



## CONTROLLED ACCESS & SECURITY MANAGEMENT

Technopuce applies its active intelligent tag technology to smart card applications in the area of controlled access and security management.

Each card is programmed to create a unique identity profile, and operates on both transponder technology for short read ranges (up to 10 centimeters), and RF technology for longer read ranges (up to 150 meters). ACTI-TAG™ makes it easy to analyse data related to traffic flow and user mobility, and can be fitted with an alarm button for emergency and security intervention measures.

As with all of Technopuce's products, these smart cards integrate *Battery on Flex™* technology for optimum response performance during periods of peak current requirements.

### Typical applications include the following:

- Public transport systems
- Parking areas
- Secure or hazardous locations
- Schools
- Marinas
- Warehouses
- Factories



Active intelligent smart cards and tags are also perfect for use in controlled area, amusement parks, sports stadiums, ski resorts, concert halls, and any other venue catering to the entertainment and professional recreational industries.

### **ACTI-TAG™, the remote electronic ticketing solution for public transport operators.**

Passengers have become the focus of public transport operators. This means providing courteous passenger service, increased comfort and safety, and offering customized services.

The Calypso electronic ticketing standards are at the forefront of customer-focused public transport applications. Within the framework of the international Calypso electronic ticketing standards project, Technopuce is currently developing several projects in close collaboration with the metropolitan public transport authorities of Paris, France, the R.A.T.P.

One of the initial testing phases has demonstrated the effectiveness of active RF technology when applied to contactless access control, in perfect harmony with the Calypso card. ACTI-TAG™ has proven itself to be a valuable complement to passive cards used for access control and electronic ticketing, particularly in such applications as emitting emergency signals in case of danger, and in establishing and monitoring passenger-related statistics.

## Specifications

<b>Tag size</b>	<i>Length</i>	85.6 mm (3.37 ")
	<i>Width</i>	54 mm (2.12 ")
<b>Tag thickness</b>	<i>Oscillator area (approx. 2 mm<sup>2</sup>)</i>	1.4 mm (47 mils)
	<i>Everywhere else</i>	0.8 mm (32 mils)
<b>Identification</b>	<i>Unique identification number – read/write memory – temporised transmission – compatible with contactless standards</i>	
<b>Operating frequencies</b>	<i>Transponder</i>	13.56 MHz
	<i>RF Transmitter</i>	868 MHz FSK
<b>Standards</b>	<i>ETS 300 220 – ISO/IEC 14443-B Smartcard IC from STMicroelectronics</i>	
<b>Compatibility</b>	<i>Calypso standard in public transport</i>	
<b>Communication range</b>	<i>Transponder</i>	<i>Up to 10 cm (or 0.3 feet)</i>
	<i>RF Transmitter</i>	<i>Up to 150 m (or 450 feet)</i>
<b>Operating temperature</b>	<i>-20 °C to +80 °C</i>	
<b>Storage temperature</b>	<i>-40 °C to +100 °C</i>	
<b>Substrate material</b>	<i>PVC</i>	
<b>Battery</b>	<i>Lithium/Manganese oxide, 3.6 volts</i>	
<b>Operating lifetime</b>	<i>1 to 5 years (depending on the frequency of use)</i>	

### **Battery on Flex™ technology**

Technopuce has patented a distinctly innovative process that integrates a thin, flexible 3.6V lithium/manganese oxide primary battery into the ACTI-TAG™ radio frequency circuitry. This lithium power source offers distinct advantages over other battery systems, the most significant of which are low self-discharge, high reliability, and high energy density. This unique *Battery on Flex™* technology ensures the best tuning balance between microelectronics and electrochemistry, and gives ACTI-TAG™ optimum response performance during periods of peak current requirements.

*Technopuce develops a wide range of applications: remote keyless entry, controlled access and security management, temperature monitoring, asset tracking and authentication management.*

*For further information, please contact our Sales & Application Department [contact@technopuce.com](mailto:contact@technopuce.com) or visit our Web site: <http://www.technopuce.com>.*

Photo non-contractual.

These specifications are preliminary and can be customized according to customer requirements. Technopuce reserves the right to change this data without prior notice.

ACTI-TAG™ is a trademark of Technopuce s.a.