User Instructions, Thingsee Nano

- TTG USER INSTRUCTIONS
- INTRODUCTION AND INTENDED USE OF TTG
- INSTALLATION AND COMMISSIONING GUIDELINES
- PRECAUTIONS
- LEGAL NOTICES
- RECYCLING
- FCC REQUIREMENTS FOR OPERATION IN THE UNITED STATES
    - FCC Information for the User
    - FCC Guidelines for human Exposure
    - Federal Communications Commission Statement
    - FCC Radio Frequency Interference Warnings & Instructions
    - FCC Caution

The following document describes how the Nano tag is installed and used in asset tracking use cases.

TTG USER INSTRUCTIONS

INTRODUCTION AND INTENDED USE OF TTG

TTG (Thingsee Nano Tag) is a 0.5” x 1.0” x 0.25” sized Bluetooth device that is used for tracking assets. Device has 5 years of operation time in specific use cases where the main functionality is to beacon in specified interval. Communication happens using Wirepas 5.1 DA communication protocol. Construction of the tag is very simple by including only two mechanical covers, PWB assembly and two batteries. The appearance of TTG is shown in the picture below.

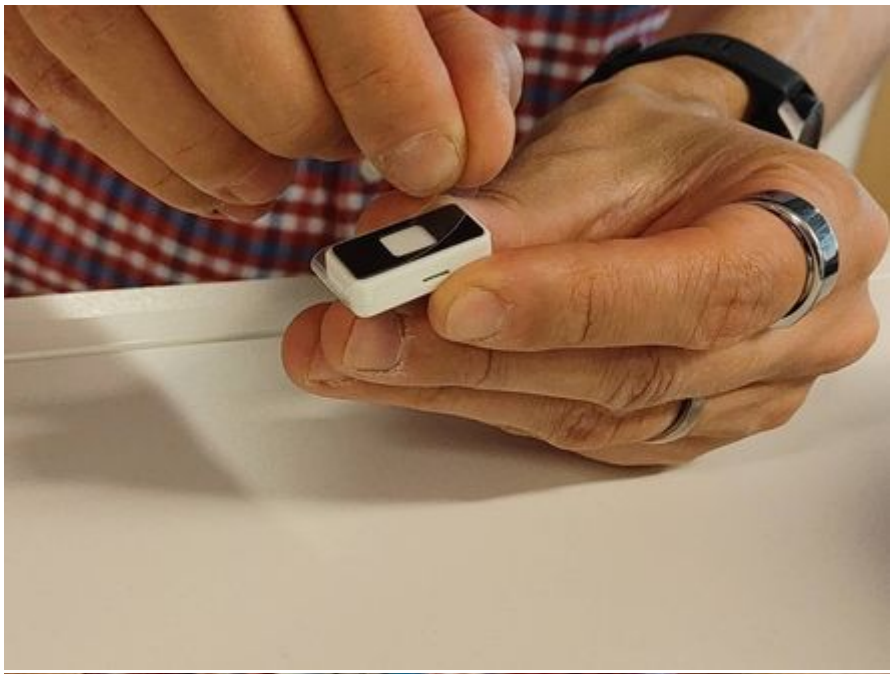
INSTALLATION AND COMMISSIONING GUIDELINES

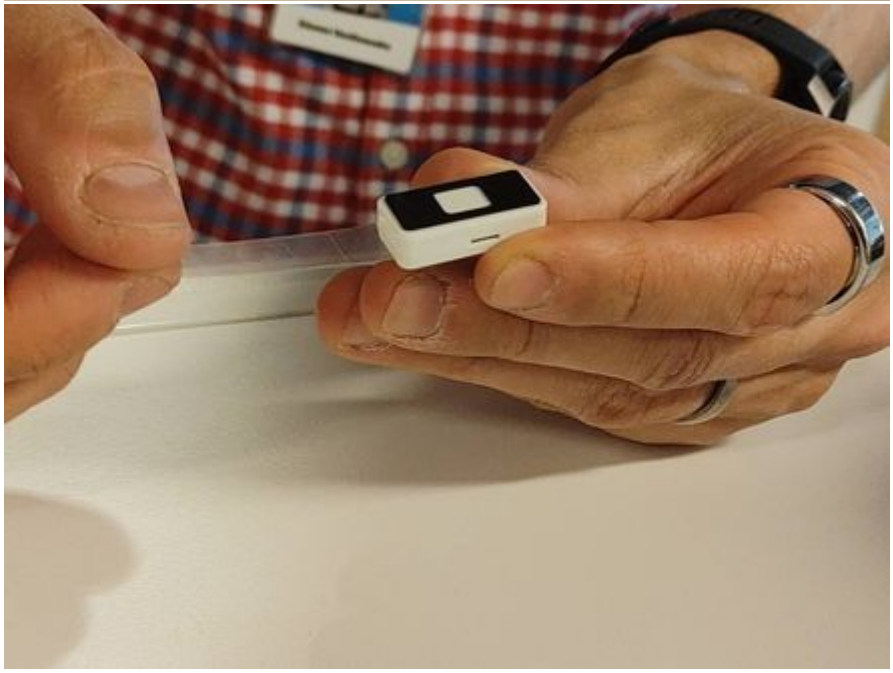
TTG is delivered as batteries pre-installed in place. The device has two CR1025 lithium batteries, recommended manufacturer is Renata.

Before installation of the device, make sure that the needed infrastructure (gateways, routers and mini beacons) is installed correctly for asset tracking.

TTG has a plastic slip serving two purposes. It protects the two sided tape used for attachment and disconnects the batteries from the electronics when the device is not yet taken into use.

The surface for attachment needs to be flat and clean, IPA solvent (isopropyl alcohol) should be used for cleaning the surface. Pull the slip from covering the two sided attachment tape first.

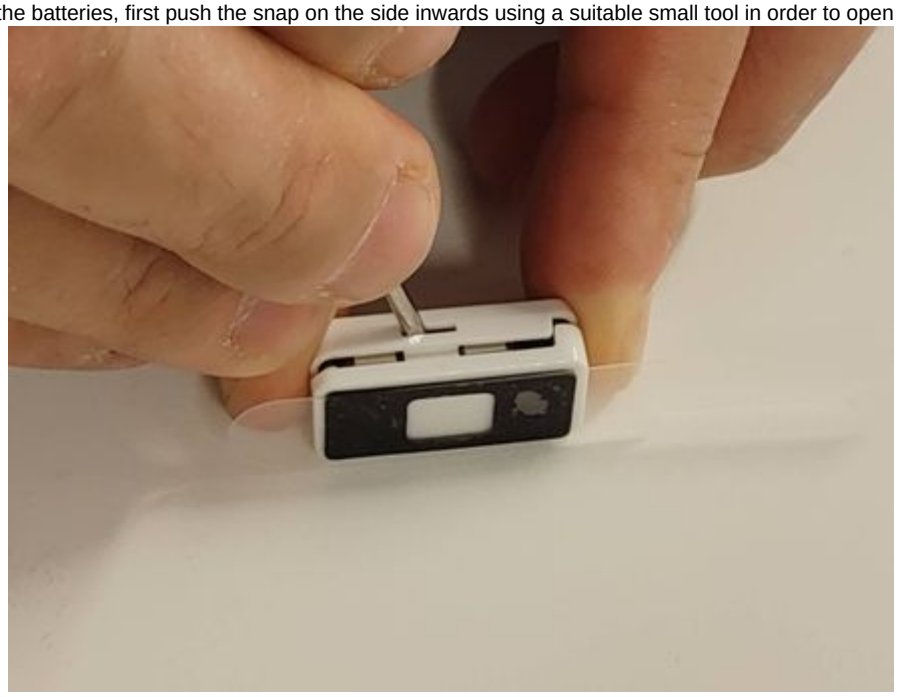




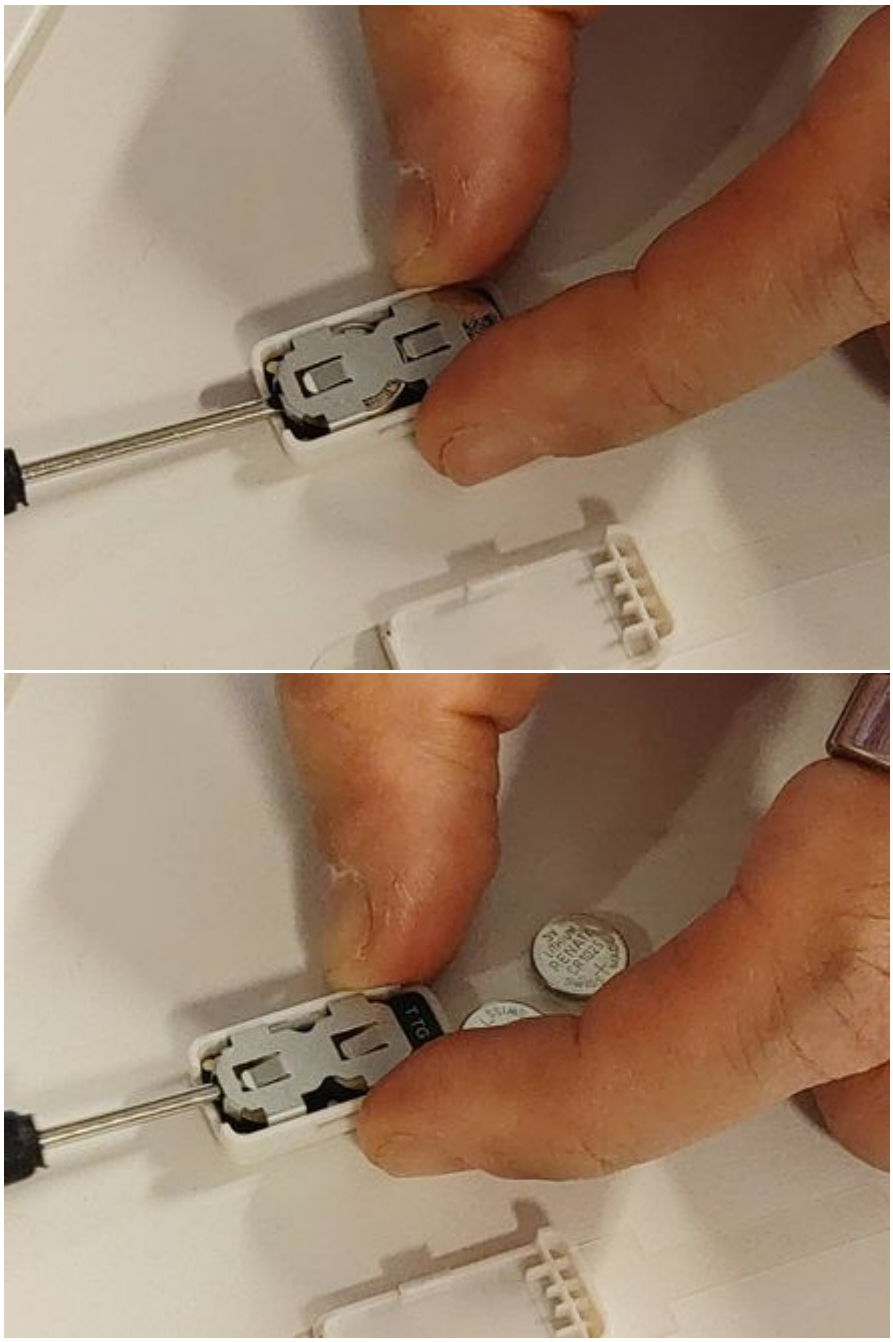
When placing the device in the desired position, press the device for 5 seconds to make sure that the tape is correctly attached on the surface.

Pull away the plastic slip from the device and it powers on and connects automatically to the surrounding asset tracking infrastructure.

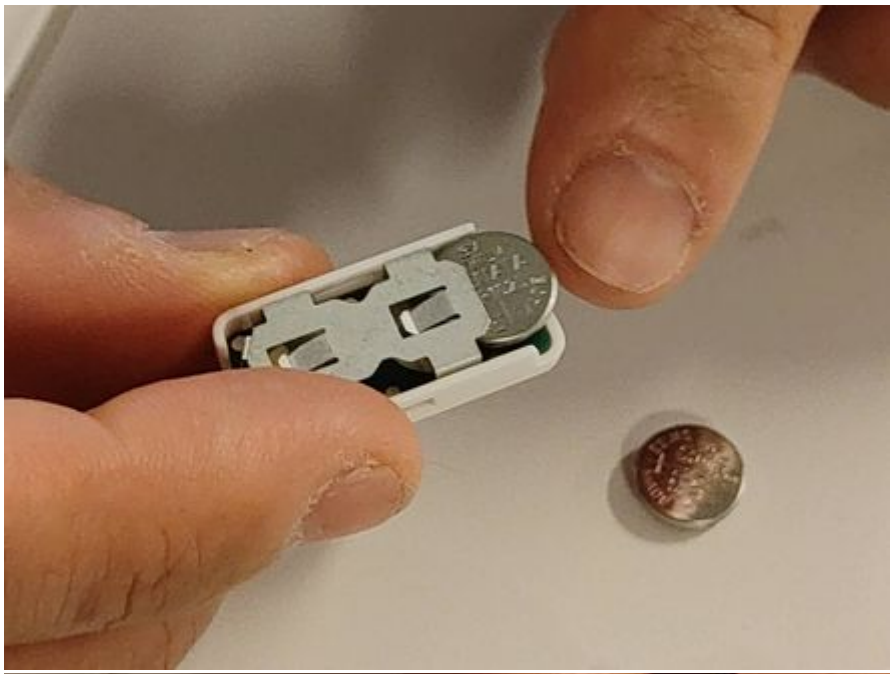
If you need to change the batteries, first push the snap on the side inwards using a suitable small tool in order to open the device.

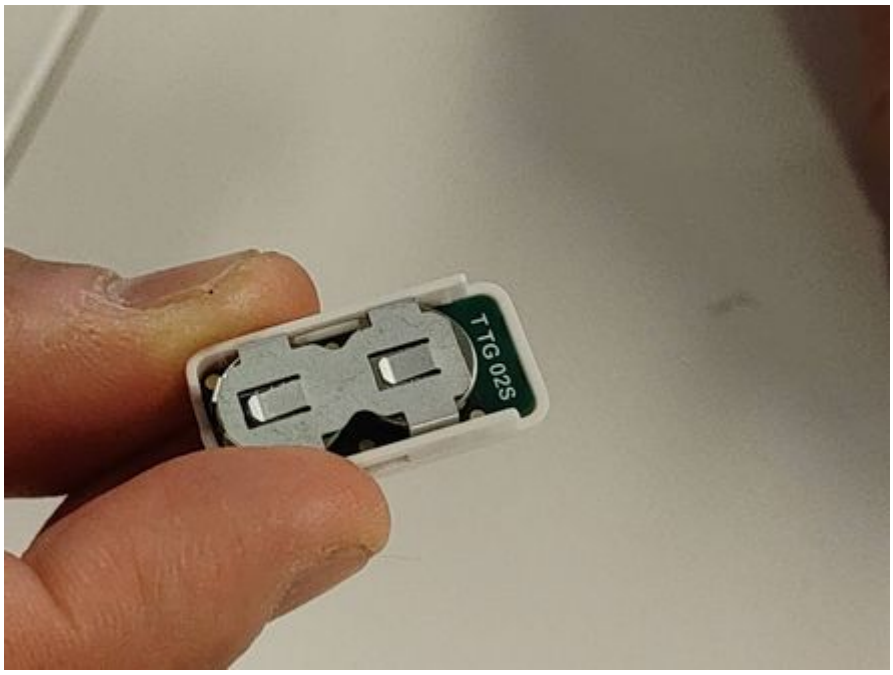


Push the batteries out from the device end having a smaller opening in the cover.

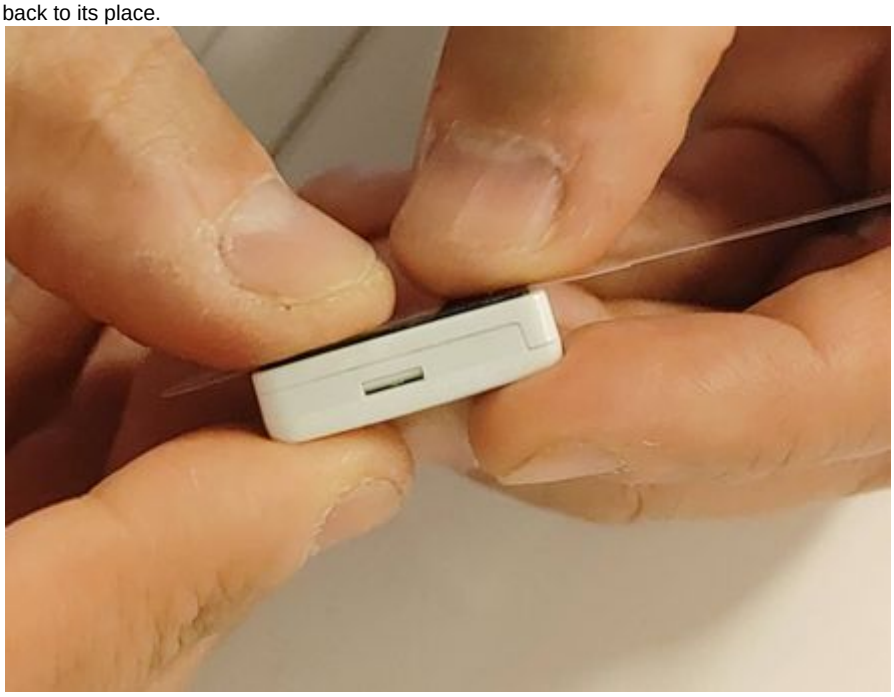


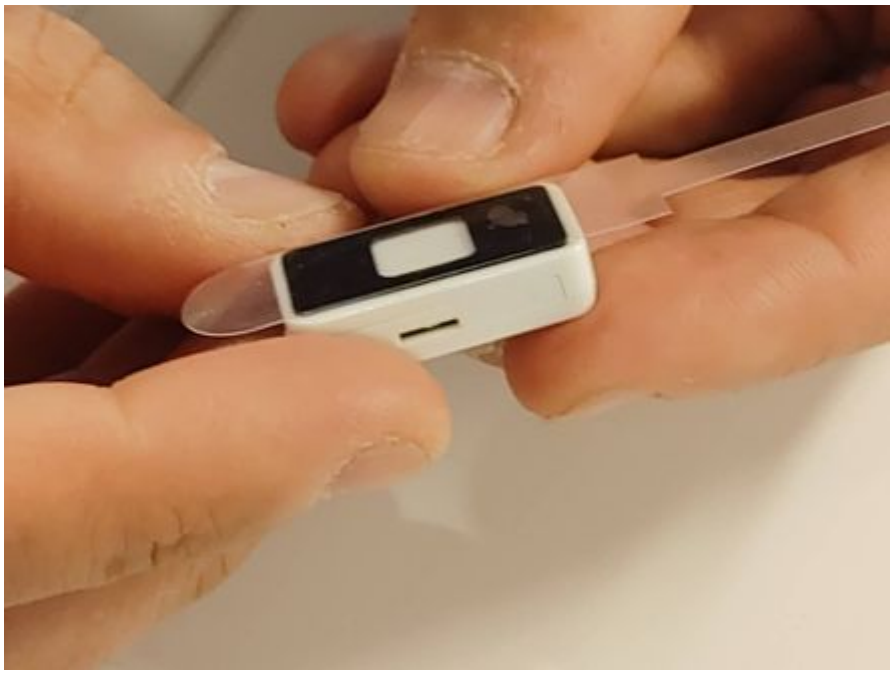
Push the new batteries in from the end having a larger opening in the cover.





Snap the bottom cover back to its place.





PRECAUTIONS

This equipment is not suitable for use in locations where children are likely to be present.

- TTG is intended for indoor use only and shall not be exposed to rain. The operating temperature range for the device is -20…+50 °C.
- Remove the batteries from the TTG device if you are taking it inside an aeroplane (unless you have the pre-installed pull-out tape still in place). The device has a Bluetooth LE receiver/transmitter which must not be operational during a flight.
- Please take care that the used batteries are recycled by taking them to appropriate collection point.
- When changing batteries, replace both of them at the same time using identical brand and type.
- Do not swallow batteries.
- Do not throw batteries into water or fire.
- Do not short-circuit batteries.
- Do not try to charge primary batteries.
- Do not open or disassemble batteries.
- Batteries should be stored in a dry place and at room temperature. Avoid large temperature changes and direct sunlight. At higher temperature the electrical performance of the batteries may be reduced.
- Keep batteries away from children.
- Risk of explosion if the battery is replaced with an incorrect type of battery
- Disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery can cause in an explosion.
- Leaving a battery in an extremely high temperature surrounding environment can cause an explosion or the leakage of flammable liquid or gas.
- A battery subjected to extremely low air pressure can cause an explosion or the leakage of flammable liquid or gas.

LEGAL NOTICES

Hereby, Haltian Oy declares that the radio equipment type TTG is in compliance with Directive 2014/53/EU.

Haltian Oy vakuuttaa, että radiolaitetyyppi TTG on direktiivin 2014/53/EU mukainen.

TTG operates at Bluetooth® 2.4 GHz frequency band. Maximum radio-frequency power transmitted is 0 dBm.

Manufacturer name and address:

Haltian Oy

Yrttipellontie 1 D

90230 Oulu

Finland

RECYCLING

Check the local regulations for proper disposal of electronic products. The Directive on Waste Electrical and Electronic Equipment (WEEE), which entered into force as European law on 13th February 2003, resulted in a major change in the treatment of electrical equipment at end-of-life. The purpose of this Directive is, as a first priority, the prevention of WEEE, and in addition, to promote the reuse, recycling and other forms of recovery of such wastes so as to reduce disposal.

The crossed-out wheelie-bin symbol on your product, battery, literature, or packaging reminds you that all electrical and electronic products and batteries must be taken to separate collection at the end of their working life. Do not dispose of these products as unsorted municipal waste: take them for recycling. For info on your nearest recycling point, check with your local waste authority.

FCC REQUIREMENTS FOR OPERATION IN THE UNITED STATES

FCC Information for the User

This product does not contain any user serviceable components and is to be used with approved, internal antennas only. Any product changes of modifications will invalidate all applicable regulatory certifications and approvals.

FCC Guidelines for human Exposure

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Federal Communications Commission Statement

This device complies with Part 15 Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

FCC Radio Frequency Interference Warnings & Instructions

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to

radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following methods:

- Increase the separation between the equipment and the receiver.
- Connect the equipment into an electrical outlet on a circuit different from that which the radio receiver is connected
- Consult the dealer or and experienced radio/TV technician for help

FCC Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
1. this device must accept any interference received, including interference that may cause undesired operation.

Industry Canada:

This device complies with RSS-247 of the Industry Canada Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Ce dispositif est conforme à la nor me RSS-247 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable

Radiation Exposure Statement :

This device complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body.

NOTE IMPORTANTE: Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec une distance minimale de 20 cm entre le radiateur et votre corps.

FCC ID: 2AEU3TSNANO

IC ID: 20236-TSNANO