From the company that continually sets the benchmark in implant reliability, the Cochlear™ Nucleus® CI512 cochlear implant draws on over 25 years of experience, and has been developed in close collaboration with surgeons around the world.

The Nucleus CI512 implant features a streamlined design and is:

- The world’s thinnest cochlear implant – 40% thinner than Nucleus Freedom™.
- 2 ½ times stronger than Nucleus Freedom*.
- Designed for precise stimulation and leading performance.

Components of the Nucleus CI512 implant

1. Receiver stimulator in titanium casing.
2. Implant coil, enabling telemetry.
3. Two extracochlear electrodes for different stimulation modes.
4. Electrode array with 22 platinum electrode contacts, plus appropriate length and positioning for precise stimulation.
5. Removable magnet for MRI safety (circle on magnet indicates the side that should be away from the bone. Sterilised replacement available from Cochlear – Z179608).
6. Symmetrical, side by side exit leads from main casing.

Overall dimensions of the Nucleus CI512 implant

The world’s thinnest cochlear implant - only 3.9 mm thin.

Specifications are nominal, accurate at the time of printing, and subject to change without notification.

* As measured by impact testing.
RECEIVER STIMULATOR

General Features
- Weight - 8.8 g (including electrode array).
- Resistant against external impact up to 2.5 Joules.\(^1\)

MRI
- MRI safe up to 3 Tesla (for further details refer to the Surgeon's guide 211651)\(^2\).

ELECTRODE ARRAY

Contacts
- 22 half-banded platinum electrodes, moulded in a perimodiolar shape.
- Electrode contacts arranged in non-uniform spacing from 0.4 to 0.8 mm and spaced over 15 mm active array.
- More robust lead to withstand the rigours of lifetime implantation.

General Features
- Platinum arrow stylet holds the electrode straight during insertion with Advance Off-Stylet™ (AOS™) surgical technique.
- AOS surgical technique and Softip™ electrode to minimise lateral wall insertion force.
- Two extracochlear electrodes - one titanium plate at the implant receiver stimulator and a separate 0.6 mm diameter cylindrical electrode.
- A white marker between 10th and 11th array contact indicates insertion depth when the tip is close to the lateral wall of the cochlea.

Dimensions
- 19 mm intracochlear length, including Softip.
- Electrode diameter at apical end - 0.5 mm.
- Electrode diameter at basal end - 0.8 mm.

MICROELECTRONIC PLATFORM

General Features
- Power efficient, custom design.
- Amplitude range: 10 uA to 1.75 mA.
- Stimulation rates up to 31.5 kHz.
- Pulse width: 12 us to 400 us per phase.
- Implant ID to uniquely identify implants and to avoid unintended stimulation.

Stimulation Modes
- Monopolar, bipolar mode and common ground stimulation, biphasic current pulses.

Telemetry Capability
- Ultra-low-noise floor (~1 μV), which enables advanced AutoNRT™ telemetry capabilities.
- Includes fully integrated Electrophysiology telemetry modes - NRT, AutoNRT, ESRT, ABR, CEP and intraoperative NRT.

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\(^1\) DIN EN45502-2-3 draft document; VDE 0750-10-3:2007-02, Active implantable medical devices - Part 2-3: Particular requirements for cochlear implant systems; German version prEN 45502-2-3:2006.

\(^2\) MRI field strength approval varies by country. Check your warnings and precautions document. Magnet must be removed before all MRI procedures in the USA.