

RTX4002 DECT Repeater

General description

The RTX4002 DECT Repeater is designed in accordance with the Digital Enhanced Cordless Telecommunications (DECT) standard. This type of repeater (WRS Wireless Relay Stations) is intended for use in residential, business and public DECT applications based on the GAP profile.

A repeater can be deployed when a need to extend the range of a DECT telephone arises. The repeater can also be utilised where there is a need to increase limited coverage or improve reception in areas shielded from the base station.

The RTX4002 has two internal antennas and can be used to double the effective range of a DECT Base Station in a desired direction.

In addition, the RTX4002 Repeater uses a new, matchless automatic registration method. With this new method, the repeater automatically seeks and acquires the DECT/GAP base station that emits the most powerful signal. For the end user, this means that the repeater installation has been simplified to Plug-and-Play.

Repeater services

The current version of the RTX4002 can be used provided the base station does not support encryption or if the encryption function can be disabled by the RTX4002.

It is possible to achieve seamless intercell handover from an area covered by the base station to an area covered by the WRS or visa versa. It is also possible to effect intercell handover from one WRS to another WRS. If the base station is a single cell type (residential with RPN=0), the handset may not always support seamless handover.

Data

- Complies with CTR6 test requirements and is compatible with ETS 300 700
- Low power consumption
- Single-sided component mounting
- Frequency band: 1880 MHz – 1900 MHz
- Transmit power: 250 mW (+22.5dBm)
- Receiver sensitivity: <math><-91\text{ dBm}</math> at Max. 6 WRS per base station

Figures 1 and 2: Examples of repeater applications

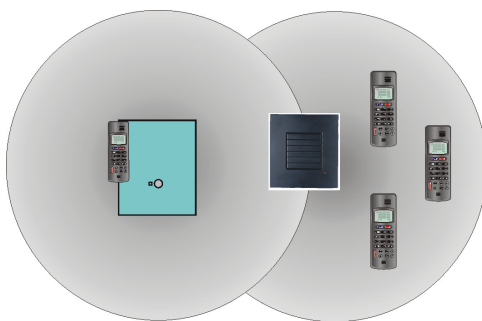


Figure 1

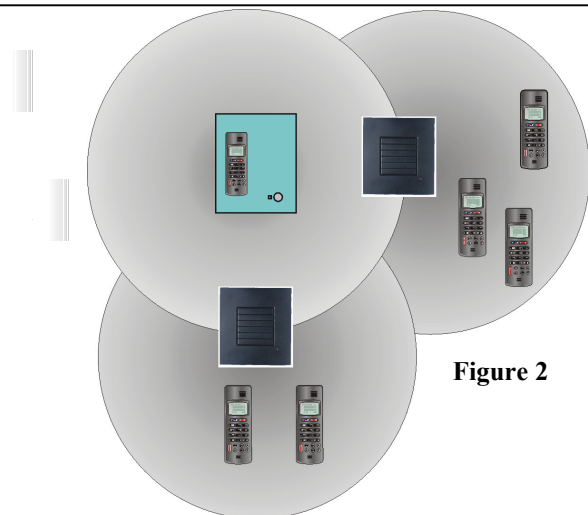


Figure 2

Copyright of RTX Telecom A/S. RTX does not assume any responsibility for use of any circuitry described, no circuit patent licenses are implied. RTX Telecom A/S reserves the right without notice to change and/or improve said circuitry and specifications.

Compliance specifications

The RTX Wireless Relay Station operates as a Cordless Radio Fixed Part (CRFP) based on the ETSI wireless Relay Station specification ETS 300 700. This application requires minimal or no changes to the base station (RFP) and no changes to the handset in a DECT system (as opposed to the alternative type of WRS with a Repeater Part (REP) application, as also described in ETS 300 700).

The RTX4002 complies with the CTR6 and is compatible with TBR22 (Generic Access Profile, GAP) specifications, as well as the ETSI Wireless Relay Station Specification ETS 300 700. Type approval test reports are available upon request.

Features

- The RTX4002 has two internal antennas and can be used to double the effective range of a DECT Base Station in a desired direction.
- The RTX4002 contains a 6-slot RF section that in theory allows up to 3 simultaneous conversation transfers

However, a limitation of 2 simultaneous transfers has been established due to requirements for the use of channels during call set-up and due to a fixed requirement for handover capability. If greater capacity is required in any particular area, additional WRS's can be put into operation.

Mechanical

The standard PCB measures only 102mm x 92mm and with the two internal antennas is contained in a discrete plastic housing that measures a mere 120mm x 130mm x 31mm.

It is wall mountable, with modular-plug connector for external power adapter (9VDC, 250mA).

Availability

The repeater s available from RTX Telecom A/S. Delivery time upon request.

Customising

RTX Telecom also assists DECT system manufacturers in modifying the RFP software to include the cipher key transfer. As an option, the repeater can be delivered in customised housings.