

Description & Offer

Historic

For many years, the University of Liege has been involved in microelectronics and microsystems (also called smart sensors) modelling, design and integration. Recently, the University of Liege has received the opportunity to build a brand new laboratory (clean rooms – ISO 7) with specific equipments for packaging implementation and characterization. This laboratory's name is MICROSYS.

Description

TAIPRO Engineering is a start-up of the MICROSYS laboratory of the University of Liege. TAIPRO Engineering's target market is the tailored microsystems (smart sensors). Its goal is to give a high level support to identify and respond to needs of industrialists.

TAIPRO Engineering focuses its activities on innovative assembly (packaging) of existing sensors and microelectronic COTS (Components Off The Shelf) to perform customized solutions with new functionalities for industrial applications. TAIPRO Engineering offers high technology services in and around the fields of microelectronics, microsystems and packaging.

Therefore, TAIPRO Engineering's core business is to design **TAI**lored microsystems improving industrial **PRO**ducts or **PRO**cesses. This is the reason why it's called "TAIPRO Engineering".

Offer

TAIPRO Engineering's offer can be summarized in three main strategic axes:

- Full development project based on a functional and/or technical specification [a priori for industrial companies having no or few specific knowledge in the field of (micro)electronics]: feasibility studies – Proof of concept / prototype / demonstrator – very small production series (20 – 100 pieces);
- Packaging consultancy and pre-production series for front-end and back-end sectors which need specific support before manufacturing: feasibility studies, support for packaging choices (wire bonds, die attach, solder paste, substrate, package...), demonstration and characterization, very small production series (20 – 100 pieces);
- Training on specific packaging and testing equipment of the MICROSYS laboratory.

In a near future, TAIPRO Engineering's offer will be extended to "larger series" of microsystems or specific packages (~5,000 to 10,000 pieces/year).

To develop its activities, TAIPRO Engineering has an access to MICROSYS' facilities¹ which include 12 specific equipments dedicated to versatile packaging operations (manual equipment with programmable parameters) located in a 200 m² certified clean room (ISO 7 – class 10000).

With these equipments, TAIPRO Engineering is able to assemble, interconnect, encapsulate and characterize a wide range of microsystems.

Capabilities of the facility:

- wafer scribing (till 6"),
- plasma cleaning,
- pick and place (die attach, SMD and bare die pick & place, flip chip),
- ultrasonic wire bonding,
- tests (wire pull test, ball & die shear test, leak detector, electrical measurements),
- microsystems protection (potting, globe top, dam and fill, hermetic seam sealing),
- PCB gold plating,
- PCB machining,
- package decapsulation.

Conclusion

TAIPRO Engineering can design and build your **TAI**lored microsystems demonstrators or prototypes to improve your **PRO**duct or **PRO**cess. TAIPRO Engineering also can help and guide industrialists through microsystems' production.

TAIPRO Engineering is your partner for innovation.

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¹ These facilities have been created by the University of Liege with the financial support (around 1300 k€) from the FEDER and the Walloon Region).