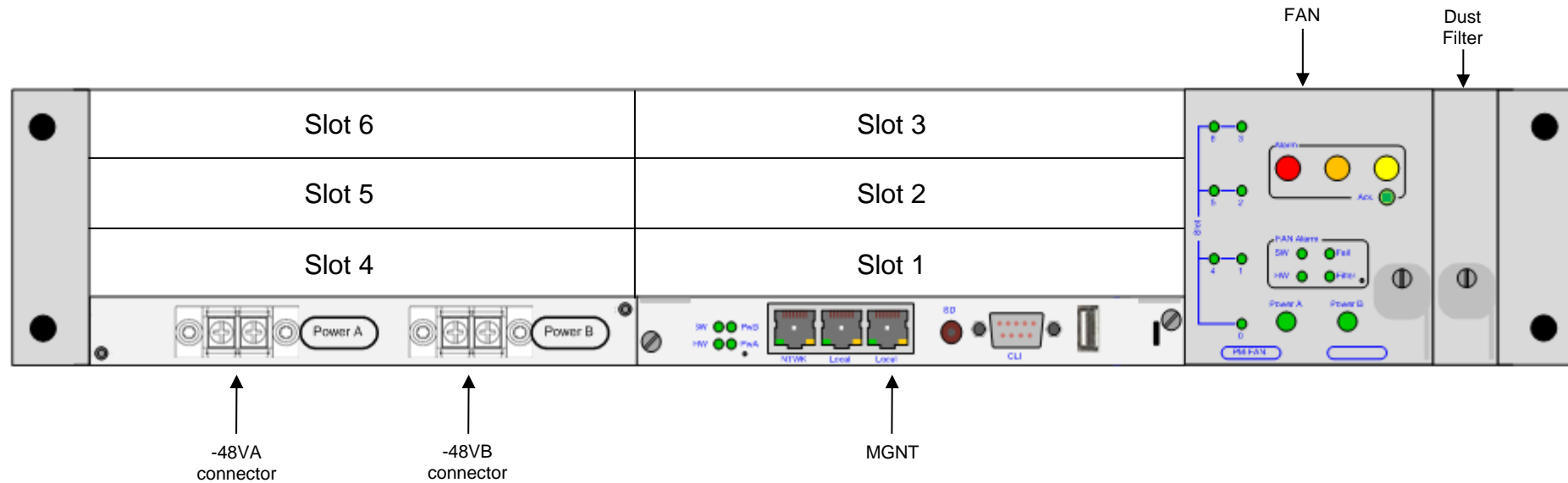


Figure 6

DC Chassis front view

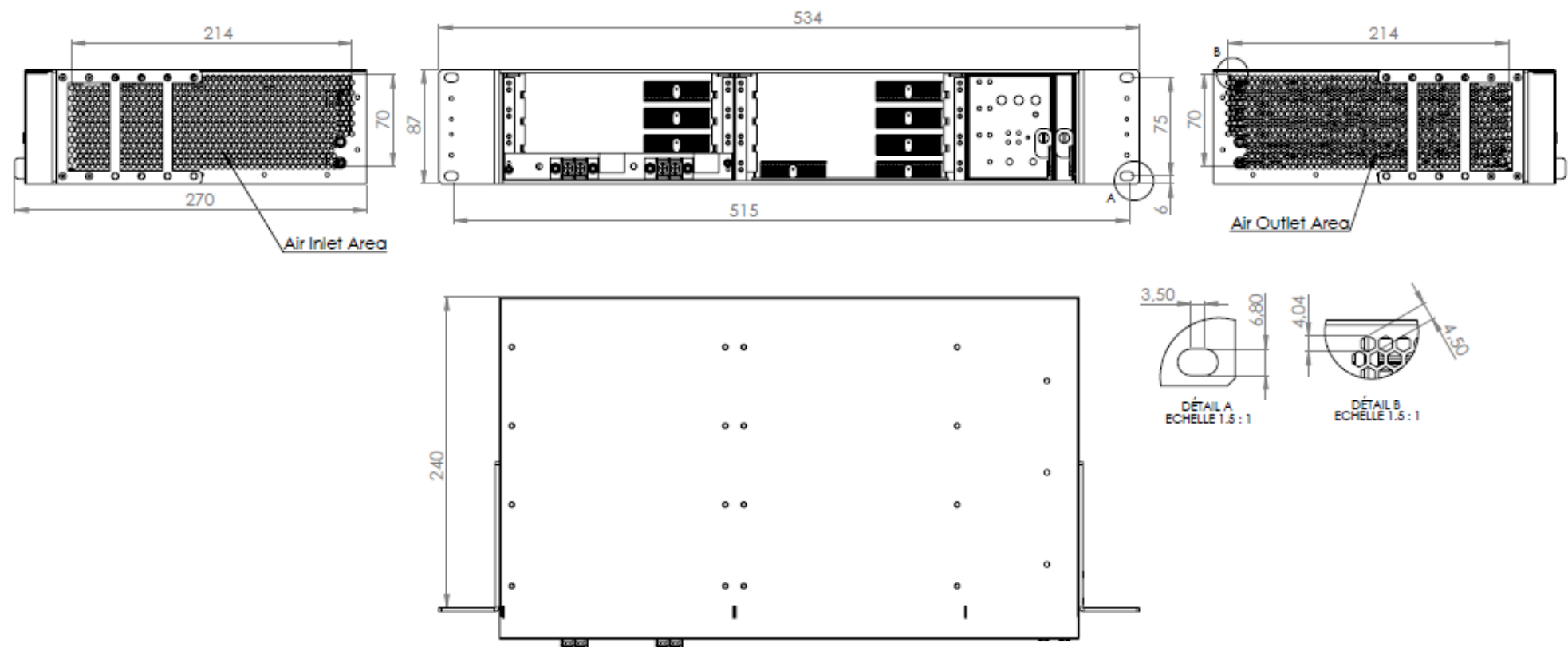


Figure 7 DC Chassis mechanical dimension (ETSI flange)

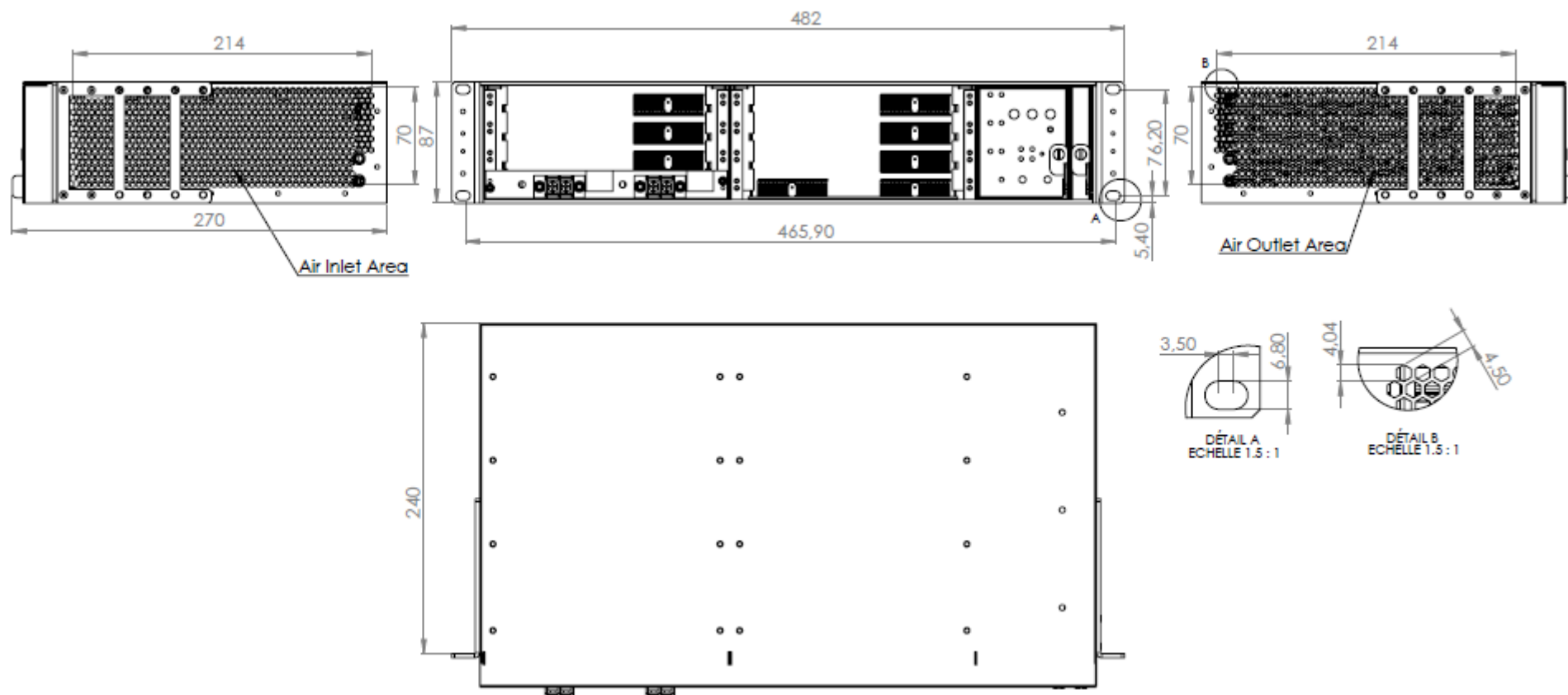


Figure 8 DC Chassis mechanical dimension (19" flange)

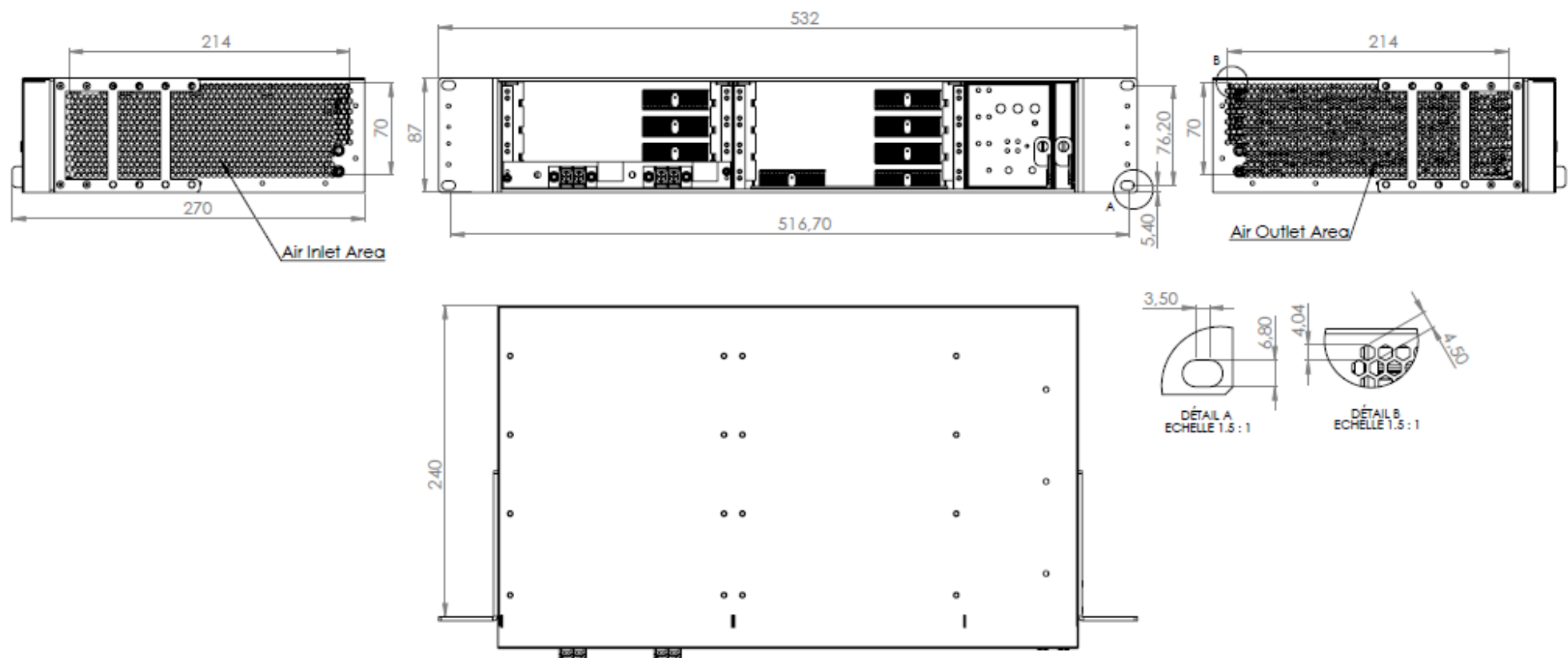


Figure 9 DC Chassis mechanical dimension (21" flange)



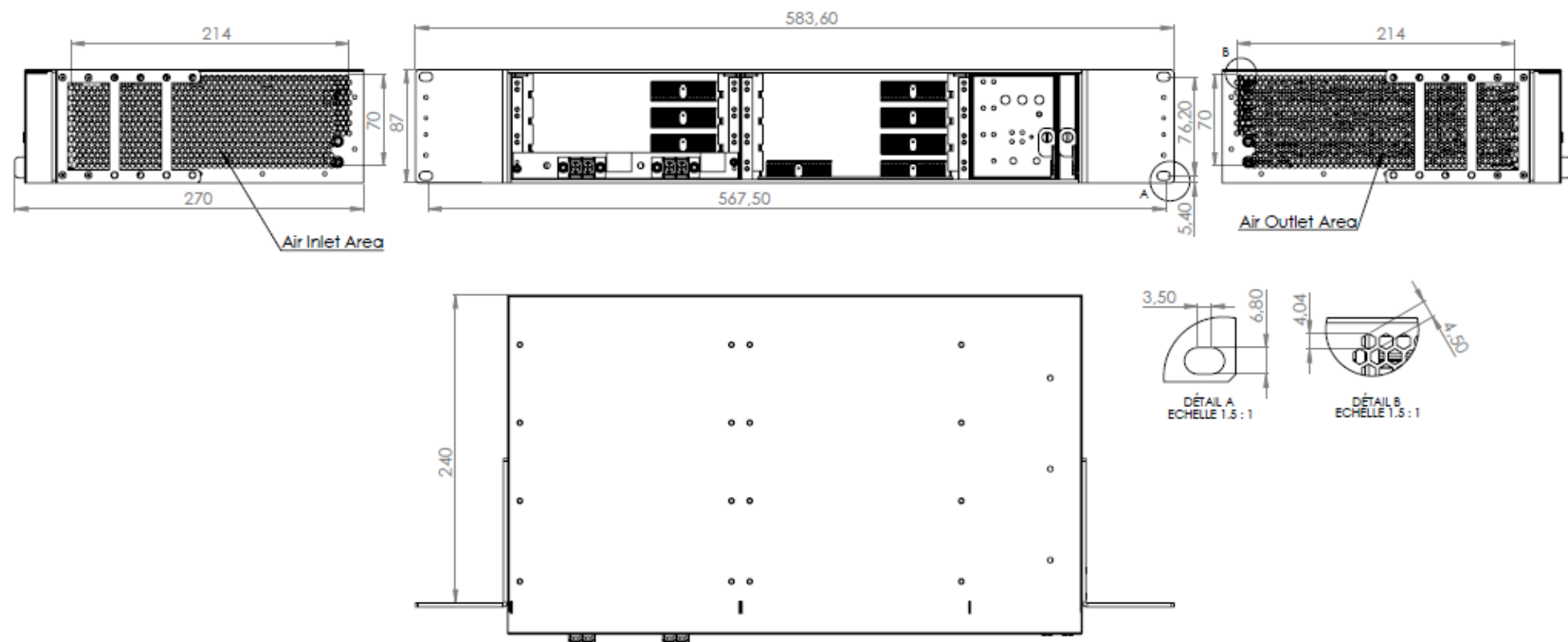


Figure 10 DC Chassis mechanical dimension (23'' flange)



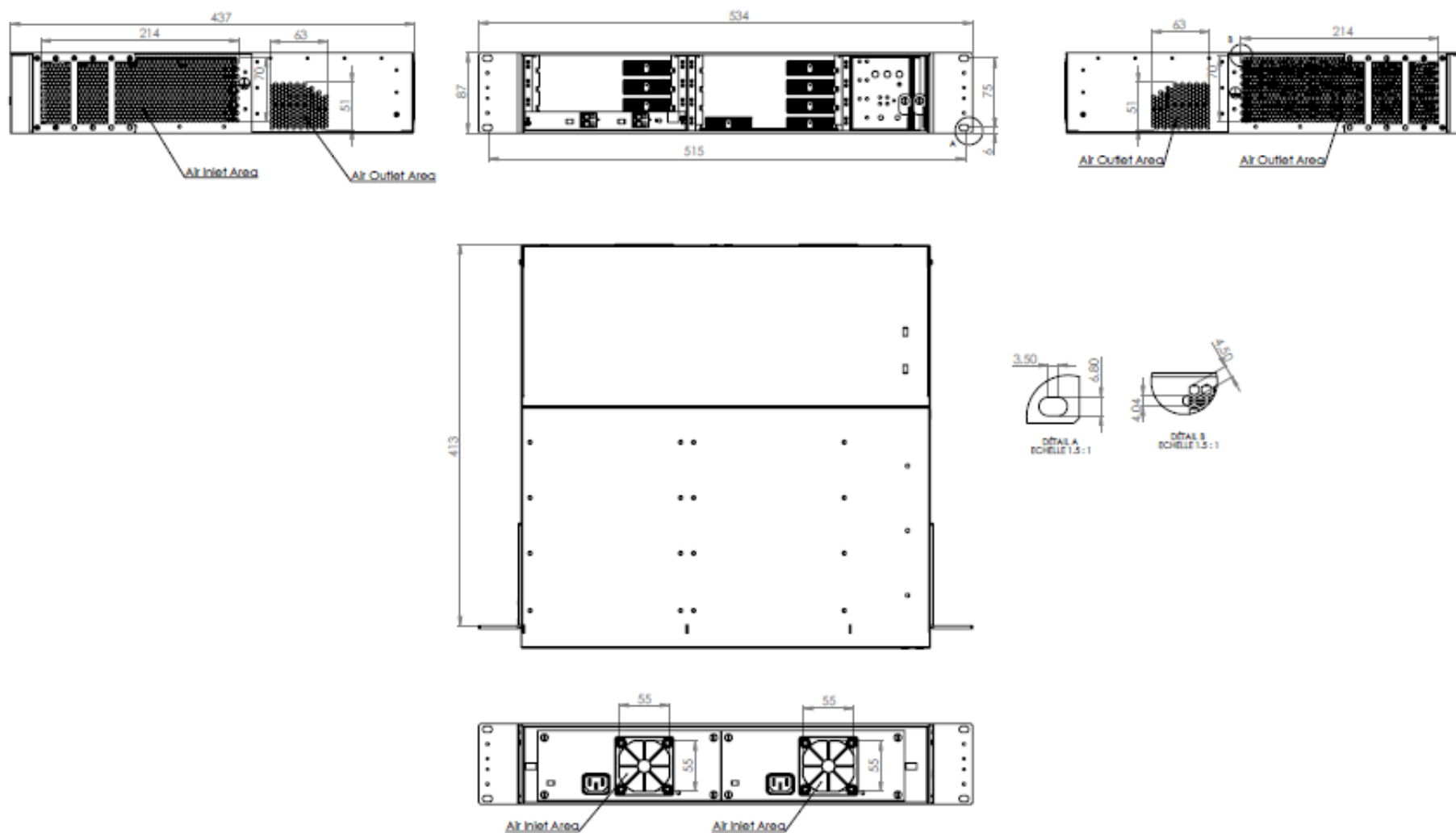


Figure 12 AC chassis mechanical dimension (ETSI flange)

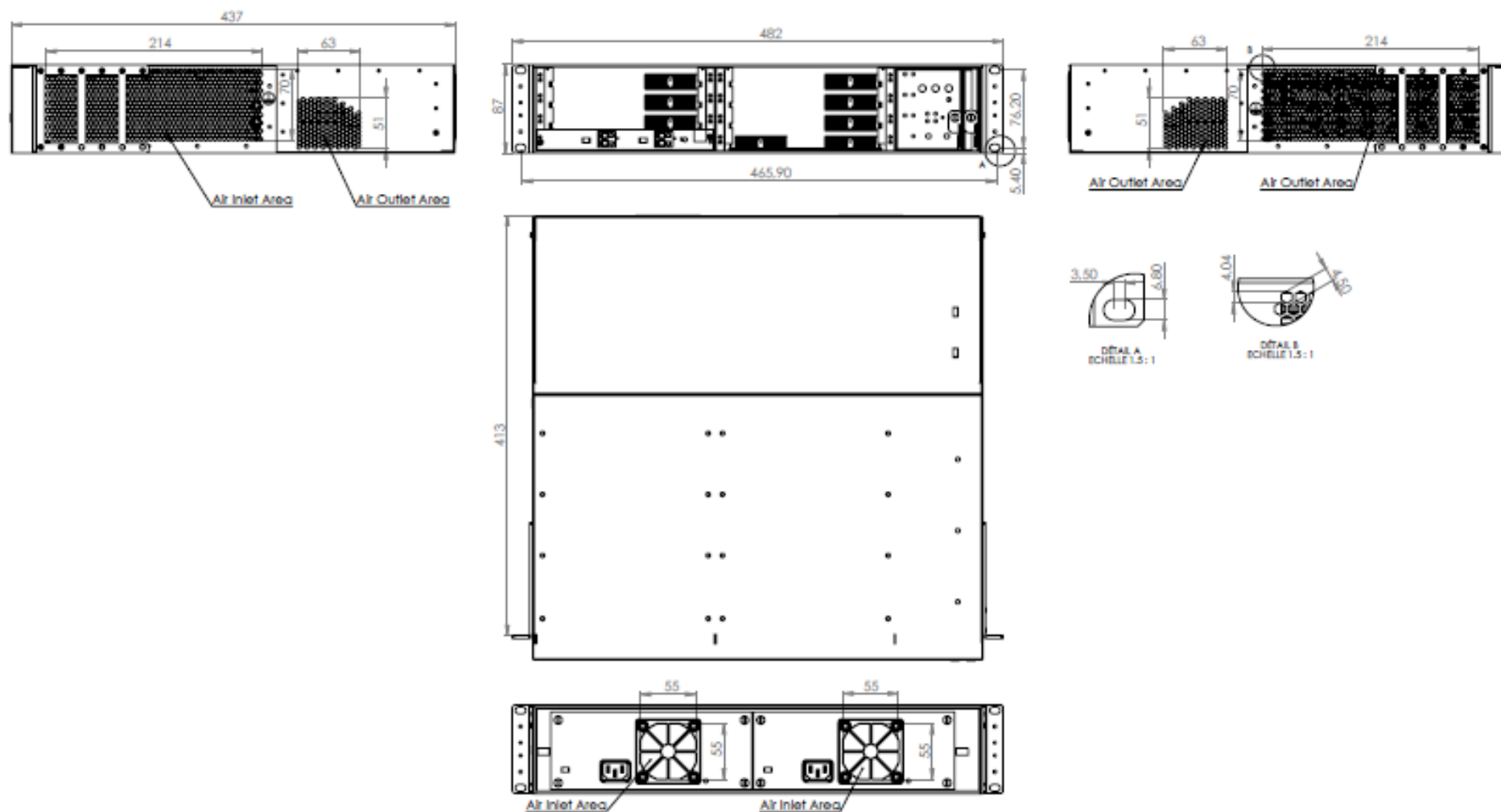


Figure 13 AC chassis mechanical dimension (19" flange)

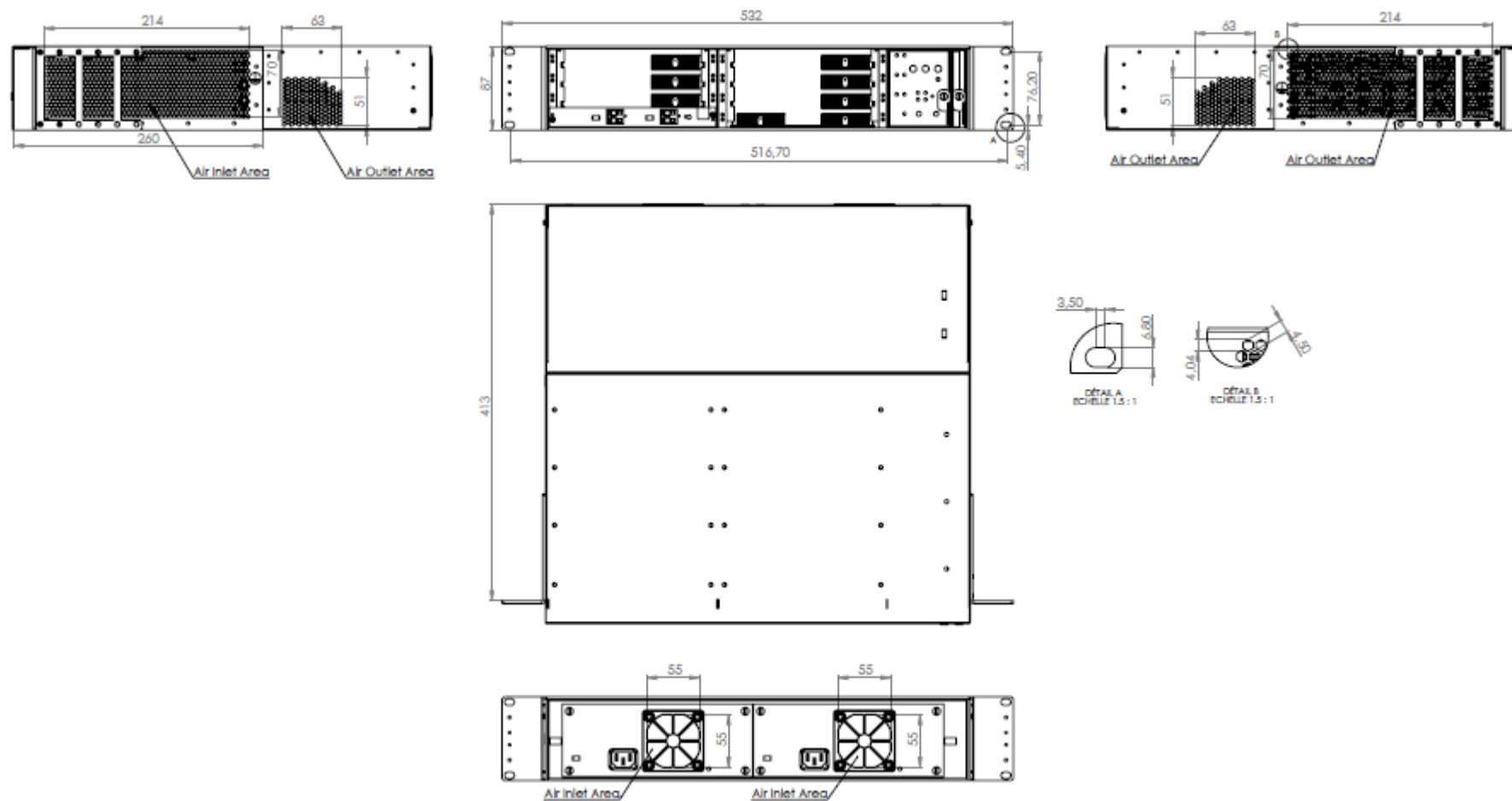


Figure 14 AC chassis mechanical dimension (21" flange)

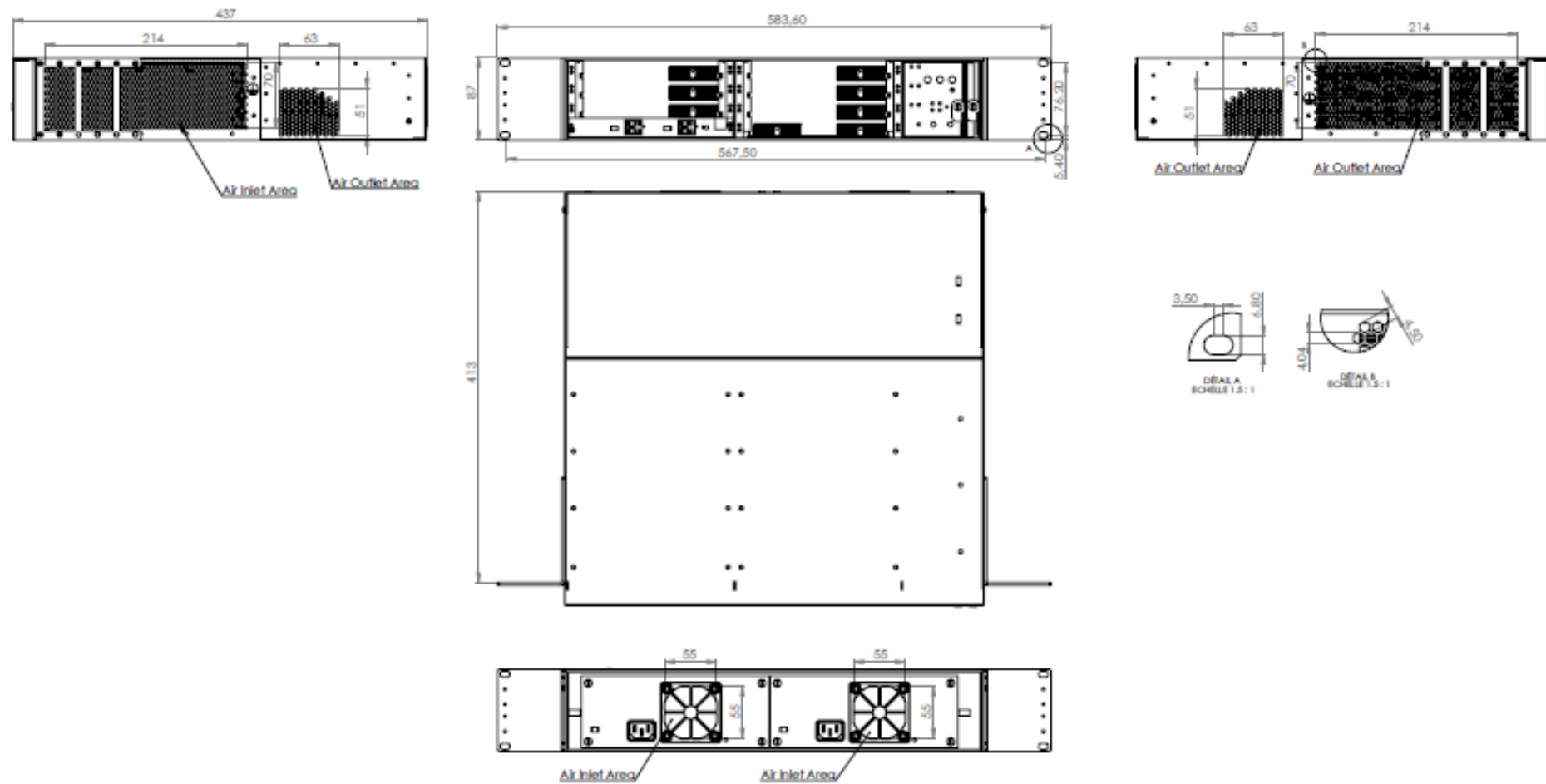


Figure 15 AC chassis mechanical dimension (23" flange)

## Electrical and Environmental Conditions

### ***Power Consumption***

The power consumption for the regular chassis is 120 W typical without PMs in generic slots.

### ***Environmental***

Regular Chassis

- Ambient temperature range: 0°C to 50°C.
- humidity: 5-85%
- storage temperature range: -20°C to +70°C

## Site Preparation

Before installation ensure that your site meets the following requirements:

### **Mounting**

With the mount kit provided, use a 19in (48.3cm) equipment rack, correctly grounded and secure.

The **chassis** may also be installed in a 23in or ETSI rack with the aid of suitable extension brackets.

### **Access**

Locate the **chassis** in a position that allows access to the front panel, enabling maintenance, connection and visual checking.

### **Power Source**

Provide a suitable power source within 9.8 feet (3 meters) from the location. The supplied cables are 3 meters in length.

Power specifications can be found in the technical Specification section of the present document.

### **Environment**

Install the **chassis** in a suitable location with an ambient temperature of 0°C to 50°C and a maximum relative humidity of 85%. Do not allow the air inlets to become obstructed, causing airflow restriction.

Keep 1.5 in (4 cm) free on both sides to ensure adequate ventilation.



## Delivery

Verify the contents of the delivery. The basic delivery should consist of the following;

- One 2U subrack, containing:
  - One Management card (MGNT)
  - One Fan unit (FAN)
- Two power cables (-48VDC for DC, 110/240 VAC for AC)
- One Dust Filter
- One Rack-Mount installation kit
- One set of documentation
- One to six generic slot PMs

Check your order for site specific equipment, number/type of modules etc. If any items are missing contact your supplier immediately.

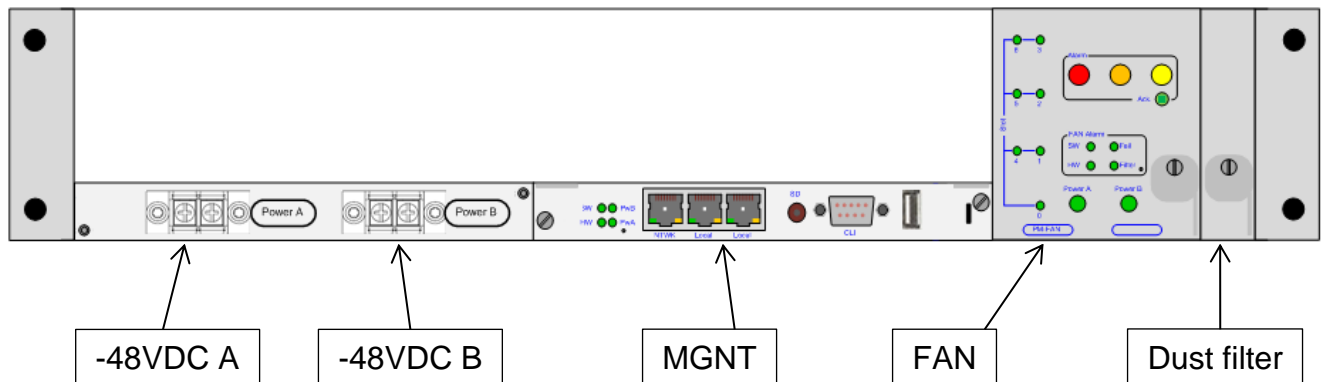


Figure 16 DC chassis Front view

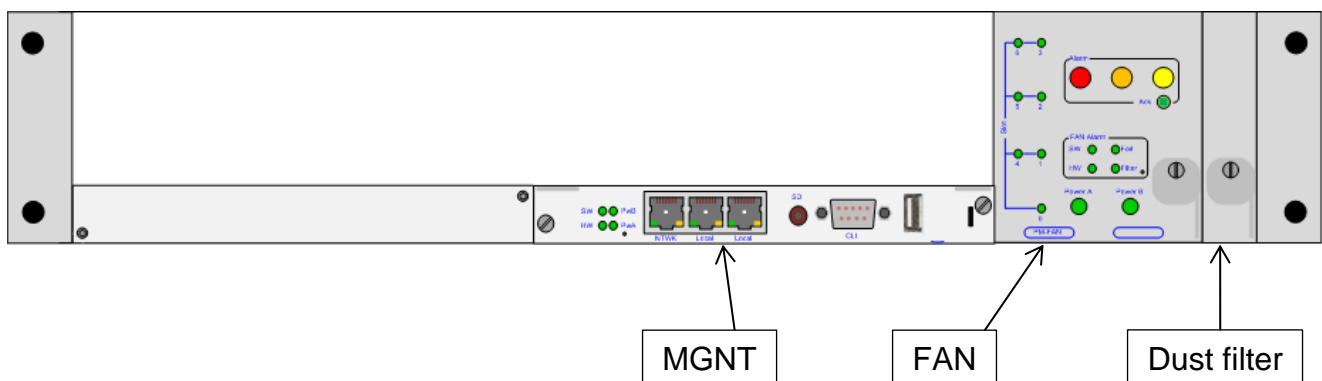


Figure 17 AC chassis Front view

## Installing the DC chassis

### ***Rack mount Installation***

Securely attach one rackmounting bracket on each side of the front of the chassis with the provided screws.

Align the mounting holes in the brackets with the holes in the rack and secure using the remaining screws in the supplied kit.

#### ***Warning***

For a standard NEBS installation, the chassis must be installed in Network Telecommunication Facilities (Central Offices)

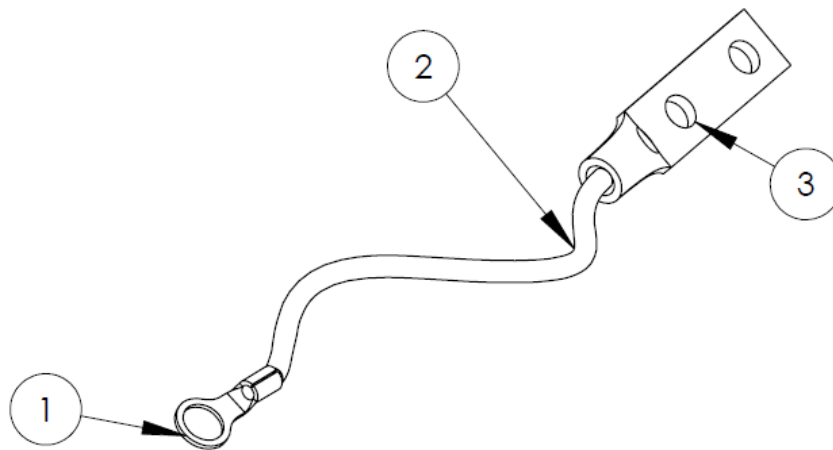
## Grounding the chassis

Prior to power up the chassis, it is mandatory to ground the chassis.

### Procedure

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- Check that all the components are correctly seated and secured;
- It is recommended to apply an anti-oxidant compound to bare conductors before any crimp connections are made for grounding
- The ground cable wire gauge has to be AWG12. Only copper cables shall be used for grounding purposes.



The ground cable ends are ringlet terminal lug (Thomas&Betts, Ref: 256-30685-1298) and two-hole compression lug.

- Connect one end of the ground cable to the ground reference

### Warning

For a standard NEBS installation, the chassis must be grounded as part of the Common Bonding Network (CBN) when installed in Network Telecommunication Facilities.

- Connect the other end to the dedicated two-hole lug that is provided on the rear frame of the chassis. The two-hole compression lug must be screwed with star-washers to provide a locking mechanism.

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**End**

## **Powering up**

There are two power inlets to enable backup in case of failure. The second connection is optional. Before applying the power verify that the chassis is securely positioned and that the equipment and cables are not damaged in any way.

There is no on/off switch on the **chassis**. Turning on and off the unit is achieved by connecting and disconnecting the power lead(s).

Each -48V DC input (A&B) requires an independent external breaking circuitry. The minimum required distance between the contacts of this breaking circuitry is 3 millimeters. The 0V Battery do not need any breaking circuitry

Breaking circuitry on -48VDC input A and -48VDC input B shall be off for powering off the chassis

## **Procedure**

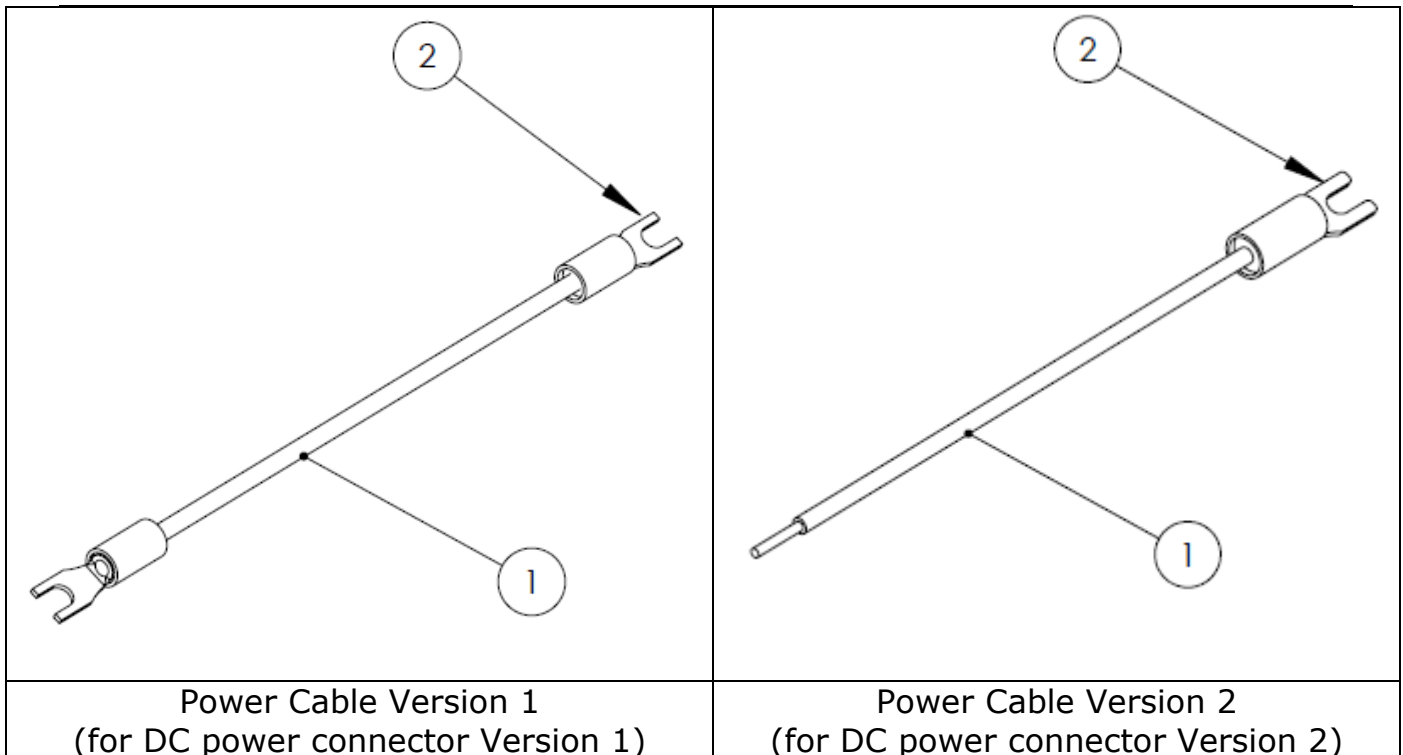
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Using an On-Site -48V Supply:

- Check that all the components are correctly seated and secured;
- If cables are supplied, connect them to a correctly protected -48V supply.

Fuse Rating: 20A, as follows:

Red	-	0V Battery
Black	-	-48V
Wire Gauge	-	AWG14



- The power cables ends are spade terminal lugs (Tyco, Ref: 52935)
- If you use your own cables, connect them to the 0V battery and - 48V as indicated on the power connector. Fuse rating is 20A, wire Gauge is AWG14
- Connect the other end to the power unit on the front panel of the chassis:
  - On the chassis with DC power connector Version 1, the power cables can be connected using the cable terminal delivered in the installation kit a crossed screw driver.
  - On the chassis with DC power connector Version 2 (spring cage connector), the power cables can be connected using a flat screw drive to insert or extract the power cable into/from the spring cage connector.

### **Warning**

It is recommended to treat the Battery Return Input Terminals as Isolated DC Return (DC-I).

- Make sure to route the power cable to the left side of the chassis.

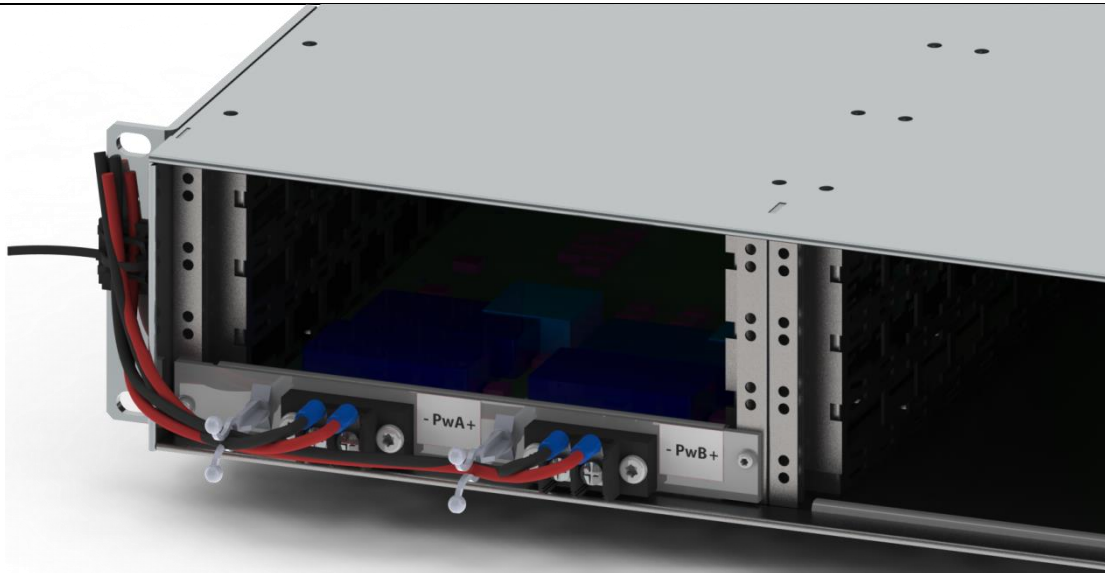


Figure 18 power cable routing (DC power connector Version 1)

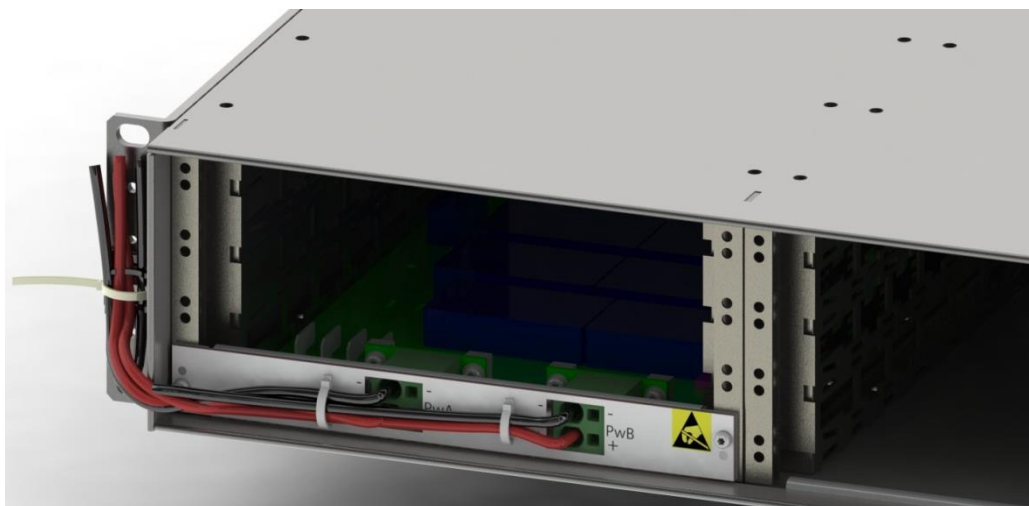


Figure 19 power cable routing (DC power connector Version 2)

During the powering up sequence the HW led on the front panel of the **chassis** will momentarily flash green before remaining on. One or two seconds later the SW led on the front panel will come on indicating the correct loading of the software.

With normal led activity i.e. all leds on and green, the **chassis** is ready for setting up.

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**End**

## Installing the AC chassis

### ***Rack mount Installation***

Securely attach one rackmounting bracket on each side of the front of the chassis with the provided screws.

Align the mounting holes in the brackets with the holes in the rack and secure using the remaining screws in the supplied kit.

#### ***Warning***

For a standard NEBS installation, the chassis must be installed in Network Telecommunication Facilities (Central Offices)

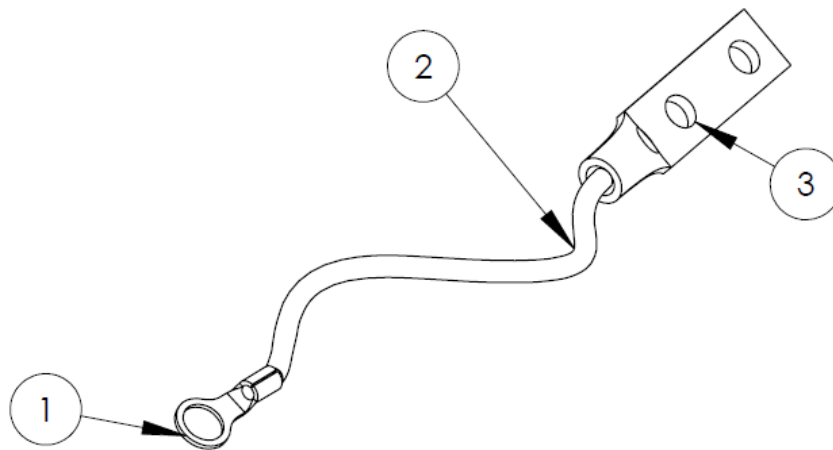
## Grounding the chassis

Prior to power up the chassis, it is mandatory to ground the chassis.

### Procedure

---

- Check that all the components are correctly seated and secured;
- It is recommended to apply an anti-oxidant compound to bare conductors before any crimp connections are made for grounding
- The ground cable wire gauge has to be AWG12. Only copper cables shall be used for grounding purposes.



The ground cable ends are ringlet terminal lug (Thomas&Betts, Ref: 256-30685-1298) and two-hole compression lug.

- Connect one end of the ground cable to the ground reference

### Warning

For a standard NEBS installation, the chassis must be grounded as part of the Common Bonding Network (CBN) when installed in Network Telecommunication Facilities.

- Connect the other end to the dedicated two-hole lug that is provided on the rear frame of the chassis. The two-hole compression lug must be screwed with star-washers to provide a locking mechanism.

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**End**



## Powering up

There are two power inlets to enable backup in case of failure. The second connection is optional. Before applying the power verify that the chassis is securely positioned and that the equipment and cables are not damaged in any way.

There is no on/off switch on the **chassis**. Turning on and off the unit is achieved by connecting and disconnecting the power lead(s).

Each -48V DC input (A&B) requires an independent external breaking circuitry. The minimum required distance between the contacts of this breaking circuitry is 3 millimeters. The 0V Battery do not need any breaking circuitry

Breaking circuitry on -48VDC input A and -48VDC input B shall be off for powering off the chassis

## Procedure

Using an On-Site -48V Supply:

- Check that all the components are correctly seated and secured;
- Using standard 110/240VAC power cables, connect them to a correctly protected 110/240VAC supply.  
Fuse Rating: 20A
- Connect the other end to the power unit on the front panel of the Cchassis using the cable terminal delivered in the installation kit.
- Make sure to route the power cable to the left side of the chassis.



During the powering up sequence the HW led on the front panel of the **chassis** will momentarily flash green before remaining on.

One or two seconds later the SW led on the front panel will come on indicating the correct loading of the software.

With normal led activity i.e. all leds on and green, the **chassis** is ready for setting up.

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**End**

## System and Module Set-Up

Management of the **chassis** can be achieved in a number of ways:

### **Locally and remotely:**

The on-board SNMP agent allows the **chassis** to be managed from any system or PC in your network using network management software.

Consult the **chassis** user manual for information relating to the system set-up.

## Preventive Maintenance

### ***Dust Filter replacement Procedure***

The dust filter should be visually examined on a six month basis.

#### ***Procedure***

- Unscrew the locker and slide out the Dust filter located on the right of the chassis
- Replace the dust filter
- Put back the dust filter grid and screw the locker.
- Check that the dust filter presence LED is green on the FAN front panel.

***End***

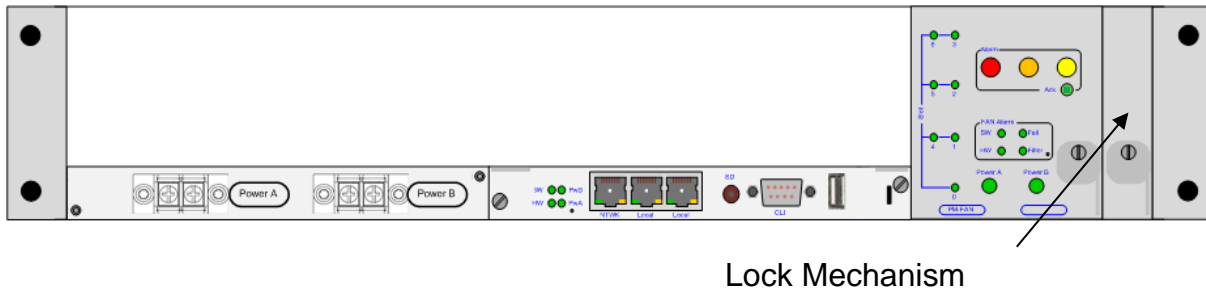


Figure 20 Dust filter lock mechanism



## Corrective Maintenance

### Management Board MGNT

#### MGNT Replacement Procedure

Use the following procedure to replace a MGNT management board:

#### Procedure

- Perform a chassis configuration backup.
- Get the inventory of the management board and store the release version of the management board.

MGNT boards are shipped with a management release loaded.

- Shutdown correctly the Test/SD button to the top position for 10 seconds (the 4 LEDs of the MGNT board will then shutdown).

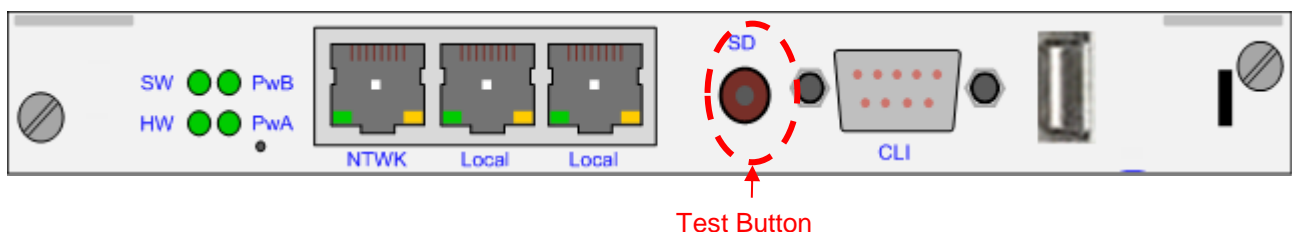


Figure 21 MGNT Management board SD button

- Verify that the wrist strap you are wearing is properly grounded or that other antistatic measures are in place.
- Disconnect any Ethernet cables from the Rj45 sockets on the front of the board.
- Using a flat head screwdriver loosen the two holding screws on the frontplate, located at the top right-hand and bottom right-hand corners.
- Slide the MGNT Board out of the chassis, unplugging the backplane connectors, and set aside.
- Line up the replacement MGNT Management Board with the lower rail and gently slide it in, plugging in the backplane connectors.

#### Note

Do not force the MGNT Board into place as this could lead to damage to the connectors on the module and/or the connectors on the back panel of the chassis.

- Using a flat head screwdriver; tighten the two holding screws on the frontplate, located at the top right-hand and bottom right-hand corners.
- Re-connect Ethernet cables to the Rj45 sockets on the front panel.
- Observe behaviour of LEDs.
- Get the inventory of the management board
- Reload Software if required
- Verify status of MGNT Board.
- Verify communication with module(s).
- Perform a chassis configuration restore.
- Re-integrate the **chassis** into your network.

---

**End**

## Rescue CLI mode

The rescue CLI can be launched in case of major software crash on the MGNT board to retrieve a working software.

When the rescue CLI is activated, the following parameters are restored to their default value:

Parameter	Default value
SNMP communities	SNMP Get: public SNMP Set: private SNMP Trap: public
CLI passwords	administrator: administrator maintenance: maintenance

The rescue CLI allows the user to perform all the upgrade procedure described in the CLI documentation.

Use the following procedure to start the rescue CLI on the MGNT management board:

### Procedure

---

Use a needle-like tool (i.e. paper clip) to reach the MGNT reset button and press it during 5 seconds minimum to activate the rescue CLI feature.

Observe behaviour of MGNT LEDs.

The colour sequence of the SW LED on the front panel of the MGNT is:  
Off > Red > Green

The rescue CLI is then available through the RS232 port.

Use the login "administrator" and the password "administrator" to log in the rescue CLI.

The prompt "rescue\_cli>" appears to indicate that the rescue CLI is currently running.

You can perform all the required upgrade or change the configuration of the MGNT management board.

Perform a reset of the MGNT management board to quit the rescue CLI.

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**End**

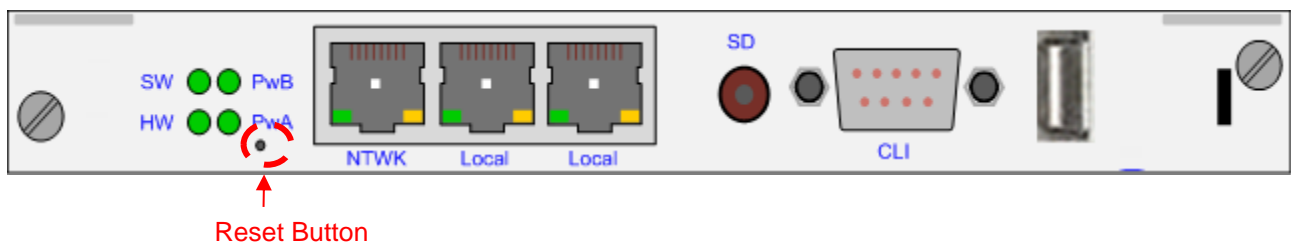


Figure 22

MGNT Management board Reset button



## **FAN Unit**

The following alarms indicate a problem with the Fan Unit:

### **mgnt2AlmFansFailure**

This bit indicates a failure on one of the fans (General).

### **mgnt2AlmPbFan1Fail**

This bit indicates a failure detected on Fan N°1.  
Removal of the fan unit or rotation failure.

### **mgnt2AlmPbFan2Fail**

This bit indicates a failure detected on Fan N°2.  
Removal of the fan unit or rotation failure.

### **mgnt2AlmPbFan3Fail**

This bit indicates a failure detected on Fan N°3.  
Removal of the fan unit or rotation failure.

#### **Note**

If more than one Fan is out of service the FAN must be replaced immediately.

## **Fan Unit Replacement Procedure**

#### **Note**

It is not advisable to leave the **chassis** running for a prolonged period without a working FAN in place. The maximum time without a working Fan Unit is 5 minutes in an environment of 25°C.

## **Procedure**

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- Verify that the wrist strap you are wearing is properly grounded or that other antistatic measures are in place.
- Using a flat head screwdriver loosen the holding screw on the frontplate, located at the bottom right-hand corner.

-Pull the FAN out of the chassis, unplugging the backplane connectors, and set aside.

-Line up the replacement module with the rails and gently slide in, plugging in the backplane connectors.

**Note**

Do not force the FAN into place as this could lead to damage to the connectors on the unit and/or the connectors on the back panel of the chassis.

- Using a flat head screwdriver tighten the holding screw on the frontplate, located at the bottom right-hand corner.

-Verify correct operation of the FAN.

-Verify resolution of relevant alarms.

---

**End**

## **Module maintenance**

### **Pluggable Module Replacement Procedure**

Use the following procedure to replace a PM module:

#### **Procedure**

---

-Perform a chassis configuration backup.

-Get the inventory of the module and store the 5EK version of the module.

- Verify that the wrist strap you are wearing is properly grounded or that other antistatic measures are in place.

-Take the necessary steps to minimise the impact on your network, traffic by-pass re-route etc.

- Disconnect any cables connected to the Line and the client ports on the module.

- Using a flat head screwdriver loosen the two holding screws on the frontplate.
- Pull the module out of the chassis, unplugging the backplane connectors, and set aside.
- Line up the replacement module with the rails and gently slide in, plugging in the backplane connectors.

**Note**

Do not force the module into place as this could lead to damage to the connectors on the module and/or the connectors on the back panel of the chassis.

- Re-connect cables to the Line and the client ports on the module.
- Observe behaviour of LEDs.
- Check the module has been correctly detected by the MGNT board
- Get the inventory of the module
- Reload module Software if required
- Perform a chassis configuration restore.
- Re-integrate into your network.

---

**End**

## SFP/SFP+ Replacement Procedure

Each Client port based on SFP or SFP+ has its own LED located on the front panel of the PM to indicate operating status of each of the ports.

If a client port SFP/SFP+ needs to be replaced use the following procedure.

### Procedure

---

#### Note

The SFP/SFP+ are hot-swappable therefore there is no requirement to power down the Module.

- Check the inventory to verify the type of SFP/SFP+ currently installed
- Take the necessary steps to minimise the impact on your network, traffic by-pass re-route etc.
- Remove the Fibre Optic connector.
- Check the orientation of the SFP/SFP+ (to be sure to re-insert the new SFP/SFP+ with the same orientation)
- Release the SFP by: Carefully opening the latch or pressing the locking button and slide the SFP/SFP+ out of the module and place it aside.
- Gently push the SFP/SFP+ into the relevant module port until it is securely seated.  
Take care to insert the SFP/SFP+ respecting the orientation checked previously.

#### Note

Do not remove the protective caps from the SFP/SFP+ until you are ready to attach the fibre-optic.

- If Latch-Type SFP/SFP+; Close the latch to lock it into place.
- Clean Fibre Optic connectors on fibre optic cable.
- Re-connect Fibre.
- Verify correct operation of the SFP/SFP+.

**End**

## XFP Replacement Procedure

The Client or Line port based on XFP has two LEDs located on the front panel of the PM; LOS and Fail, indicating operating status of each of the ports.

If a Line port XFP needs to be replaced use the following procedure:

### Procedure

---

#### Note

The XFP's are hot-swappable therefore there is no requirement to power down the Module.

- Check the inventory to verify type of XFP currently installed
- Take the necessary steps to minimise the impact on your network, traffic by-pass re-route etc.
- Remove the Fibre Optic connector.
- Check the orientation of the XFP (to be sure to re-insert the new XFP with the same orientation)
- Release the XFP by: Carefully opening the latch or pressing the locking button and slide the XFP out of the module and place it aside.
- Gently push the XFP into the relevant module port until it is securely seated. Take care to insert the XFP respecting the orientation checked previously.

#### Note

Do not remove the protective caps from the XFP until you are ready to attach the network fibre-optic.

- If Latch-Type XFP; Close the latch to lock it into place.
- Clean Fibre Optic connectors on fibre optic cable.
- Re-connect Fibre.
- Verify correct operation of the XFP.

**End**

## CFP Replacement Procedure

The Client ports based on CFP have two LEDs located on the front panel of the PM; LOS and Fail, indicating operating status of each of the ports.

If a Line or Client port CFP needs to be replaced use the following procedure:

### **Procedure**

---

#### **Note**

The CFP's are hot-swappable therefore there is no requirement to power down the Module.

- Check the inventory to verify type of CFP currently installed
- Take the necessary steps to minimise the impact on your network, traffic by-pass re-route etc.
- Remove the Fibre Optic connector.
- Check the orientation of the CFP (to be sure to re-insert the new CFP with the same orientation)
- Loosen the two holding screws on the CFP.
- Release the CFP and slide the CFP out of the module and place it aside.
- Gently push the CFP into the relevant module port until it is securely seated. Take care to insert the CFP respecting the orientation checked previously.

#### **Note**

Do not remove the protective caps from the CFP until you are ready to attach the network fibre-optic.

- Tighten the two holding screw on the CFP.
- Clean Fibre Optic connectors on fibre optic cable.
- Re-connect Fibre.
- Verify correct operation of the CFP.

**End**

## Initial Set-Up and Configuration

### Configuration

#### Connecting to the manager

The **chassis** contains an on-board SNMP agent which allows it to be managed from any point in your network using network management software.

Access is via the RJ45 10 Mbit Ethernet port on the front panel.

#### **Note**

It is necessary to have the latest compiled MiB.

Verification of the connection can be achieved by sending a “ping” message to the IP address of the **chassis**.

Each **chassis** is shipped the following default configuration

Parameter	Default value
IP address	192.168.16.201
IP subnet Mask	255.255.255.0
IP manager List	One manager address: 192.168.16.202
Gateway address	192.168.16.254 rank 1 192.168.16.254 rank 2
NTP server IP Address	0.0.0.0
Syslog Server IP Address	0.0.0.0
Chassis name	NoName
SNMP communities	SNMP Get: public SNMP Set: private SNMP Trap: public
CLI passwords	administrator: administrator maintenance: maintenance
Web passwords	Admin: admin Operator: operator Read-only: readonly

Once a connection is established to the **chassis** configuration may begin.

---

## Setting the chassis IP Address

The object

### **mgnt2GigmBoardIpAddress**

Location: ...\\microsens\\mgnt2\\mgnt2SNMPAgentData\\  
mgnt2IPmanagment

, can be used to define the **chassis** IP address in a manual way. In that case, the DIP switches of the **chassis** Management Board must be **all set to 0** or **all set to 1**.

#### **Note**

The MGNT board resets automatically in a warm manner to apply the IP address modification

## Setting the Chassis IP Subnet Mask

The object

### **mgnt2GigmNetmask**

Location: ...\\microsens\\mgnt2\\mgnt21SNMPAgentData\\mgnt2IPmanagment

, defines the IP Subnet Mask of the Chassis.

#### **Note**

The MGNT board resets automatically in a warm manner to apply the IP Subnet Mask modification

## Setting the Chassis Gateways address

The MNGT can handle two different gateways to communicate over layer 3 network. These two gateways are linked to an order number to determine the main and the backup gateway.

By default the MGNT is using the gateways with the lowest order. If this gateway is dead, the MGNT switch to the other gateway. The dead gateway detection is performed using a ping function. The estimated time to detect a dead gateway is less than 30 seconds.

The table

### **mgnt2GigmGatewayAddressTable**



Location: ...\\microsens\\mgnt2\\mgnt2SNMPAgentData\\mgnt2IPmanagment

Contains the following objects

**mgnt2GigmGatewayAddress**  
**mgnt2GigmGatewayOrder**

These two objects allow the user to define two different gateways and their order.

**Note**

The MGNT board resets automatically in a warm manner to apply any modification in the gateways configuration

## Setting the Manager IP addresses

The IP address of the manager must be set to enable trap reception.

It is possible to set several managers IP address. In that case, all the managers specified in the manager list will receive all the traps sent by the **chassis**

To change the default IP address of the manager or add a new address, the following object is concerned:

**mgnt2GigmManagerIpAddressTable**

Location: ...\\microsens\\mgnt2\\mgnt2SNMPAgentData\\mgnt2IPmanagment

This table references three objects:

**mgnt2GigmManagerIpIndex**  
**mgnt2GigmManagerIpAddress**  
**mgnt2GigmManagerIpAddressTableRowStatus**

It is possible to modify, add, remove or disable an IP address.

**Warning**

It is mandatory to keep always at least one entry in this table.

**Note**

The Manager IP address manipulation can be changed off site prior installation.

## Setting the chassis Name

The object:

**mgnt2GigmLogicalName,**

Location: ...\\microsens\\mgnt2\\mgnt2SNMPAgentData

, enables the user to assign a name to each **chassis** in the network, (Alpha – numeric up to 255 characters).

This name may be used in maintenance work, i.e. to assist in locating a **chassis**.

### **Note**

All alarms and traps originating from the **chassis** are accompanied by the IP address of the system *not* the name.

## Setting the SNMP Communities

The object:

**mgnt2GigmRoCommunity**

, defines the SNMP Get community

**mgnt2GigmRwCommunity**

, defines the SNMP Set community.

### **Note**

The object **mgnt2GigmRwCommunity** is not readable. The returned value is always "\*\*\*\*\*"

**mgnt2GigmTrapCommunity**

, defines the SNMP Trap community

Location: ...\\microsens\\mgnt2\\mgnt2SNMPAgentData\\mgnt2Gigmsecurit

y

### **Note**

A warm reset of the MGNT board is necessary to apply the new communities

## Management

### *Inventory*

An inventory check on the system returns the values of the following objects.

#### **mgnt2RinvHwPlatform**

Chassis management module: HW inventory.

Example Response:

MANAGEMENT HARDWARE  
Vendor: MICROSENS  
Mnemonic: MGNT4  
Part Number: 2EK00229ABAA01  
Serial Number: 001000  
Date Code (yymmddww): 13010901

#### **mgnt2RinvSoftwarePackage**

Software package identification.

Example Response:

MANAGEMENT SOFTWARE  
Mnemonic: Release 6.0.120  
Part Number: 5MS02058AAAE01  
Release date (yymmdd): 130201

#### **mgnt2RinvGateware**

Gateware identification.

Example Response:

GW Part Number: 3GW000166AAAA  
Version Number: 06  
Release date (yymmdd):

#### **mgnt2RinvAgent**

Agent identification.

Example Response:

SW Part Number: 3SW02203AEAA  
Version Number: 17  
Release date (yymmdd): 130322

#### **mgnt2RinvCraft**

Agent identification.

Example Response:

CRAFT Part Number: 3SW03203AEAA  
Version Number: 08

Release date (yymmddww): 130313

### **mgnt2RinvLinux**

Agent identification.

Example Response:

Linux Part Number: 3SW06001AAAA

Version Number: 24

Release date (yymmddww): 120619

Location: ...\\microsens\\mgnt2\\mgnt2RemoteInventory

## **Alarms**

In order to retrieve Alarm status information a polling mechanism must be put in place.

The appearance of a trap message signals the occurrence of an Alarm.

Location: ...\\microsens\\mgnt2\\mgnt2Hardware\\mgnt2alarms

The following table lists the possible MGNT alarms and recommended actions:

Name	Description	ACTION
<b>mgnt2AlmAbsFailure</b>	Chassis Management module failure :This OID indicates that the Chassis Management module is in fail conditio	Replace PBU-MGNT board, if Alarm persists.
<b>mgnt2AlmFansFailure</b>	Chassis Fan Module failure :This OID indicates that at least one of the three FAN unit of the FAN module is in fail condition	Replace Fan Unit
<b>mgnt2AlmDef48a</b>	Power Input A present :This OID indicates that there is not input power on the right power connector (A)	Verify the power input A (power cord, power source)
<b>mgnt2AlmDef48b</b>	Power Input B present :This OID indicates that there is not input power on the right power connector (B)	Verify the power input B (power cord, power source)
<b>mgnt2AlmMgntDefFuseA</b>	Mgnt Fuse A fail :This OID indicates that the fuse of the power input A is in fail condition on the Management board	Correlate all alarms. If Alarm persists change the module.
<b>mgnt2AlmMgntDefFuseB</b>	Mgnt Fuse B Fail :This OID indicates that the fuse of the power input B is in fail condition on the Management board	Correlate all alarms. If Alarm persists change the module.
<b>mgnt2AlmPmSlot2Absent</b>	PM present in Chassis slot 2 :This OID indicates the presence of a PM in Slot 2 of the Chassis .	Verify correct configuration.

Name	Description	ACTION
<b>mgnt2AlmPmSlot3Absent</b>	PM present in Chassis slot 3 :This OID indicates the presence of a PM in Slot 3 of the Chassis .	Verify correct configuration.
<b>mgnt2AlmPmSlot4Absent</b>	PM present in Chassis slot 4 :This OID indicates the presence of a PM in Slot 4 of the Chassis .	Verify correct configuration.
<b>mgnt2AlmPmSlot5Absent</b>	PM present in Chassis slot 5 :This OID indicates the presence of a PM in Slot 5 of the Chassis .	Verify correct configuration.
<b>mgnt2AlmPmSlot6Absent</b>	PM present in Chassis slot 6 :This OID indicates the presence of a PM in Slot 6 of the Chassis .	Verify correct configuration.
<b>mgnt2AlmPmFanAbsent</b>	FAN module present in Chassis :This OID indicates the presence of the FAN module in the Chassis	Insert a PBU-FAN in the chassis
<b>mgnt2AlmPbFan1Fail</b>	Fan unit n°1 failed on Fan module :This OID indicates a failure on fan 1. Removal of the fan unit or no rotation sets the OID.	Replace the Fan Unit
<b>mgnt2AlmPbFan2Fail</b>	Fan unit n°2 failed on Fan module :This OID indicates a failure on fan 2. Removal of the fan unit or no rotation sets the OID.	Replace the Fan Unit
<b>mgnt2AlmPbFan3Fail</b>	Fan unit n°3 failed on Fan module :This OID indicates a failure on fan 3. Removal of the fan unit or no rotation sets the OID.	Replace the Fan Unit
<b>mgnt2AlmPbFan4Fail</b>	Fan unit n°4 failed on Fan module :This OID indicates a failure on fan 4. Removal of the fan unit or no rotation sets the OID.	Replace the Fan Unit
<b>mgnt2AlmPbFan5Fail</b>	Fan unit n°5 failed on Fan module :This OID indicates a failure on fan 5. Removal of the fan unit or no rotation sets the OID.	Replace the Fan Unit
<b>mgnt2AlmPbFan6Fail</b>	Fan unit n°6 failed on Fan module :This OID indicates a failure on fan 6. Removal of the fan unit or no rotation sets the OID.	Replace the Fan Unit
<b>mgnt2AlmFanPwrProtOn</b>	Fan Backup Power :This OID indicates the backup power on the FAN module is switched on	Replace the Fan Unit
<b>mgnt2AlmFanPwrFail1</b>	Fan Main Power :This OID indicates a failure on the main power of the FAN module	Correlate all alarms. If Alarm persists change the module.
<b>mgnt2AlmFanDefFuseA</b>	Fan Fuse A fail :This OID indicates that the fuse of the power input A is in fail condition on the Fan board	Correlate all alarms. If Alarm persists change the module.
<b>mgnt2AlmFanDefFuseB</b>	Fan Fuse B Fail :This OID indicates that the fuse of the power input B is in fail condition on the Fan board	Correlate all alarms. If Alarm persists change the module.
<b>mgnt2AlmApiError</b>	Comm fail between Agent and PMs :This OID indicates a failure detected on the Agent.The failure is located on a communication process with the modules.	-Correlate other alarms and Traps. -Reset the Management board.

Name	Description	ACTION
<b>mgnt2AlmFifoCmdError</b>	SNMP Agent to PM comm FIFO fail :This OID indicates a failure inside the FIFO stack. The FIFO containing the messages from the agent (write) to the PMs is full	-Correlate other alarms and Traps. -Reset the Management board.
<b>mgnt2AlmapiErrorCode</b>	API Error Identification :Error number and description of the abs1AlmApiError object	See API error table
<b>mgnt2AlmLogFileFull</b>	Log File Full Alarm :This OID indicates that a log file is full. This file must be cleared to insure correct log function	Reset the log file to insure correct working of the log function
<b>mgnt2AlmLog80Full</b>	Log File Full Warning :This OID indicates that a log file is 80% full.	Check the log files

Table 1 MGNT Alarms list

## Traps

A trap is an unsolicited, asynchronous event that the **chassis** generates to indicate a status changes; e.g.: a trap is generated on the detection of a start of an alarm and an end of an alarm.

### Note

It is important to set the IP address of the manager correctly in order to receive the traps.

The following table lists the possible traps originating from the MGNT Board:

MGNT Traps		
Name	Possible cause	Action
Description		
<b>mgnt2TrapApi</b> Api error trap with its number	See API Code Table	Reboot the agent (Warm Reset).
<b>mgnt2TrapSwError</b> MGNT software error other API		
<b>mgnt2TrapHwError</b> MGNT hardware error	Fan failure (Fan number indicated in the trap message)	Carry out relevant maintenance procedure.
<b>mgnt2TrapBoardInserted</b> PM module inserted		
<b>mgnt2TrapBoardRemoved</b> PM module removed	A PM module has been removed	No action, information only
<b>mgnt2TrapRestoreConfDone</b> PM Configuration restored		
<b>mgnt2TrapGlobalPowerFail</b> One power input is in fail condition	There is no power cable connected on the power connector of the <b>chassis</b>	No action, information only
<b>mgnt2TrapLogFileFull</b> One of the log file is full or 80% full		

Table 2 MGNT Traps list

## API Codes

The following table lists the API codes that can accompany specific Alarms and Traps. The information codes are not errors; the API indicates the state of communication with the module as information.

Name	Description	Value
<b>API Information Codes</b>		
DEF_API_OK	Default Value	0
DEF_API_COLD_RESET_MODULE	Cold Reset request	4
DEF_API_WARM_RESET_MODULE	Warm Reset request	5
DEF_API_DOWNLOAD_IN_PROGRESS	Download in Progress	3
<b>API Error Codes</b>		
moduleNotResponding	A timeout occurred on requested response of a command	128
messageFormatError	The module has detected a wrong message format	129
cmdExecutionError	Internal module error during the processing of a message	130
unknownArticleError	The article is unknown or not allowed	132
unknownMessageError	The message is unknown or not allowed	133

Table 3 API error code

## Control

There are six objects associated with the control function.

Location:...\microsens \mgnt2\mgnt2Hardware\mgnt2controls\

They are responsible for:

### **mgnt2CtrlGigamixWarmReset**

This bit allows resetting the MGNT in a 'warm' manner.

A warm reset does not affect the traffic, the module configuration remains unchanged.

### **mgnt2CtrlChassisShutDown**

This bit must be set to two to shut down the **chassis** in a correct manner. Once the OID has been set, it is necessary to wait for 5 seconds before removing the power of the **chassis**.

### **mgnt2CtrlEthPort2Disable**

This bit enables/disables the second Ethernet Port on the MGNT (right port).

### **Note**

When not required it is advised to disable this port in order to avoid unauthorised connection.



**mgnt2CtrlGreenLed**

This bit switches ON all the green LEDs of the **chassis** (MGNT, FAN and all the PMs plugged in the **chassis**)

**mgnt2CtrlRedLed**

This bit switches ON all the red LEDs of the **chassis** (MGNT, FAN and all the PMs plugged in the **chassis**)

**mgnt2CtrlLedOff**

This bit switches OFF all the LEDs of the **chassis** (MGNT, FAN and all the PMs plugged in the **chassis**)

## Software Management

### Resets

The following describes the various methods of resetting the MGNT board;

**Note**

*Under no circumstances should a Reset be attempted during the Installation Phase of the SNMP Agent Update procedure.*

*Consult the object: **mgnt2PackageExtractionInProgress**. Ensure it is set to "off" before continuing.*

### Warm reset

This reset has no effect on the traffic and takes 35 seconds to complete.

### Procedure

---

-Start the reset:

Set to "on" the object:

**mgnt2CtrlChassisWarmReset**

Location:

...\microsens\mgnt2\mgnt2Hardware\mgnt2controls\mgnt2Ctrlsynth5\

Visual indication:

The colour sequence of the SW LED on the front panel of the MGNT during a warm reset is:

Green > Red (few seconds) > Orange (less than 1 second) > Green

Under normal conditions all LEDs return to green when the reset is complete. Refer to LED status table in Appendix A.

The duration of a **MGNT** warm reset is approximately 35 seconds, during which time the management function is unavailable.

---

**End**

## Hardware reset

A hardware reset may be also performed on the MGNT.

This reset has no effect on the traffic and takes 35 seconds to complete.

### Procedure

-Use a needle-like tool (i.e. paper clip) to reach the MGNT reset button and press it during 1 second to perform a hardware reset of the MGNT.

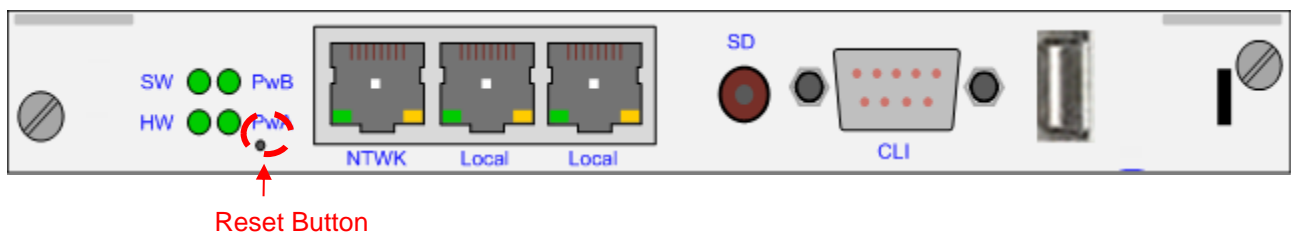


Figure 23

MGNT4 Management board Reset button

Visual indications:

The colour sequence of the front panel LEDs are:

HW LED: Red (while the reset button is pressed) > Green

SW LED: Off (few seconds) > Orange (less than 1 second) > Green

Under normal conditions all LEDs return to green when the reset is complete. Refer to LED status table in Appendix

The duration of a **MGNT** warm reset is approximately 35 seconds, during which time the management function is unavailable.

---

**End**

## MGNT Unplug/Plug

Another method of reset is to unplug/unplug the MGNT

This reset has no effect on the traffic and takes 35 seconds to complete.

### Procedure

---

Before the extraction of the MGNT, it is mandatory to power it down.

-MGNT Software stop:

Before unplug the MGNT, it is mandatory to stop the MGNT software.

There are several ways to stop the MGNT software:

- Using the test button on the front panel  
Push up the test button for 10 seconds.
- Using a SNMP objet  
Set the object **mgnt2CtrlChassisShutDown**  
Location: ...\\microsens \\mgnt2\\mgnt2Hardware  
\\mgnt2controls\\
- Using a command in the CLI  
Enter the command shutdown (or sd) in the CLI.

In all the cases, the LEDs of the MGNT are switched OFF when the MGNT is properly stopped.

Then, you can unplug the MGNT and plug it again in the **chassis**.

#### Note

It is necessary to wait at least 10 seconds before plugging again the MGNT

Visual indications:

The colour sequence of the front panel LEDs are:

#### MGNT

SW LED: Off (few seconds) > Orange (less than 1 second) > Green

HW LED: Red (about 1 second) > Green

---

**End**

## Power Off/On

The last method of reset is to power down the **chassis** for a few moments and power up again. This is traffic affecting and all equipped modules are reset.

The manager is unavailable for approximately 35 seconds

### Procedure

---

There is no on/off switch on the **chassis**, powering down/up is achieved by disconnecting/connecting the -48V supply(s) on the front panel.

#### -Power Down:

Before powering down the complete chassis, it is mandatory to stop the MGNT software.

There are several ways to stop the MGNT software:

- Using the test button on the front panel  
Push up the test button for 10 seconds.
- Using a SNMP objet  
Set the object **mgnt2CtrlChassisShutDown**  
Location: ... \microsens \mgnt2\mgnt2Hardware  
\mgnt2controls\
- Using a command in the CLI  
Enter the command shutdown (or sd) in the CLI.

In all the cases, the LEDs of the MGNT are switched OFF when the MGNT is properly stopped.

Remove the -48V supply(s) on the front panel.

#### -Power Up:

Connect the -48V supply(s) on the front panel.

#### Visual indications:

The colour sequence of the front panel LEDs are:

#### MGNT

SW LED: Off (few seconds) > Orange (less than 1 second) > Green

HW LED: Red (about 1 second) > Green

---

**End**

## Module management

### Module detection

Information regarding the number of generic slot PM and their configuration in the **chassis** may be obtained via the table:

#### **mgnt2GigmBoardTable**

Location:

...\microsens\mgnt2\mgnt2SNMPAgentData\mgnt2ModulesManagement\

Example:

- 1: mgnt2IndexBoards.0 (integer) 0
- 2: mgnt2Position.0 (integer) 3
- 3: mgnt2Name.0 (octet string) pm1008
- 4: mgnt2PortNumber.0 (integer) 8
- 5: mgnt2LineNumber.0 (integer) 1

Where:

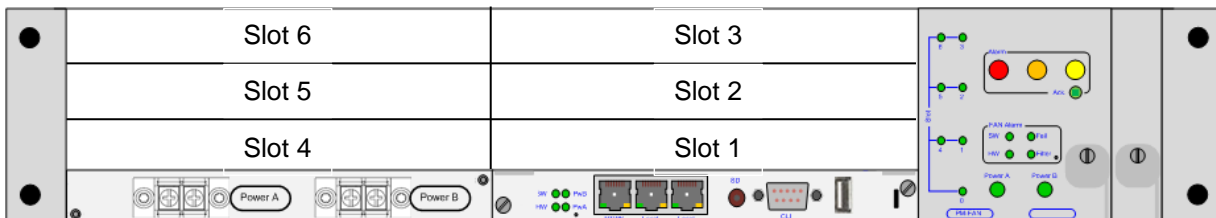
**mgnt2Position** returns the physical position of the module(s).

**mgnt2Name** returns the name of the module

**mgnt2PortNumber** Number of ports on the module

**mgnt2LineNumber** Number of lines on the module

The following diagram shows the slot positions:



The object:

#### **mgnt2GigmSelectedBoard**

Location:

...\microsens\mgnt2\mgnt2SNMPAgentData\mgnt2ModulesManagement\

allows the user to select the module to manage using the slot number.

#### **Note**

Before performing any operations on a module it is necessary to consult this object beforehand to ensure that the correct module is selected.

There are also alarms originating from the MGNT which are associated with the generic slot PM modules. These alarms indicate the presence or absence of a module in a particular slot.

Example:

- 1: mgnt2AlmPmSlot2Absent.0 (integer) **off** (1)
- 2: mgnt2AlmPmSlot3Absent.0 (integer) **on** (2)
- 3: mgnt2AlmPmSlot4Absent.0 (integer) **on** (2)
- 4: mgnt2AlmPmSlot5Absent.0 (integer) **on** (2)
- 5: mgnt2AlmPmSlot6Absent.0 (integer) **on** (2)

In the above example we can see that this particular **chassis** is equipped with one Module which is located in slot 3.

## **Generic slot PM Backup configuration**

### **Note**

In all the following procedures, the user has the possibility to delete some files from the FLASH and/or the RAM memory. It is necessary to delete only one file at a time to ensure a correct delete process.

## **Upload a configuration**

A user may upload the configuration of a PM module to a PC via the MGNT management board. The user gets the PM configuration in an XML-like file.

To achieve this, you will need:

- An SNMP V2C browser (for reading and updating values in the MIB)
- A TFTP client

The configuration uploading procedure is carried out in three phases:

1. **Create a backup file** of PM configuration in the FLASH memory (conf partition) of the MGNT management board.
2. **Transferring the backup file** from the MGNT FLASH memory to the MGNT RAM memory
3. **Get the backup file** in the MGNT RAM memory via a TFTP command.

Described in more detail as follows:

---

**Procedure**

---

**1. Create a backup file**

The object of this phase is to read the configuration of a dedicated PM module and store this configuration in a backup file.

- Use your SNMP browser to check the backup file presence in the FLASH memory of the MGNT management board using the table:

**mgnt2CnfManageConfigFilesTable**

Location: ...\\microsens\\mgnt2\\mgnt2ConfigManagement

There is one dedicated backup file for each **chassis** Slot. At this stage in the procedure, there should be no file in the FLASH memory.

- create a backup file of configuration by setting

**mgnt2CnfBackupConfig**

Location: ...\\microsens\\mgnt2\\mgnt2ConfigManagement\\  
mgnt2CnfManageConfigFilesTable

, linked to the dedicated PM module. The PM module is referenced by the slot number where it is plugged in.

At this moment, a backup file is created in the FLASH memory of the MGNT management board.

**Note**

The backup file name is respecting the following format:

bkpConf + '*slot number*'

For instance, the backup file of the module plugged in slot 5 will have the following name:

bkpConf05

- Use your SNMP browser to check the backup file presence in the FLASH memory of the MGNT management board using the table:

**mgnt2CnfManageConfigFilesTable**

Location: ...\\microsens\\mgnt2\\mgnt2ConfigManagement

**Note**

From this point the maintenance configuration feature is enabled. It means that if a new PMxxxx module is plugged in the slot number pointed by the backup file, the MGNT



management board will performed the following process:

- Check if the backup file is compatible with the PMxxxx module plugged in (i.e. same number of line ports and same number of client ports)
- If the compatibility is correct, the backup file configuration will be automatically transferred to the PM module.

## 2. Transferring the backup file

The object of this phase is to transfer the backup file from the FLASH memory to the RAM memory of the MGNT management board.

- Use your SNMP browser to check the backup file presence in the RAM memory of the MGNT management board using the table:

### **mgnt2CnfUploadConfigFilesTable**

Location: ...\\microsens\\mgnt2\\mgnt2ConfigManagement

There is space to store four configuration files in The RAM memory. At this stage in the procedure, there should be no file in the RAM memory.

If there is no free space anymore in the RAM memory, you may delete a backup file from the RAM memory using the object

### **mgnt2CnfDeleteConfigFile**

Location:...\\microsens\\mgnt2\\mgnt2ConfigManagement\\  
mgnt2CnfUploadConfigFilesTable

- Export the backup file previously created in the FLASH memory to the RAM memory using the object:

### **mgnt2CnfExportConfig**

Location:...\\microsens\\mgnt2\\mgnt2ConfigManagement\\  
mgnt2CnfManageConfigFilesTable

- Use your SNMP browser to check the backup file presence in the RAM memory of the MGNT management board using the table:

### **mgnt2CnfUploadConfigFilesTable**

Location: ...\\microsens\\mgnt2\\mgnt2ConfigManagement

The backup file is now located in the RAM memory and is accessible via a TFTP command.

### 3. Get the backup file

The object of this phase is to get the backup file in the RAM memory of the MGNT management board.

- Open a Command Line Interface window from your operating system and go to the directory where you want to store the backup file.

- Enter the line (Windows XP):

```
T:\home\> tftp -i 192.168.16.123 GET /tftpboot/bkpConfxx destfile.txt
```

Where:

T:\home – is the location where you want to store the file on your PC

bkpConfxx - is the name of the backup file in the RAM memory (xx stands for the slot number where the PMxxxx module is plugged in)

destfile.txt – is the name of the destination file on you PC

192.168.16.123 - is the IP address of the **chassis** into which the package is to be loaded.

#### **Note**

Return of the prompt indicates completion of upload.

At this moment, the configuration file has been transfered on your PC. It is now possible to upload this file in various **chassis** to configure several PM modules identical to the source one.

---

**End**

## Downloading a configuration

A user may download a configuration file to the MGNT management board and apply this configuration to a PM module.

To achieve this, you will need:

An SNMP V2C browser (for reading and updating values in the MIB)  
A TFTP client

The configuration downloading procedure is carried out in three phases:

1. **Remote loading** of the configuration file via TFTP into the **chassis**
2. **Transferring** the backup file to FLASH memory
3. **Activation** of the configuration in the PM module.

Described in more detail as follows:

---

## Procedure

### 1. Remote loading

The object of this phase is to load the configuration file into the RAM of the MGNT management board

For this example, the configuration file will be called "config" on the PC

-Verify that there is still free space in the RAM memory of the MGNT management board using the following object

#### **mgnt2CnfUploadConfigFilesTable**

Location: ...\\microsens\\mgnt2\\mgnt2ConfigManagement

There is space to store four configuration files in The RAM memory.

If there is no free space anymore in the RAM memory, you may delete a backup file from the RAM memory using the object

#### **mgnt2CnfDeleteConfigFile**

Location:...\\microsens\\mgnt2\\mgnt2ConfigManagement\\  
mgnt2CnfUploadConfigFilesTable

- Open a Command Line Interface window from your operating system and go to the directory where you placed the new package.

- Enter the line (Windows XP):

```
T:\home\> tftp -i 192.168.16.123 PUT config /tftpboot/config
```

Where:

T:\home – is the location of the package on your PC

config - is the name of the configuration file you wish to download

and

192.168.16.123 - is the IP address of the **chassis** into which the package is to be loaded.

### **Note**

Return of the prompt indicates completion of download.

- Check that your configuration file is loaded correctly by consulting the table:

**mgnt2CnfUploadConfigFilesTable**

Location: ...\\microsens\\mgnt2\\mgnt2ConfigManagement

, and verify that your file is located in this table, check the filename of your file with the value of: **mgnt2CnfConfigFileName**

Your configuration file is now in the RAM memory and ready for transferring to the FLASH memory of the MGNT management board.

## 2. Transferring

The object of this phase is to transfer the configuration file previously loaded into the RAM to the FLASH

- Use your SNMP browser to check the backup file presence in the FLASH memory of the MGNT board using the table:

**mgnt2CnfManageConfigFilesTable**

Location: ...\\microsens\\mgnt2\\mgnt2ConfigManagement

**Note**

If there is already a backup file dedicated to your target PM module, the file will be overwritten with the new backup configuration file.

Since each backup file present in the FLASH memory is dedicated to a slot number, it is necessary to specify the target slot number of the configuration file before transferring it from the RAM memory to the FLASH memory.

- Specify the target slot number using the object **mgnt2CnfConfigSlot** associated with the required configuration file.

Location: ...\\microsens\\mgnt2\\mgnt2ConfigManagement\\  
mgnt2CnfUploadConfigFilesTable

- Set to "on" the object:

**mgnt2CnfConfigUpload** associated with the required configuration file.

Location: ...\\microsens\\mgnt2\\mgnt2ConfigManagement\\  
mgnt2CnfUploadConfigFilesTable

This validates the transfer of the configuration file to the FLASH memory with a dedicated target slot number.

During this transfer, the filename of the configuration file is modified to fit to the following format: bkpConf + '*slot number*'. For instance, if the file "config" is transferring to the FLASH memory and dedicated to the slot 3, it will be renamed and called: bkpConf03.

- Use your SNMP browser to check the backup file presence in the FLASH memory of the MGNT management board using the table:

**mgnt2CnfManageConfigFilesTable**

Location: ...\\microsens\\mgnt2\\mgnt2ConfigManagement

, and verify that the configuration file has been transferred, renamed and associated to the correct slot number.

**Note**

The same configuration file can be used to create several backup files, each one dedicated to a single slot. If it is the case, repeat the step **2.Transferring** as much as necessary.

**Note**

From this point the maintenance configuration feature is enabled. It means that if a new module is plugged in the slot number pointed by the backup file, the MGNT management board will performed the following process:

- Check if the backup file is compatible with the PM module plugged in (i.e. same number of line ports and same number of client ports)
- If the compatibility is correct, the backup file configuration will be automatically transferred to the PM module.

### 3. Activation

The object of this phase is to activate the backup configuration on the PM module.

- First, check there is a module in the dedicated slot using the object

**mgnt2GigmBoardTable**

Location: ...\\microsens\\mgnt2\\mgnt2SNMPAgentData\\  
mgnt2ModulesManagement

If the module is present, then it is possible to activate the backup configuration on the PM module.

-Set to "on" the object:

**mgnt2CnfRestoreConfig** associated with the required backup file

Location: ...\\microsens\\mgnt2\\mgnt2ConfigManagement\\  
mgnt2CnfManageConfigFilesTable

The MGNT management board will check the compatibility between the backup configuration file and the target PM module. The compatibility is based on the number of line ports and the number of client ports.

If the backup file and the PM module are compatible, the configuration is transferred to the PM module and stored in the Configuration 2 in the FLASH memory of the PM module.

It is recommended to perform a cold reset on the PM module to apply definitively the new configuration.

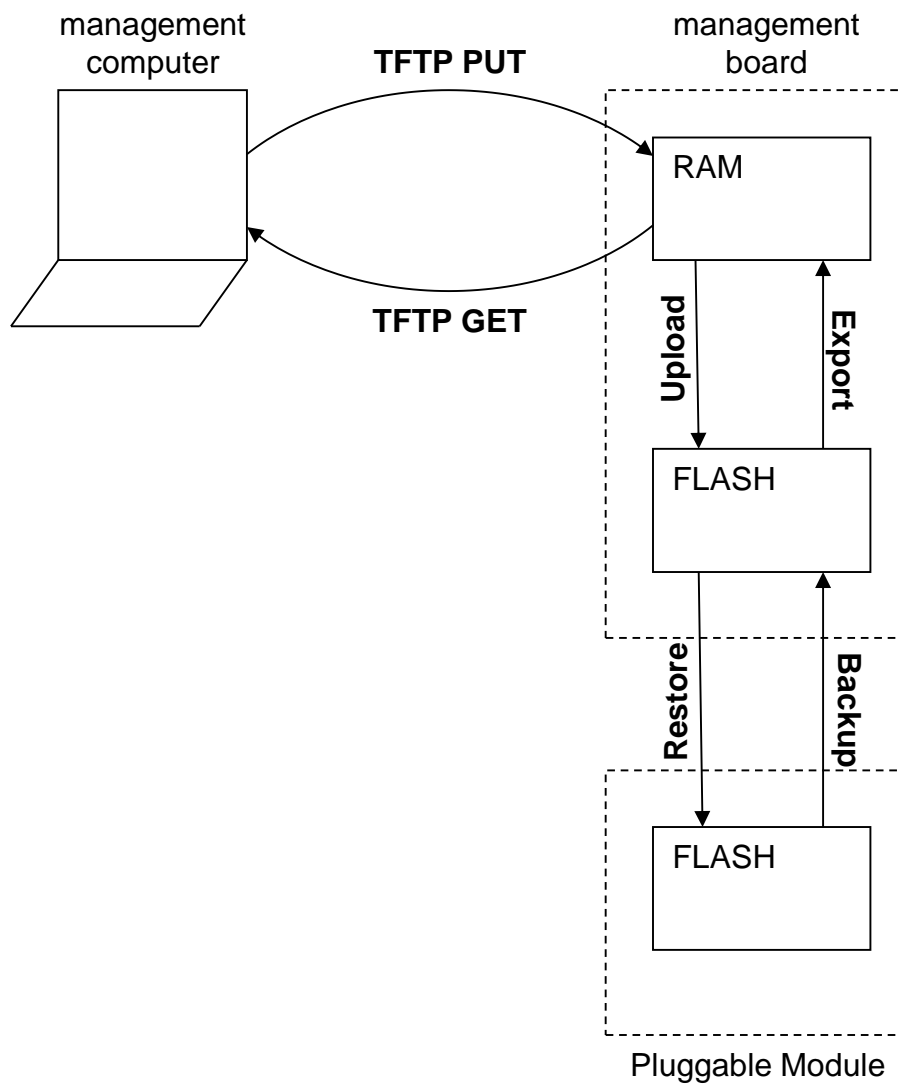
**Note**

The cold reset is necessary only if the start-up configuration has been modified.

---

**End**

## Summary block diagram



## Laser Class

Laser Class	Risks	General Requirements
1	Considered safe to eye and Skin under all reasonably foreseeable conditions of operation.	<ul style="list-style-type: none"><li>• Protective housing: may be required.</li></ul>



## Appendix Chassis Leds description

Location	LED	Status	Condition
MGNT	Pwr A	Green On	The Power input A (left connector) is valid
		Red On	The Power input A (left connector) is in fail condition
	Pwr B	Green On	The Power input B (right connector) is valid
		Red On	The Power input B (right connector) is in fail condition
	SW	Green On	Normal
		Red On	Reset in Progress
		Orange on	Initialization
	HW	Green On	Normal
		Red On	Hardware Error (On During Powering Up)
FAN	Pwr A	Green On	The Power input A (left connector) is valid
		Red On	The Power input A (left connector) is in fail condition
	Pwr B	Green On	The Power input B (right connector) is valid
		Red On	The Power input B (right connector) is in fail condition
	SW	Green On	Normal
		Red On	Reset in Progress
		Orange on	Initialization
	HW	Green On	Normal
		Red On	Hardware Error (On During Powering Up)
	FAN Fail	Red Off	The FAN is in normal condition
		Red On	The FAN is in fail condition
	Filter Presence	Green On	The Dust Filter is present
		Green Off	The Dust Filter is absent
	Critical	Red On	At least one critical alarm on the chassis
		Red Off	No critical alarm on the chassis
	Major	Orange On	At least one major alarm on the chassis
		Orange Off	No major alarm on the chassis
	Minor	Yellow On	At least one minor alarm on the chassis
		Yellow Off	No minor alarm on the chassis
	PM LED	Green On	There is no alarm on the PM
		Red On	There is at least on alarm on the PM
		Off	The PM is absent or passive