French deep tech start-up designing and manufacturing innovative electronic switches relying on the Radio Frequency MEMS (Micro Electro Mechanical Switch) disruptive technology searches industrial partners

Summary

Profile type	Company's country	POD reference
Technology offer	**France**	**TOFR20250423009**
Profile status	**Type of partnership**	**Targeted countries**
PUBLISHED	**Commercial agreement with technical assistance**	**• World**
Contact Person	**Term of validity**	**Last update**
Enrico FRANZIN	**23 Apr 2025** **23 Apr 2026**	**23 Apr 2025**

General Information

Short summary

The French start-up offers breakthrough electronic switching solutions with its cutting-edge RF (Radio Frequency) MEMS technology shrinking size, reducing power consumption and improving the electrical performances of circuits. The company is looking for industrial partners in the defence, aerospace and instrumentation sectors under commercial agreement with technical assistance for a long-term cooperation.

Full description

The firm was created by two Doctors and a Professor of the laboratory in 2012. Its R&D entailed very important technological advances which were dedicated to radio frequencies.

The SME has developed this RF MEMS technology after 11 years of R&D in a French laboratory in cooperation with the main French public and private partners above all in the defence and aerospace sectors.

RF MEMS are components that are eagerly awaited by the market and represent a breakthrough technology compared with their competitors performing the same function. Backed by 4 patents, combined with know-how

developed with the French laboratory, the company offers reliable RF MEMS components in very wide frequency bands (DC-40GHz) with several billion cycles, to meet customer demand.

The firm can manufacture and provide custom circuits (Switch matrix, Phase shifter, tunable filters, Impedance matching networks…) embedding its micro-relay technology. This service relies on a strong experience in MEMS switch manufacturing. It includes: an optimized manufacturing process ready to support partner's designs and goals, an access to the firm cutting-edge switch technology supplying best in class performances from DC to 65 GHz, an access to the hermetic wafer level packaging developed to ensure the reproducibility and robustness of the MEMS membrane during operation and a back-end service for an integration of the circuit in a standard package or a bumping service for flipchip bonding.

The firm is now willing to sell worldwide its technology finding industrial partners in the following applications sectors: defence, aerospace, instrument testing sectors in particular.

Advantages and innovations

RF MEMS represent a disruptive technology compared with semiconductor components that perform the same function, because they guarantee:

- a very good figure of merit
- virtually zero power consumption
- excellent linearity
- miniaturisation of circuits
- good power handling

Technical specification or expertise sought

Technical specifications are:

- Low insertion loss DC-40 GHz SPDT switch
- True DC, ultra-wideband (0 to 40 GHz)
- Low Insertion loss, (< 1.26 dB @40 GHz)
- High linearity (IP3 > 60 dBm)
- High isolation (> 32 dB @ 40 GHz)
- Video feedthrough (< 1 mVpp)
- Low Power Consumption (< 1 µW)
- Compact Flipchip solution (1.6 x 2.1 mm²)
- Reliable (> 1 billion cycles)

Stage of development

Already on the market

Sustainable Development goals

- **Goal 12: Responsible Consumption and Production**
- **Goal 17: Partnerships to achieve the Goal**
- **Goal 9: Industry, Innovation and Infrastructure**

IPR Status

IPR granted

IPR Notes

Partner Sought

Expected role of the partner

Partner collaboration:

The start-up searches industrial partners like manufacturers or subcontractors in the defence and aerospace fields who will be ready to co-develop specifical final component using the RF MEMS technology.

The partners sought could also be sales agents or distributors well introduced in:
-Defence and aerospace
-Semi conductor testing
-Switch matrix, RF testing

Type of partnership

Commercial agreement with technical assistance

Type and size of the partner

- **SME 50 - 249**
- **Big company**
- **University**
- **R&D Institution**
- **SME 11-49**
- **Other**

Dissemination

Technology keywords

- **01002007 - Nanotechnologies related to electronics & microelectronics**
- **01002001 - Micro and Nanotechnology related to Electronics and Microelectronics**
- **02011001 - Aeronautical technology / Avionics**
- **01002004 - Embedded Systems and Real Time Systems**
- **01002010 - Printed circuits and integrated circuits**

Market keywords

- **03004003 - Other electronics related equipment**
- **03001009 - Other electronics related (including keyboards)**
- **06009 - Energy Distribution**

Targeted countries

- **World**

Sector groups involved

- **Energy-Intensive Industries - Materials**
- **Aerospace and Defence**
- **Electronics**
- **Energy-Intensive Industries**

Media

Images

MEMS RF