# USER MANUAL

# PURETAG v1.5

# Model: PRF-PURET15

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| Document version | 1.0 |
| Product | PURETAG v1.5 |
| Date | AUGUST 2014 |

## Document version management

| Date | Version | Comments | Author |
|---|---|---|---|
| **20.8.2014** | 1.0 | Initial version | Ehud Bachman |
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# Table of Contents

# 1  Introduction

## 1.1  About this Guide

This User Guide contains important information for users of the PRF-PURET15 product and all of its series.

This guide introduces the PRF-PURET15 and provides instructions on how to install, configure, operate, and troubleshoot the device. Each section has both written and graphically explanations to provide the technical information necessary to be successful at using, installing, and configuring the PRF-PURET15 device.

## 1.2  Important Information

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## 1.3 Safety Precautions

!

**The equipment contains communication devices. Any changes or modifications made to the equipment without the written consent of SuperCom Inc. or SuperCom Ltd., or Vuance Ltd., and its resellers or distributors, can nullify the user's authority to operate this equipment.**
**The user assumes all risks associated with the use and handling of the equipment, and specifically acknowledges that SuperCom Inc. & SuperCom Ltd. & Vuance Ltd., and its resellers or distributors, will not be liable for any damages of any kind, including personal injury or property damages resulting from use of the equipment.**

!

**Carefully read the safety information contained in this section, and throughout this user guide, before installing, operating, or performing any maintenance task on the equipment.**

!

**Operations not performed as per the instructions in this user guide are done at the user's own risk and liability.**

!

**Only trained, authorized personnel should install, maintain and repair the equipment.**

!

*Once you have thoroughly reviewed this user guide, if you have any questions, please contact your reseller.*

## 1.4 FCC Warnings

### The FCC Wants You to Know

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 generates, 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 measures:

  a) Reorient or relocate the receiving antenna.

  b)  Increase the separation between the equipment and receiver.

  c)  Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.

  d) Consult the dealer or an experienced radio/TV technician.

### FCC Warning

Modifications not expressly approved by the manufacturer could void the user authority to operate the equipment under FCC Rules.

THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE 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
  (2)    This device must accept any interference received, including interference that may cause undesired operation.

# 2  Technical Specifications

## 2.1  Interfaces and MMIs

### 2.1.1  RF

1 x RF 433MHz ASK\FSK Transmitter module

2 x LF 125KHz OOK Receiver module

### 2.1.2  Tampers & Sensors

Case tamper

Motion sensor

Strap tamper (Optional)

### 2.1.3  MMI

Indication LED

## 2.2  Power

Internal battery 3v

## 2.3  Operational temperature

-20°C to +60°C

# 3  Abstract

The PureTag is part of Supercom electronic monitoring solution.

The PureTag1.5 is a 4 layer PCB card. It communicates by air channels via LF and RF. Both channels are independent and based on simplex topology.

The RF channel (at 433.92 MHz) set to communicate with the RFID reader by simplex transmitting.
The second channel (at 125 KHz) set to receives data (see figure 1.3.1).
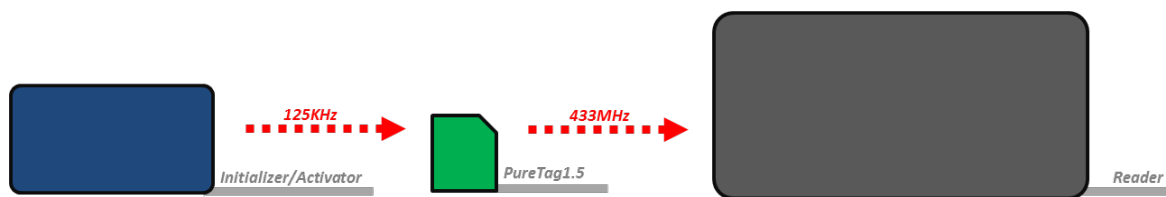
# 4  Operational description

This model currently has two sub-models (P/Ns):

## 4.1  P/N: PRF-PURET15EM

PRF-PURET15EM is targeted for the EM market (Electronic Monitoring) to be used to track and monitor offenders while in house arrest.

The unit comes in a sophisticated ankle enclosure to prevent the offender to take it off easily.

The unit immediately alerts when the offender trying to remove or sabotage the unit.

The unit alerts whenever the offender tries to leave his premises when not allowed.

The unit shall be sold to governments and police departments around the world, along with detailed installation instructions depended on their specific requirements and needs.

The PureTag bracelet is worn by inmates and utilizes the latest advancements in RF technology.  PureTag is optimized for precise indoor location verification and pairs with the PureTrack unit when GPS tracking is required.  PureTag is rugged, easy to install and ergonomically designed for comfort. The bracelet is designed to detect and immediately report any tamper attempts.  PureTime works with a permanently installed PureCom sensor network to generate real-time information on group counts, traffic flow, population segmentation and area restrictions enforcement.  Easily upload your facility diagrams to the PureMoniter software suite for custom mapping overlays.

- No charging required
- Waterproof
- Lighweight
- Immediately reports tamper attempts
- Accommodates facility and external tracking requirements

## 4.2  P/N: PRF-PURET15AT

PRF-PURET15AT is targeted for asset management system, to be used to track and monitor inventory/asset.

The unit comes in mini round enclosure to be smaller as possible to be less noticeable.

The unit alerts when it's taken off from an item that being monitored.

The unit can be used in access control and asset management systems. It is supplied with detailed installation instructions depended on the specific requirements and needs of the distributor/buyer.

The unit may come with slightly different designs since it can be used with a logo sticker / logo engraved or simply without a logo.

Example with a sticker logo:

# 5 References

## 5.1 Acronyms and Abbreviations

| | |
|---|---|
| API | – Application Programmer Interface |
| ADC | – Analog to Digital Conversion |
| RF | – Radio Frequency |
| CPU | – Central processing unit |
| CAD | – Computer Aided Design |
| CISC | –Complex Instruction Set Computing |
| DAC | –Digital to Analog Convertor |
| ETSI | –European Telecommunications Standards Institute |
| FCC | –Federal Communications Commission |
| GUI | – Graphical User Interface |
| I/O | –Input/output |
| IRQ | –Interrupt Request |
| ISO | –International Organization for Standardization |
| Kbps | –kilobit per second |
| LED | –Light Emitting Diode |
| MCU | – Micro Controller unit |
| MMI | – man machine interface |
| RAM | –Random Access Memory |
| ROM | –Read Only Memory |

# 6 Appendix A:

**Model Name:**            PRF-PURET15

**P/Ns types:**          PRF-PURET15EM

                       PRF-PURET15AT

The tables below describe the sensor combination that can be for any PRF-PURET15,
For PRF-PURET15XX series:

| FCC ID: W5P-PRF-PURET15 | | PureTag v1.5 |
|---|---|---|
| Strap tamper ☑ | Strap tamper ☐ | |
| Case tamper ☑ | Case tamper ☑ | |
| Motion sen. ☑ | Motion sen. ☑ | Model: PRF-PURET15 |
| EM enc. ☑ | EM enc. ☐ | |
| Asset enc. ☐ | Asset enc. ☑ | |
| Vehicle enc. ☐ | Vehicle enc. ☐ | |
| **PRF-PURET15EM** | **PRF-PURET15AT** | SuperCom PN |
| EM (full) | Asset Tag | |