USER MANUAL

PURETAG v2.0

Model: PRF-PURET20

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Document version	1.0
Product	PRF-PURET20
Date	DECEMBER 2014

Document version management

Date	Version	Comments	Author
24.12.2014	1.0	Initial version	Ehud Bachman

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1 Introduction

1.1 About this Guide

This User Guide contains important information for users of the PRF-PURET20 product and all of its models.
This guide introduces the PRF-PURET20 and provides instructions on how to install, configure, operate, and troubleshoot the device. Each section has both written and graphic explanations to provide the technical information necessary for using, installing, and configuring the PRF-PURET20 device.

1.2 Acronyms and Abbreviations

API	– Application Programmer Interface
ADC	– Analog to Digital Conversion
RF	– Radio Frequency
BLE	- Bluetooth Low Energy
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	–kilobits per second
LED	–Light Emitting Diode
MCU	– Micro Controller unit
MMI	– man machine interface
RAM	–Random Access Memory
ROM	–Read Only Memory

1.3 Important Information

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1.4 Safety Precautions

!

The equipment contains communication devices. Any changes or modifications made to the equipment without the written consent of SuperCom Inc., SuperCom Ltd., or Vuance Ltd., 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.

!

Read carefully 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.

1.5 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's 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 BLE 2.4 GHz ASK\FSK Transmitter module

1 x LF 125KHz OOK Receiver module

2.1.2 Tamper Resistance & Sensors

Case tamper resistant

Motion sensor

Tamper resistant strap (Optional)

2.1.3 MMI

Indication LED

2.2 Power

Internal battery 3v

2.3 Operational Temperature

-20°C to +60°C

3 Abstract

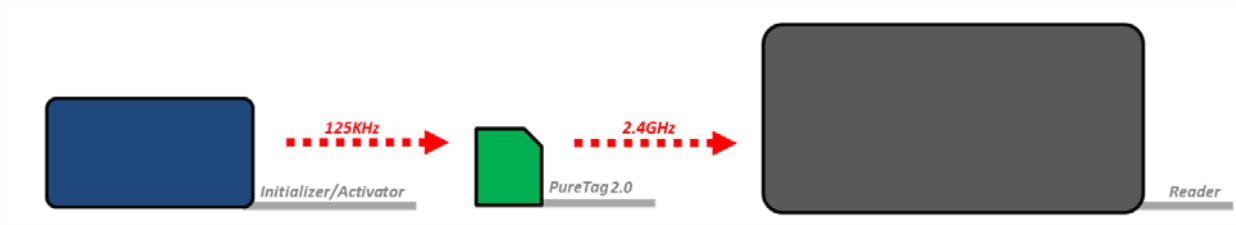
The PRF-PURET20 is part of SuperCom electronic monitoring solution.

The PRF-PURET20 is a 4 layer PCB card. It communicates by over-the-air-channels via LF and RF. Both channels are independent of one another and based on simplex topology.

The RF BLE channel (at 2.4 GHz) is set to communicate with the BLE reader by simplex transmitting.
The second channel (at 125 KHz) is set to receive data (see

Figure 1).

Figure 1 Antenna Wavelength



4 Operational Description

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

- PRF-PURET20EM
- PRF-PURET20AT

4.1 P/N: PRF-PURET20EM

PRF-PURET20EM is geared for the EM market (Electronic Monitoring) to be used for tracking and monitoring defendants or offenders who are under house arrest.

The unit comes in a sophisticated ankle unit to prevent a defendant or offender from easily removing it.

The unit immediately sends an alert when a defendant or offender tries to remove or sabotage the unit.

The unit sends an alert whenever a defendant or offender tries to leave the premises when not allowed.

The unit is sold to governments and police departments around the world, along with detailed installation instructions, tailored to their specific requirements and needs.

The PureTag bracelet is worn by defendants and inmates and utilizes the latest advances in Bluetooth Low Energy technology. PureTag is optimized for precise indoor location verification in conjunction 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 tampering attempts. It works with a permanently installed PureCom base unit or a PureTrack device to generate real-time information about group counts, traffic flow, population segmentation and area restriction enforcement. Facility diagrams can be easily uploaded to the PureMonitor software suite for custom mapping overlays.

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

4.2 P/N: PRF-PURET20AT

PRF-PURET20AT is a device geared for asset management systems to track and monitor inventory or assets.

The unit comes in a mini, round case to be as small and as least noticeable as possible.
The unit sends an alert when it's taken off from an item that is being monitored.
The unit shall be used in access control and asset management systems. Detailed installation instructions are provided that depend 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, have a logo engraved on it, or simply without a logo.

An example photo of a PRF-PURET20AT device with a sticker logo:

5 Appendix A:

Model Name: PRF-PURET20

P/Ns types: PRF-PURET20EM
PRF-PURET20AT

The tables below describe the sensor combination that can be used with any PRF-PURET20,
For PRF-PURET20XX series:

FCC ID: W5P-PRF-PURET20 Pure Tag v2.0

Strap Tamper resistant ☑	Strap Tamper resistant ☐	
Case Tamper resistant ☑	Case Tamper resistant ☑	
Motion sensitive ☑	Motion sensitive ☑	Model: PRF-PURET20
EM enc. ☑	EM enc. ☐	
Asset enc. ☐	Asset enc. ☑	
Vehicle enc. ☐	Vehicle enc. ☐	
PRF-PURET20EM	PRF-PURET20AT	SuperCom PN
EM	Asset Tag	