

# RBS 6201/6202 & BBS/BBU 6201 Installation

## RAN System Description and RBS 6000 Survey



# Course Agenda

- Introduction
- RAN System Description and RBS 6000 Survey
- RBS 6201 & RBS 6202 Technical Data
- BBS 6201 & BBU 6201 Technical Data
- Installation Safety Precautions and Tools
- Site Installation Preparation
- RBS 6201 & RBS 6202 Installation
- BBS 6201 & BBU 6201 Installation
- Concluding Routines
- Practical Exercises
- Theoretical Assessment and Course Summary

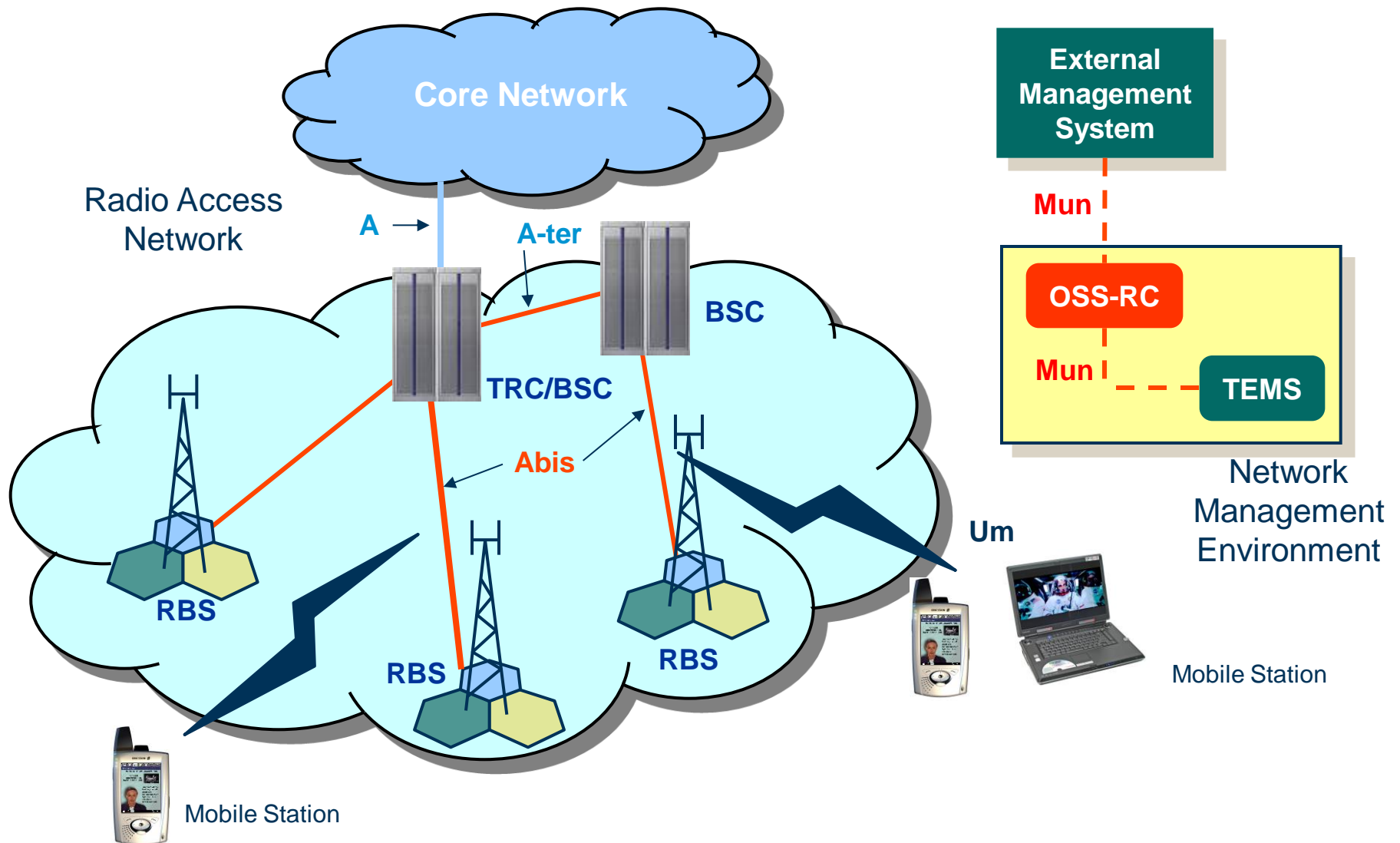
# Module Objectives

**At the end of this module, you will be able to:**

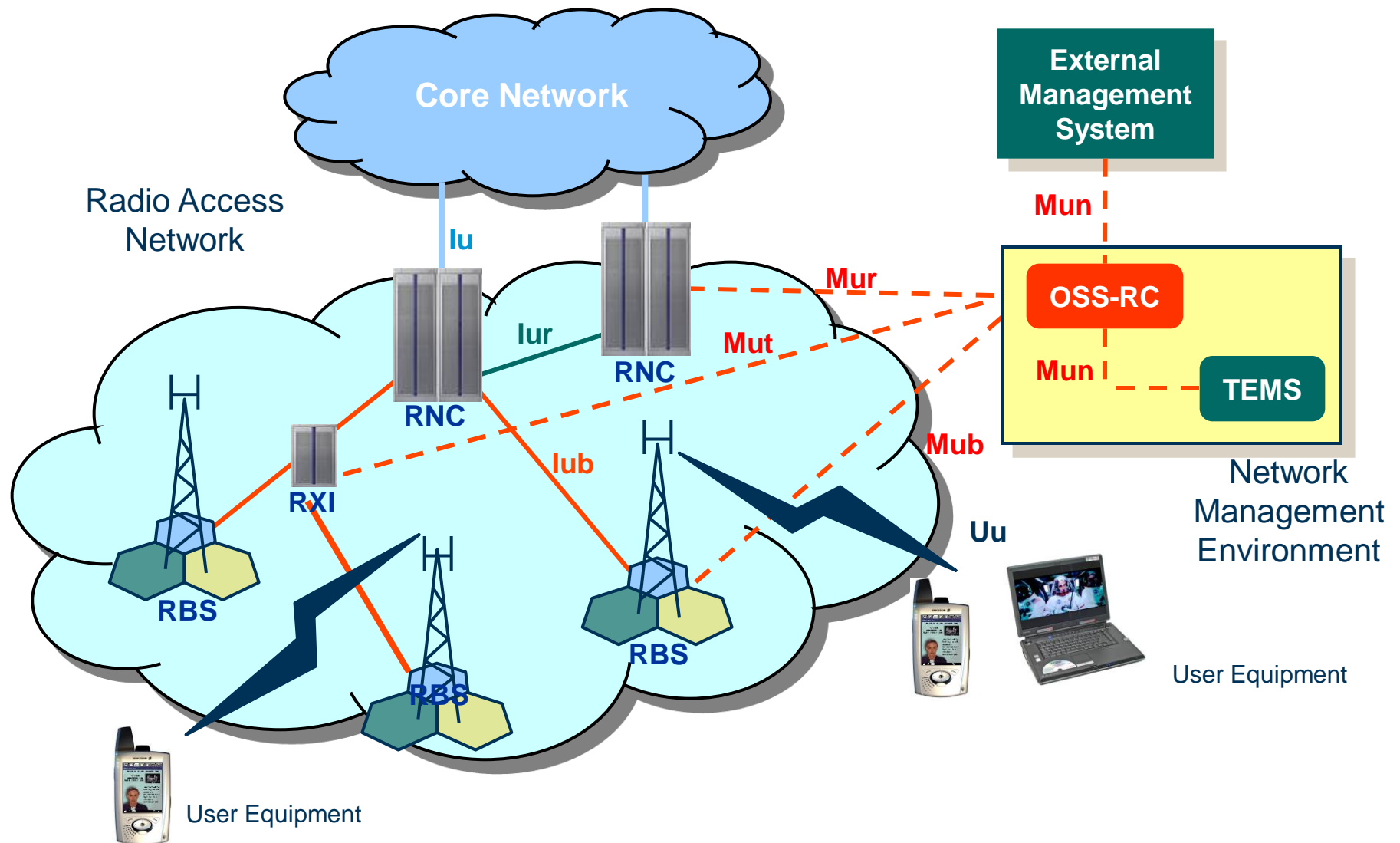
- **Learn the general overview of GSM, WCDMA and LTE system.**
- **List the various RBS 6000 cabinets.**



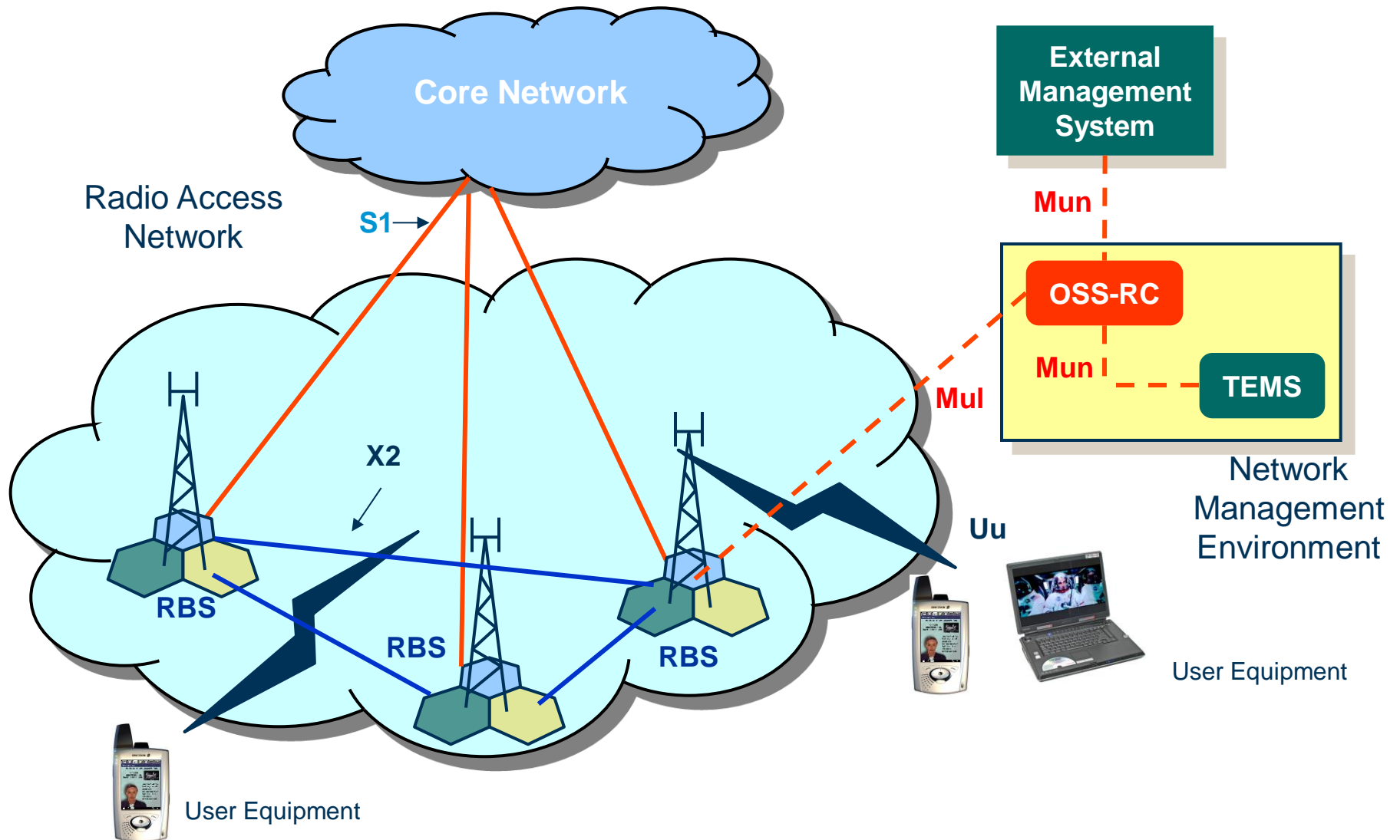
# GSM RAN Interfaces



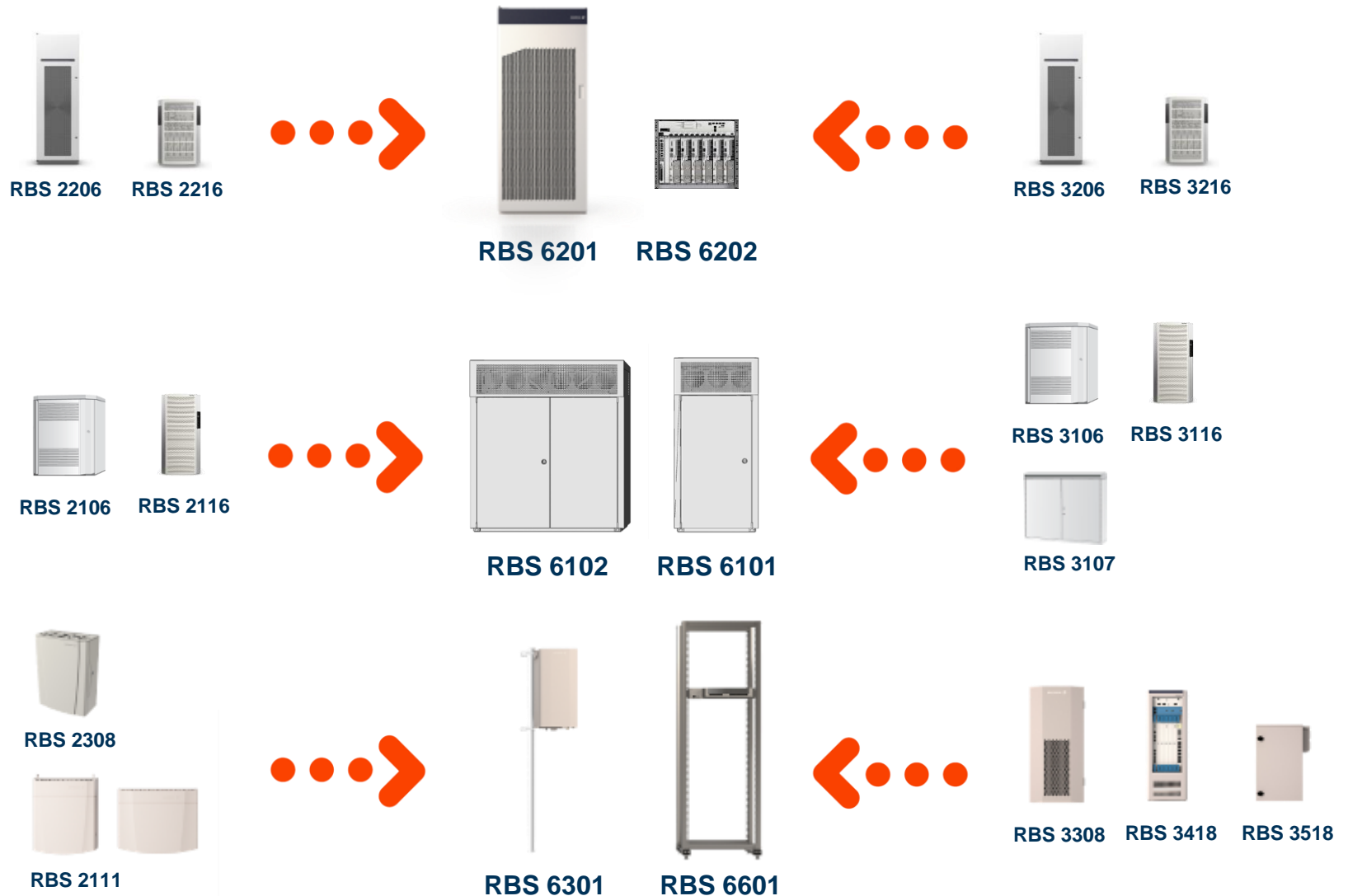
# WCDMA RAN Interfaces



# LTE RAN Interfaces



# Cabinet Vision





# RBS 6000 family



RBS 6102



RBS 6101



RBS 6201



RBS 6202



RBS 6601



RBS 6301



RRU



RRU



# RBS 6102



- Outdoor macro RBS cabinet
- Supports GSM, WCDMA and LTE
- Complete RBS including transmission equipment and internal battery backup.
- Can be equipped with various Digital Units (DU) and Radio Units (RU)
- Can be configured with up to 12 RUs.
- Has the following power supply alternatives:
  - -48 V DC (two-wire)
  - 200 – 250 V AC
- Supports up to 6 U transmission spaces.
- Supports GPS as a synchronization source.
- Ethernet-based site Local Area Networks (LAN) (optional).
- Supports external alarms.

# RBS 6101



- Outdoor macro RBS cabinet
- Supports GSM, WCDMA and LTE
- Complete RBS including transmission equipment and internal battery backup.
- Can be configured with up to 6 Radio Units (RU) and up to 4 Digital Units (DU)
- Has the following power supply alternatives:
  - -48 V DC (two-wire)
  - 100 – 250 V AC<sup>‘1’</sup>
- Supports up to 2 to 4 U transmission spaces depending on configuration and if RBS has internal batteries.
- Supports external alarms.

<sup>‘1’</sup> Supply voltage below 200 V AC must be phase to phase connected. Single phase connection requires 200-250 V AC.

# RBS 6201



- Indoor macro RBS cabinet
- Supports GSM, WCDMA and LTE
- A complete RBS in a two radio sub-rack cabinet with a standard indoor RBS footprint.
- Can be configured with up to 12 Radio Units (RU) and up to 4 Digital Units (DU).
- Has the following power supply alternatives:
  - -48 V DC (two-wire)
  - +24 V DC (three-wire)
  - 120 – 250 V AC
- Supports up to 2 to 15 U transmission spaces depending on configuration.
- Supports external alarms.

# RBS 6202

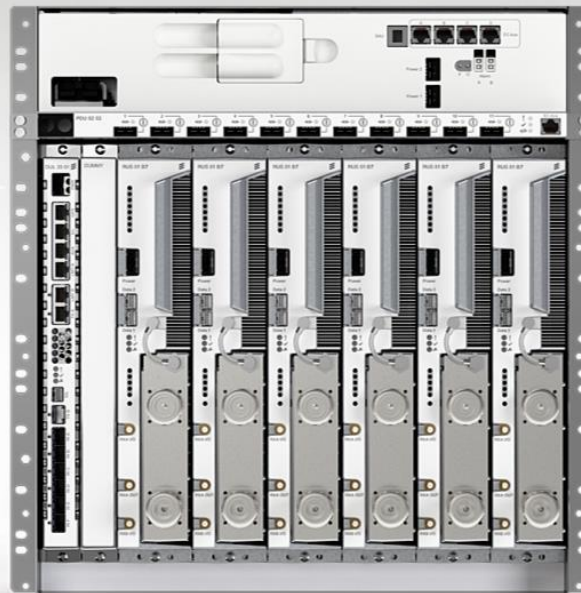
- Compact indoor macro RBS cabinet
- Supports GSM, WCDMA and LTE
- Optimized for installations in already existing 19" frames to save space at the customer site.



RBS 6102



RBS 6101



RBS 6301



RRU

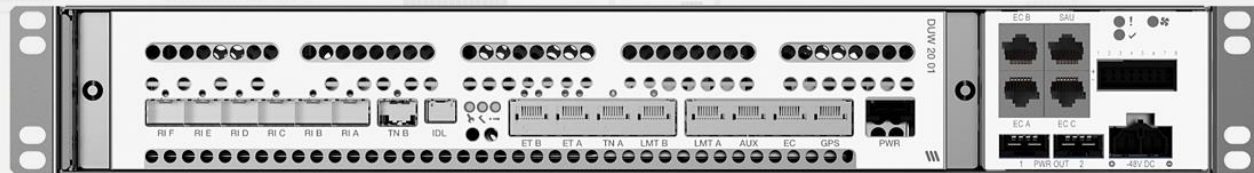


RRU

- Radio shelf is an 11U (488.1mm) high support rack with space for 8U (1431mm) modules (1-2xDU + 6xRU) including climate and power functions.
- The second DUW is place below the radio units in an additional box that is screwed on to the bottom of the cabinet.

# RBS 6601

- Main-Remote indoor RBS solution
- Supports GSM, WCDMA and LTE
- A sub-rack based RBS to be hosted in a 19 inch rack structure, either an existing RBS or other standard racks.
- Can be configured with up to 2 Digital Units (DU)
- Power supply is -48 V DC (two-wire)
- Supports external GPS
- Supports integrated external alarms.



RBS 6102

RBS 6101

RBS 6201

RBS 6301

RRU

RRU



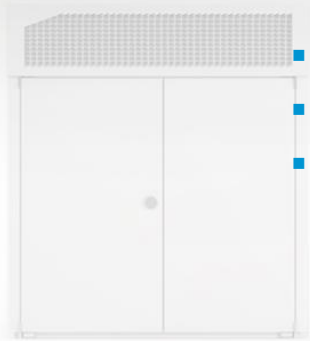
# RBS 6301

- Main-Remote outdoor RBS solution
- Supports GSM, WCDMA and LTE
- Multi-enclosure control support
- Versatile 19" building practice
- Power up to 6 x RRU
- Wall/pole and ground mountable

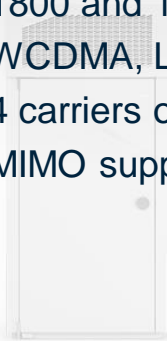


# RRUW/S 01

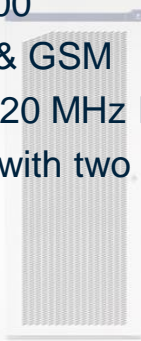
- RRUW for 2100, 1900 & 850
- RRUS 01 for 2100, 1900, 850, 900P, 900E, 1800 and 18IX00
- WCDMA, LTE & GSM
- 4 carriers over 20 MHz IBW
- MIMO support with two RRU



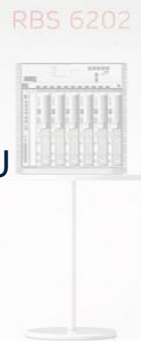
RBS 6102



RBS 6101



RBS 6201



RBS 6202



RBS 66



RRU



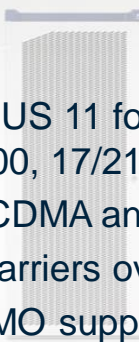
# RRUS 11



RBS 6102

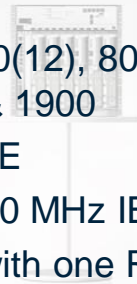


RBS 6101



RBS 6201

RBS 6202

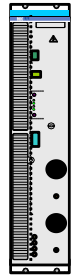


- RRUS 11 for 700(12), 800DD, 2600, 2100, 17/2100 & 1900
- WCDMA and LTE
- 4 carriers over 20 MHz IBW
- MIMO support with one RRU

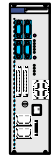


# RBS 6000 Unit Migration

GSM



DRU

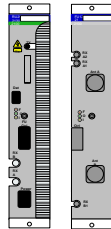


DXU

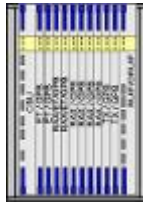


RUG + DUG

WCDMA



RU FU



BB

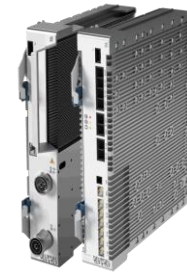


RUW + DUW

LTE



RUL + DUL



RUS + DUx

**High capacity unit**  
GSM, WCDMA and LTE  
60W MCPA, 20 MHz IBW

# RBS 6000 Unit Positions

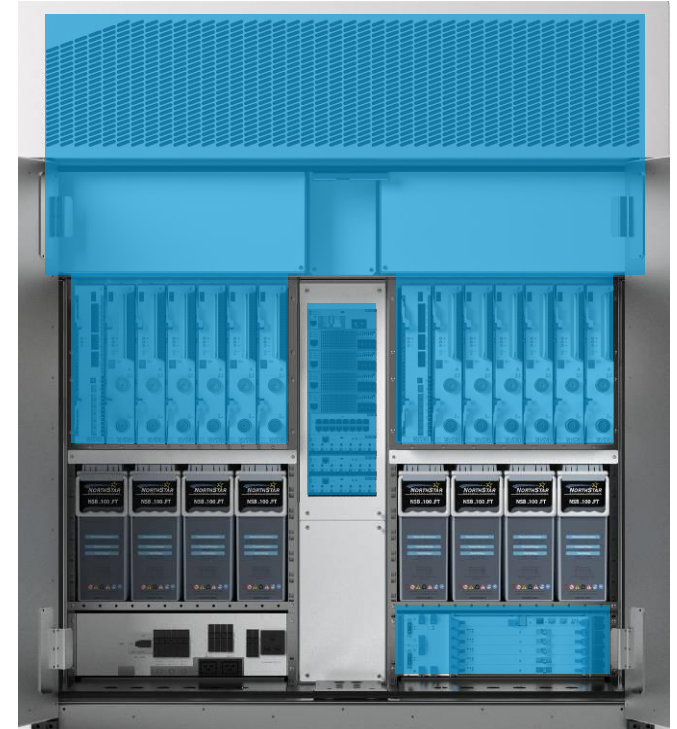
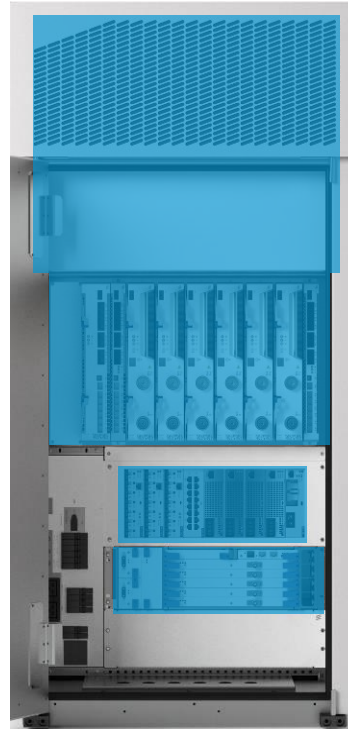
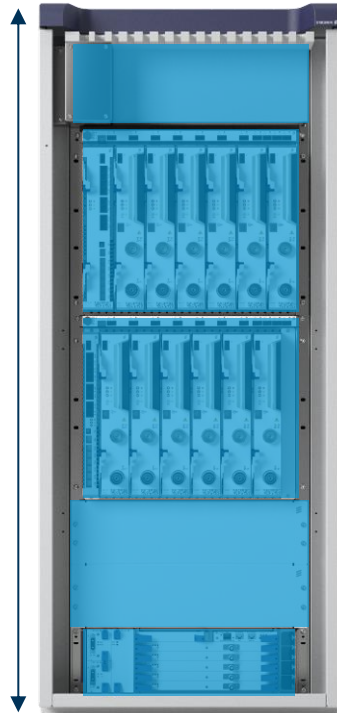
143.5cm

Radio Units  
GSM/WCDMA/LTE

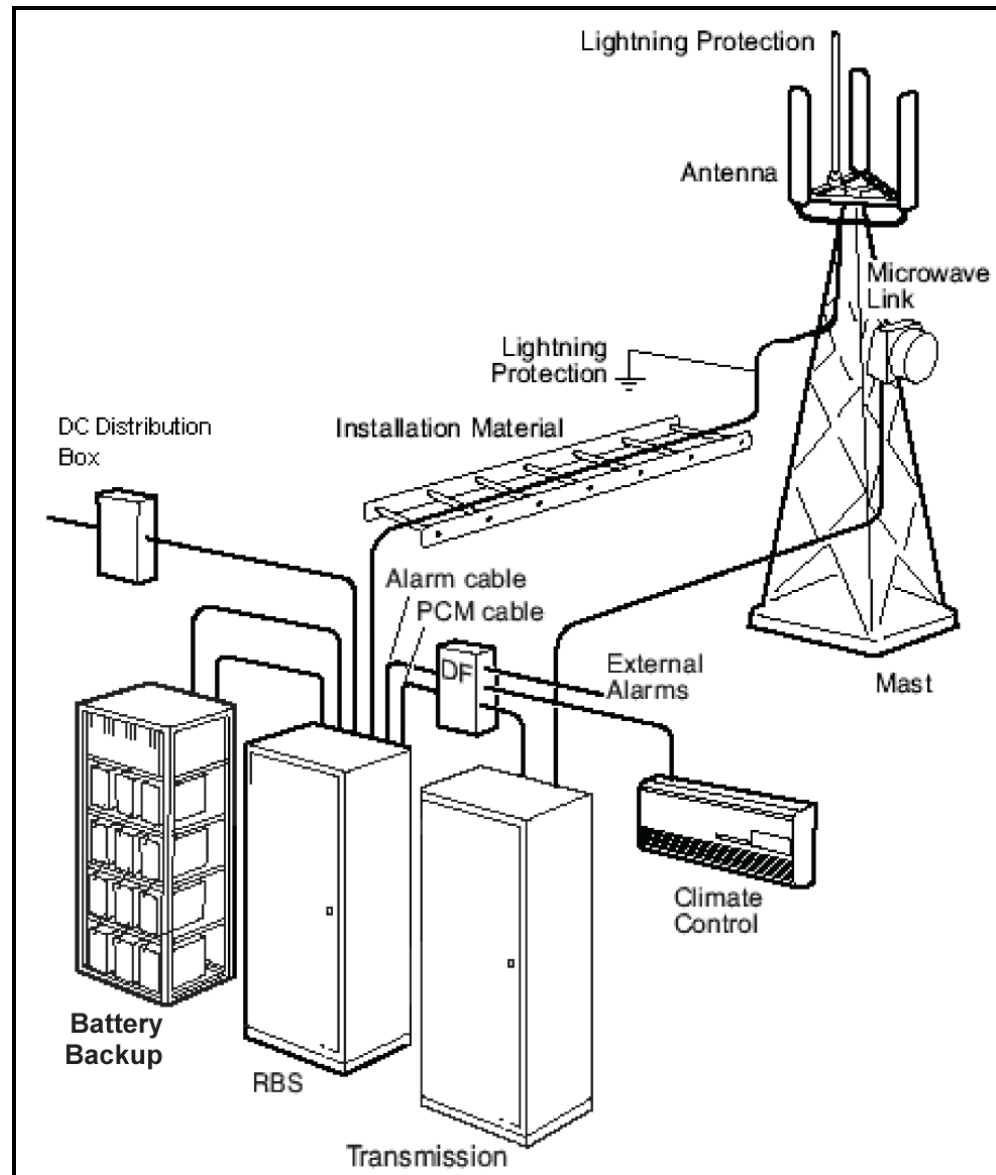
Transmission  
Module

Site Power

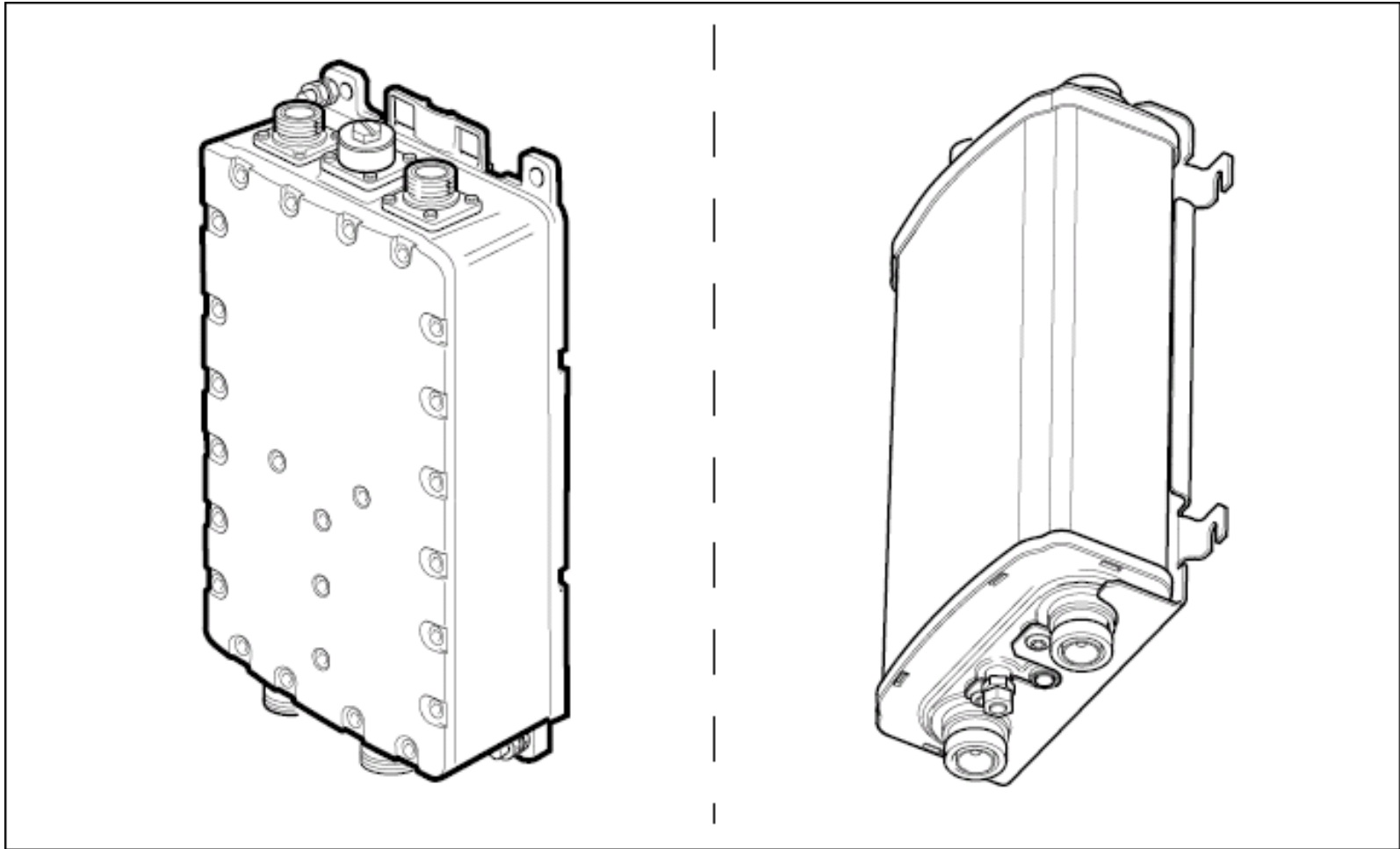
Cooling



# Typical RBS Site



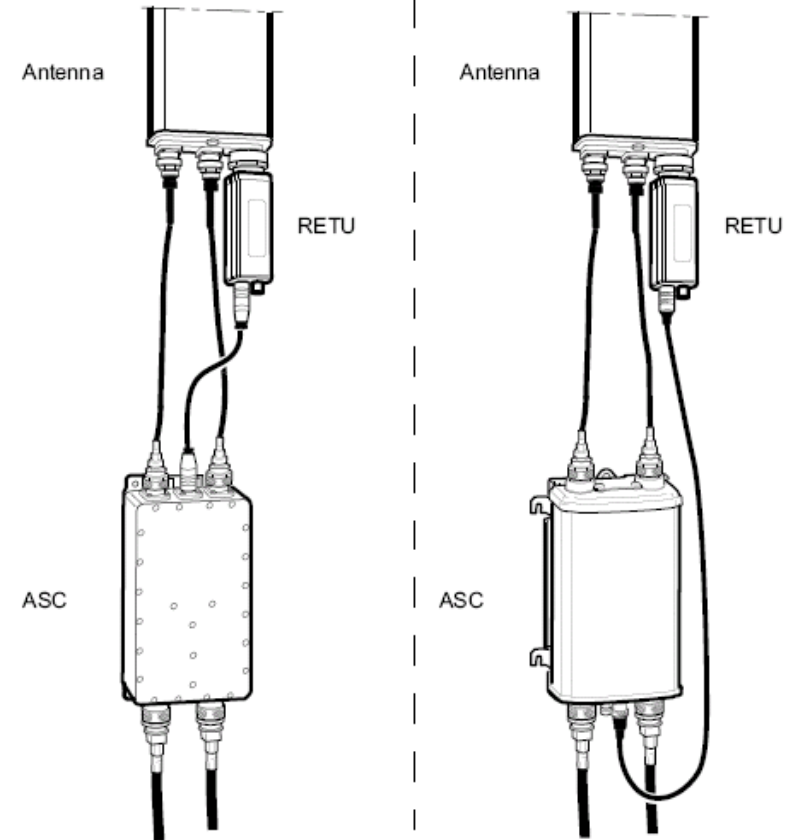
# Antenna System Controller (ASC)



# Remote Electrical Tilt, RET

## Characteristics:

- Needs a specific RET compatible antenna
- Allows network tuning remotely
- Minimizes site visits
- Nominal power supply: 28 V DC
- Maximal down-tilt angle depends on antenna type



**ERICSSON**

