TIME DOMAIN
THE PULSE OF THE FUTURE

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ITEM: **PulsON 350 UWB Active RFID System**

Technical Description

The PulsON P350 is an active RFID system based on ultra wideband technology. It's primary use is for the location and identification of people or objects which are equipped with a small RF tag.

Technical Rationale

The PulsON 350 (P350) is based on similar ultra wideband (UWB) technology, and has similar functionality, to the PulsON 210 RD which has already been granted an ECCN of EAR99 granted on CCATS G040004. The P350 has reduced functionality when compared to the P210 RD, being designed to operate exclusively as an active RFID system with a real time location (RTLS) capability. In order to reduce costs sufficiently for volume deployment, the P350 also uses a simpler form of UWB than the P210, resulting in slightly reduced performance.

The P350 system is comprised of the following components:

Tag: The tag is a small, transmit-only device which emits data packets at a constant (pre-programmed) rate. The data packets include a tag identification code, status information, and time of arrival measurement waveforms.

Reader: The reader is a receiver which is permanently mounted in the area of coverage. The reader reads and decodes the data packet from the tag, and also ascertains the time of arrival of the packet at the receiver.

Synchronization Distribution Panel: The synchronization distribution panel (SDP) distributes a timing signal to multiple receivers in order that the times of arrival measured by each have a common time base. The SDP additionally powers the receivers over Ethernet cable, and passes the decoded data and measured times of arrival to other Ethernet devices.

The P350 system is delivered with documentation describing the use and installation of the system. It is also delivered with a software interface specification allowing a developer to interface software that computes the location of the tags (from the measured times of arrival). Additionally, a simple position solver is included as a dynamic link library (DLL) along with a software executable that plots the location of the tags in real time on a computer display, and displays certain diagnostic information useful for installation and testing.

Technical Documentation/Specifications

Origin Declaration

The P350 system has been developed entirely with private capital, and contains no military parts. It has not yet been sold. Its purpose is the location and identification of tags which are attached either to people or to objects.

1. *Proved a block diagram, short description, technical specifications, and potential use of this item.*

Potential uses include:

- Tracking patients, caregivers and equipment in a healthcare facility
- Locating inventory in a warehouse
- Tracking goods in a manufacturing process
- Tracking retail items in a retail facility
- Tracking personnel in dangerous environments, e.g. a petrochemical facility

In general the uses of this product include tracking people or objects for the purpose of improving business process efficiency, for improving the security of a facility, or for improving the safety of personnel.

2. *Has this item been exported before, if yes, please provide a Z or D number?* ***No***

3. *Provide sales history in percentage, commercial vs. military.* ***No sales yet.***

4. *Is there any encryption on the system?* ***No.***