

RBS 2206

The GSM Macro Indoor Base Station

RBS 2206 is a high capacity, small footprint indoor macro base station supporting up to twelve transceivers per cabinet. It is possible to build one, two and three sector configurations including dual band configurations in one cabinet.

Being the latest member in the RBS 2000 family RBS 2206 is to date the most powerful indoor RBS in the world. Keeping the successful characteristics of the existing RBS 2000 portfolio and improving functionality as well as operation and maintenance makes the RBS 2206 the most cost-effective solution for growing GSM operators.

The RBS 2000 family supports a wide range of applications ranging from extreme coverage to extreme capacity. Being a RBS 2000 member guarantees coexistence with the installed base of RBS 200 and RBS 2000 products. Ericsson's synchronization based BSS features ensure that transceivers from different generations of radio base stations can easily form common cells. Operators can therefore bridge the past with the future. By making existing sites futureproof, investments are protected while migrating to 3G.

Part of the grow-on-site concept

Since it is becoming increasingly difficult to find new base station sites, it is of great interest to remain on the existing sites as long as possible. Site space is often a limiting factor for capacity growth. The powerful RBS 2206, included in Ericsson's grow-on-site toolbox, addresses this problem. On many sites, two or more existing cabinets can be replaced by one RBS 2206, thereby solving the site space problem by making room for another cabinet.

This is of major importance, since it makes it possible to reuse and collocate GSM and WCDMA equipment. The RBS 2206 will pave the way for WCDMA.



Doubled capacity – superior performance – same footprint

The 12-transceiver RBS 2206 cabinet has the same footprint as RBS 2202 but has doubled capacity, thanks to the new double-capacity transceivers and combiners. The double Transceiver Unit, dTRU, has some powerful features. The RBS 2206 has better output power than the current RBS 2000 products, which are the best on the market today. The improved radio performances means increased site-to-site distance, and therefore, fewer sites. Another example of a cost-saving feature is 121 km Extended Range.

The RBS 2206 comes with two new extremely flexible combiners. Examples of configurations supported by the Filter Combiner (CDU-F) are 3x4, 2x6, 1x12 and 8+4 in one cabinet. CDU-F supports up to 12 transceivers on one dual-polarized antenna. The other combiner (CDU-G) can be configured in two modes: capacity mode and coverage mode, making it very flexible. In coverage mode, the output power from the CDU-G is increased, making it perfect for rural sites or when fast rollout is required at a minimum cost.

Prepared for the future

The RBS 2000 family is prepared for GSM data services, including General Packet Radio Service (GPRS), High Speed Circuit Switched Data (HSCSD) and 14.4 kbit/s timeslots. To meet the operators' need for faster datacom solutions, RBS 2206 supports EDGE.

A powerful Distribution Switch Unit (DXU) and fast internal buses guarantee full EDGE support. With the optional BSS feature RBS 2000 synchronization, it is possible to have up to 32 transceivers in one cell. With the optional BSS feature RBS 200 and RBS 2000 in the same cell, it is possible to expand an existing RBS 200 cell with RBS 2206, and thereby introduce EDGE and 3G capabilities through plug-in units.

Key features

- Six double transceiver units (dTRU); that is, 12 transceivers
- Filter and hybrid combining one, two, or three sectors in one cabinet
- Excellent RF performance
- Synthesized and baseband frequency hopping
- Supports 12 transceiver EDGE on all timeslots
- Supports GSM 800, 900, 1800 and 1900 MHz
- Extended Range 121 km
- Duplexer and TMA support for all configurations
- Four transmission ports supporting up to 8 Mbit/s
- Optional built-in transmission equipment transmission
- Prepared for GPS assisted positioning services

Technical specification for RBS 2206

Frequency band:	GSM 800, E-GSM 900, P-GSM 900, GSM 1800, GSM 1900
Tx:	869–894, 925–960, 1805–1880, 1930–1990 MHz
Rx:	824–849, 880–915, 1710–1785, 1850–1910 MHz
Number of transceivers (per cabinet):	2–12
Number of sectors:	1–3
Dimension (H x W x D):	1850 x 600 x 400 mm (725/6 x 233/5 x 153/4 in.) including installation frame
Weight:	230 kg (506 lbs.) fully equipped
Power into antenna feeder:	35 W / 45.5 dBm (GSM 800 / GSM 900) 28 W / 44.5 dBm (GSM 1800 / GSM 1900) With TCC activated, add 2.5 dBm to above values
Receiver sensitivity:	-111 dBm (dynamic, without TMA and diversity gain)
Power supply:	120 – 250V AC, 50 / 60 Hz -48 – -72V DC, +20.5 – +29V DC
Battery backup:	Optional external
Operating temperature:	+5°C – +40°C (+41°F – +104°F)