Tracking and Tracing 3D Printed Prototypes with RFID

The Customer's Challenge:

Track, trace, and organize 3D prototypes throughout the design and development stage

Stakeholders:

Product development groups, logistics & inventory control, material control, quality engineering, purchasing, product management, production team, etc.

Customer Challenges:

- Similar-looking 3D prototypes causing confusion and product mixups
- Difficulty tracking when, who, and how the 3D prototype was made
- Importance of knowing which design file was used in order to replicate the same design during production
- Replacing existing visual method (typically scribbles on sticky labels), which are often impractical, unreliable, and confusing

The Murata Solution:

The Product:

LXMS33 Series
Ultra small HF RFID Tag – MAGICSTRAP®
Fully compliant with ISO standards

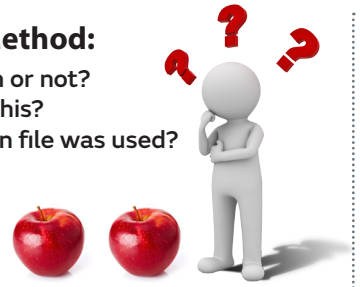
How It Works:

- Insert/attach MAGICSTRAP® into 3D prototypes.
- Each prototype now has a unique identifier as well as available memory to store additional user data.
- Able to store prototype data (revision numbers, design file name, time stamps, etc.) on the RFID tag or in an online database.
- 896 bits read/writable user memory
- Utilize RFID reader to retrieve data from each device and identify when, how, and by whom the 3D prototype was made.

Comparison:

Current Method:

Same design or not?
Who made this?
Which design file was used?



RFID Method:

ID: 11111
3/18/2014
Ken
Apple1.stl

ID: 22222
3/20/2014
Jim
Apple2.stl

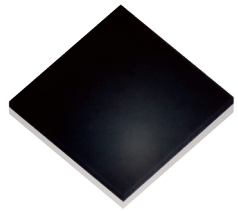
More info:

For further information about RFID solutions, please contact your local sales manager.

Data sheets and application notes for Murata Electronics products can be found at:

www.murataamericas.com

MAGICSTRAP®



LXMS33HCNG-134
LXMS33HCNK-167

To see more RFID solutions, visit www.murataamericas.com/rfid

Benefits of RFID:

- Each 3D prototype can be uniquely identified.
- Additional data can be written to the RFID tag, e.g., design file name, dates, test status, personnel, QC records, etc.
- Data can be password protected or permanently locked for increased security.
- RFID tag can also be read through non-metal enclosure.

- MAGICSTRAP® is permanently inserted/attached into 3D prototypes
- Secure and simple
- Readability – non-line-of-sight
- Ultra-small tag size (3.2 x 3.2mm)
- Large memory to store customer data