Introduction

RBS 6000 Survey

The New Vision

RBS 2206 · RBS 2216 → RBS 6201 ← RBS 3206 · RBS 3216

RBS 2106 · RBS 2116 → RBS 6102 · RBS 6101 ← RBS 3106 · RBS 3116 · RBS 3107

RBS 2308 · RBS 2111 → RBS 6301 · RBS 6601 ← RBS 3308 · RBS 3418 · RBS 3518

RBS 6000 Brief Overview

RBS 6102

RBS 6102 is the large outdoor macro RBS providing a complete radio site including transport equipment, site power, 4U transport equipment and battery backup. The cabinet can house up to two radio shelves, two battery strings, thus designed for high capacity demands.
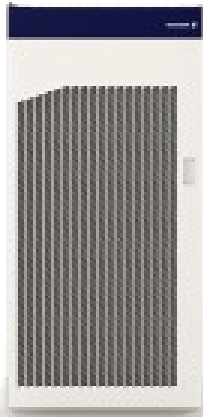
RBS 6101

RBS 6101 is the small outdoor macro RBS. The cabinet can house one radio shelf and has space for power and transport. The RBS 6101 can also be used as a site support cabinet when Main-Remote is used. RBS 6101 can fit high capacity multistandard MR with power and battery back-up to the entire MR RBS.

RBS 6000 Brief Overview

RBS 6102

RBS 6201 is an indoor cabinet that can house two radio shelves as well as the transport equipment and site power supply needed for an entire RBS site. Thus, this is a complete site for high capacity demands integrated into one cabinet. The cabinet is containing two radio shelves that provides flexible radio capacity.

RBS 6601

RBS 6601 is a very small indoor main unit that can be inserted into standard 19" racks already deployed at the site.

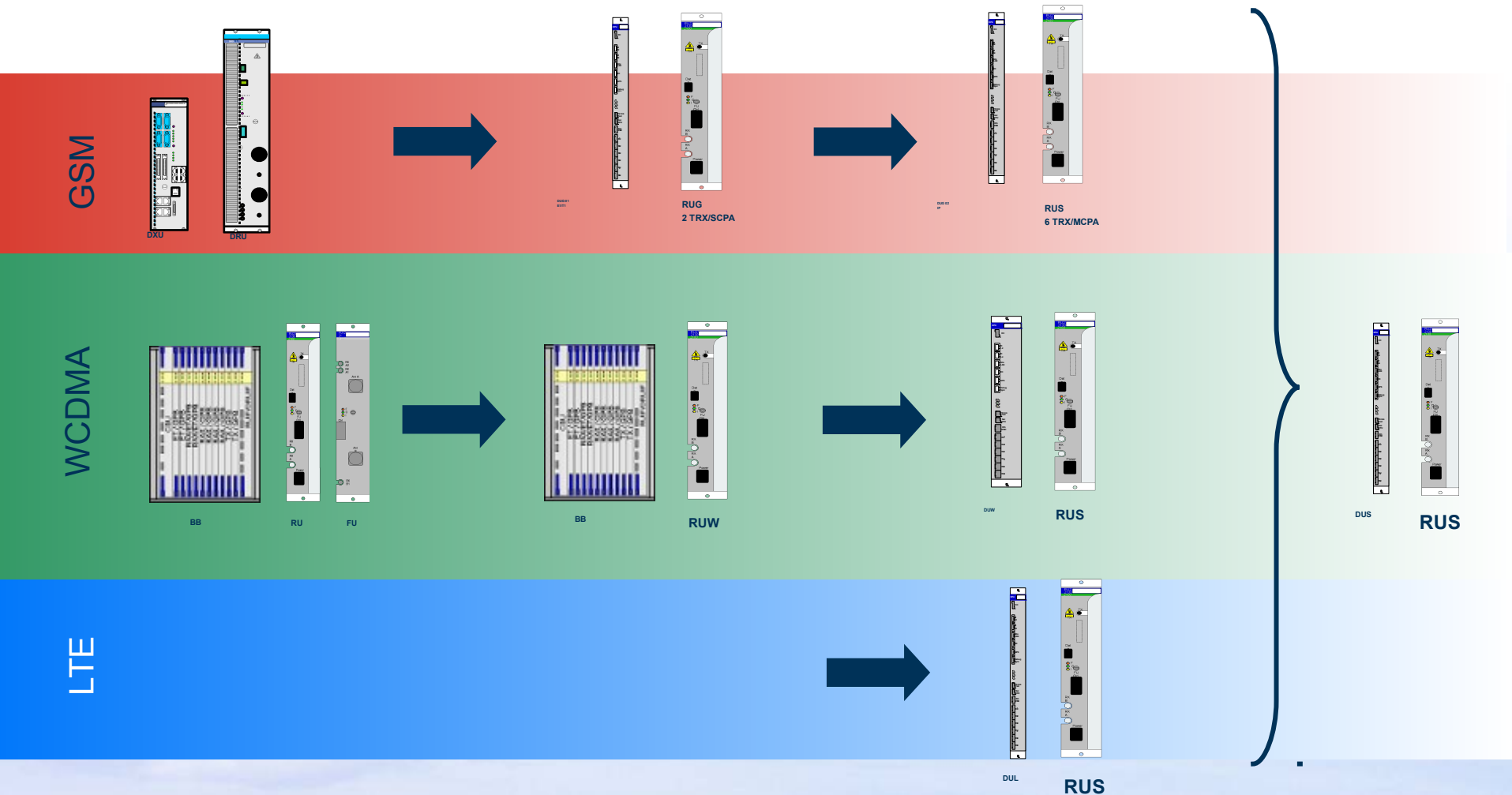19" Plug-in Main Unit.

RBS 6000 Brief Overview

RRU

Radio Remote Units, RRU are the naming of the radio designed to be mounted near the antenna to minimize the feeder loss, which gives drastically reduced site power consumption. The baseband controlling the RRU can be deployed either in macro enclosures (E.G RBS 6101, 6301 or in the 19" RBS 6601.

RBS 6301

RBS 6301 can be used as a low capacity macro, a very compact high capacity main unit for single standard or multi standard main-remote sites or as a micro.

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RBS 6000 Radio Modules

GSM

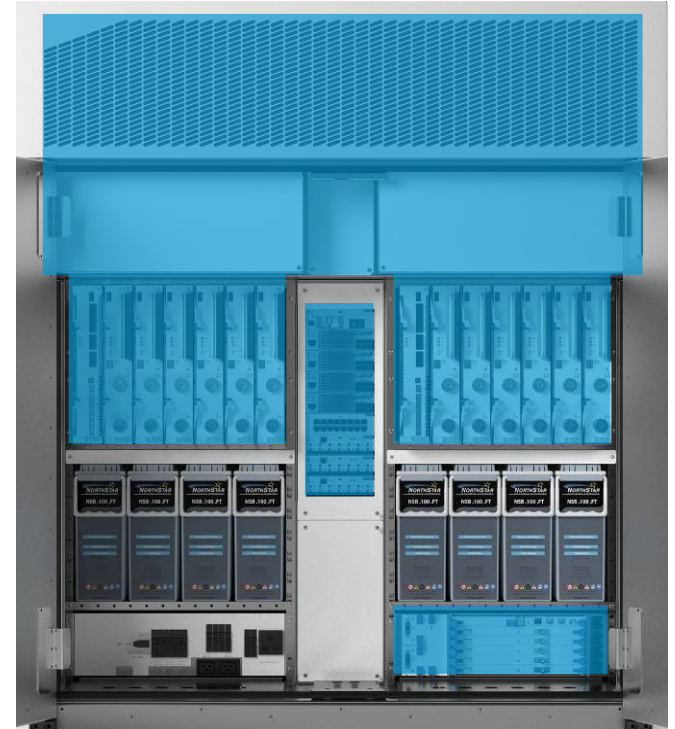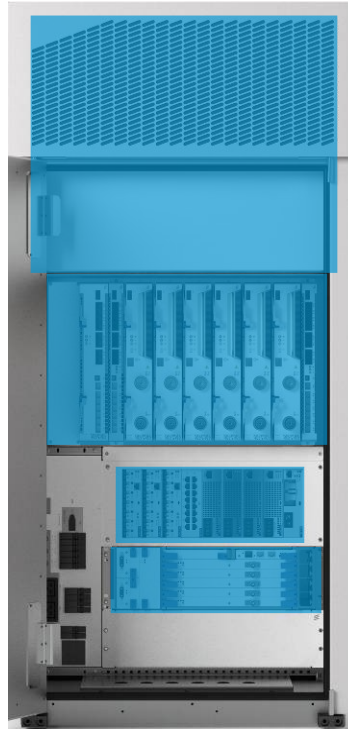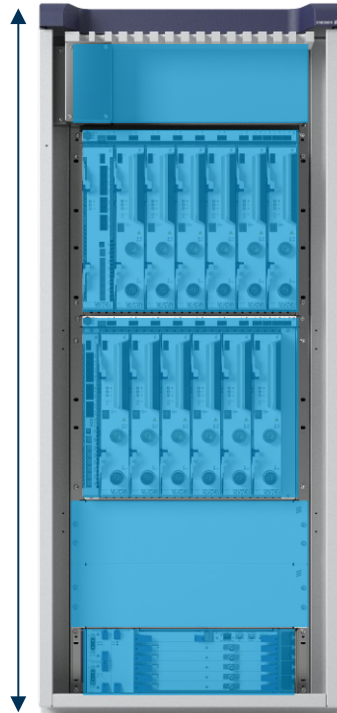DXU DRU → DUG01 EUTS RUG 2 TRX/SCPA → DUG 02 IP RUS 6 TRX/MCPA

WCDMA

BB RU FU → BB RUW → DUW RUS · DUS RUS

LTE

→ DUL RUS

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RBS 6000 Unit Positions

143.5cm

Radio Units GSM/WCDMA/LTE

Transmission Module

Site Power

Cooling

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RBS 6000 FAMILY

HARDWARE COMPONENTS

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TAKING YOU FORWARD

Radio Unit for GSM (RUG)

- Half the size from predecessor
- SCPA based
- 2 TRX
- TX Output power* @ ARP

	800/900	1800/1900
Uncombined	48W / 46,8dBm	43W / 46,3dBm
Combined	22W / 43,3dBm	19W / 42,8dBm
TCC	85W / 49,3dBm	76W / 48,8dBm

- RX sensitivity** @ ARP

800/900

	Static	TU50
Single Branch	-113,1dBm	-112,4dBm
2WRD	-115,9dBm	-117,2dBm
4WRD	-118,5dBm	-120,6dBm

1800/1900

	Static	TU50
Single Branch	-113,5dBm	-112,8dBm
2WRD	-116,3dBm	-117,6dBm
4WRD	-118,9dBm	-121,0dBm

- **EDGE evolution ready**

* Antenna Referance Point

** Timing Unit.

Radio Unit for WCDMA (RUW)

- Extremely compact
- 4 carriers
- 20MHz IBW
- TX output power @ ARP
  - 60 W total

- RX sensitivity @ ARP
  (3GPP & w ASC)
  - -128,9dBm

- **Future Proof, designed for HSPA evolution**

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Multi Standard Radio Unit (RUS)

- Multistandard support
  - GSM, WCDMA and LTE

- **4 carriers** (single or mixed mode supported)

- IBW
  - 20 MHz for WCDMA and LTE single mode
  - 10 MHz for GSM single mode
  - 15 MHz for Mixed Mode

- Output Power @ ARP
  - 60W on all bands (4x20W on GSM*)

- Output power and carrier flexibility
  - HW activation licenses

- RX sensitivity @ ARP
  - -128,9dBm (WCDMA, 3GPP, w ASC)

- **Future Proof Prepared for**
  - **EDGE Evolution, HSPA Evolution, l**

- Built in ASC/TMA support and built in VSWR

- **Statistical Gain Maximizes utilization of the MCPA HW capabilites**
  - Allow 80 W during short periods of the time (GSM 2x40)
  - Average output power = 60W
  - Minimizes performance degradation in configurations with power overbooking

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Digital Unit for GSM (DUG)

Prepared for the future

- Supports multistandard
- Main Unit

Capacity

- Up to 12 TRX
- Half the size of predecessor
- Multiple digital units (TG-sync)

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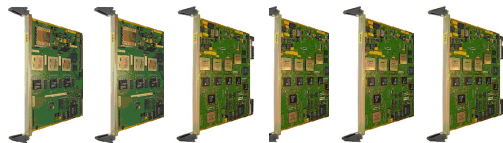# Digital Unit for WCDMA (DUW)

Baseband

ATM & IP

Main Unit

Multiple Digital Units

Hardware HSPA Evolution ready

- MIMO and 64QAM downlink
- 16QAM uplink
- Interference cancellation
- Multi-carrier
- Continuous packet connectivity
- Multistandard ready

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Digital Unit for LTE (DUL)

Prepared for high peak rates

- 2x2 MIMO
- 64QAM DL & UL

Prepared for the future

- Supports for LTE System Architecture Evolution
- Supports for multiple digital units & redundancy
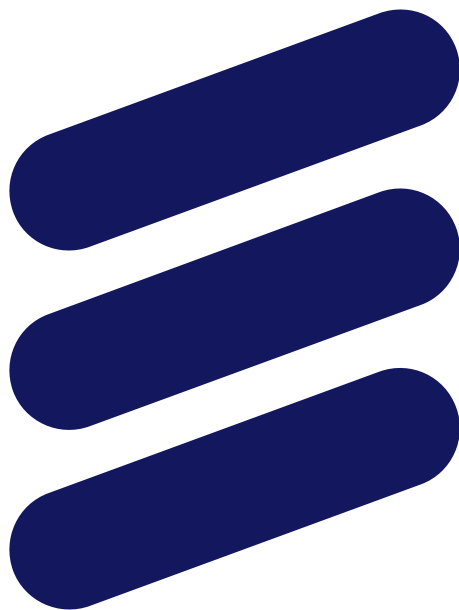- Multistandard ready
- Main unit

Capacity

- Up to 1000 users
- Up to 300Mbps throughput DL
- Up to 100Mbps throughput UL

IP transmission capability

- All IP architecture with full non-blocking connectivity
- 100/1000BASE-T
- SFP slot for 1000BASE-X

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