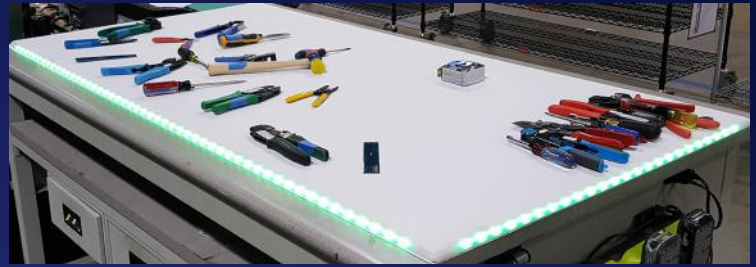


Surface Trak - Smart RFID Table Surfaces



Intelligent RFID Tracking in an Integrated RFID Surface

The RFID Surface solution from Venture Research provides the state of the art in tracking solutions where there is a need for a low profile RFID reading surface that can cover large surface areas in an industrial setting. Suitable for tool management, packaging and shipping stations, receiving stations, mobile shelf carts and anywhere that an integrated large surface reader and antenna array is required.

Eliminates the need for Cabinet or Drawer storage

For the first time, tools and critical assets can be left in the work area and tracked without the daily task of moving tools and assets to a cabinet or drawer storage area. Studies have shown up to an hour a day is saved for each person that is required to manage their tools using drawer and cabinet storage systems.

Tool or WIP Tracking

The Surface Trak solution can be used to manage tools but also as a work surface for the movement of materials across a work area to perform work in process tracking. Tracking of start and end times of a particular process can now be performed automatically. As items are being assembled in a work area, if they are tagged, automatic capture of serialized items can be performed without scanning or paperwork.

Critical Asset Management

The Surface Trak combines the state of the art in RFID and IoT technology by providing a large surface antenna array for reading of items with RFID tags but also Low Energy Bluetooth active tag support for critical assets that must still be read up to 100' away from the surface.

Rugged Surface

The exclusive stacked layer construction of the surface provides the utmost in resilience to heavy tools and materials that are placed on the surface. Surfaces can be cleaned with ordinary cleaning solutions.

Intelligent Store and Forward ready for Cloud computing

All Venture Research products provide an exclusive store and forward capability to allow direct interaction with the Cloud. Surfaces can run autonomously without network connection if required and still collect critical asset movement.

24 x 7 x 365 Support

Venture Research maintains a world class support organization that can provide real time monitoring and alerting of system operability. All hardware products from Venture Research contain automatic self-diagnosis and alerting. Connecting the product to the remote Venture Research monitoring system called SiteWatch, allows non-stop read point sensing for mission critical applications.

Surface Trak shown on a 3' x 6' table surface managing tools

Some of the applications where Surface Trak has been used to Trak Assets :

- Tool Management
- WIP and Manufacutring
- Kanban Replinish
- Packout Stations
- Check in/Check out stations
- Packaging and Shipping Stations

Product Features

| Features | Benefits |
|--|---|
| Antennas and Readers are a single and continuous surface | No need to wire separate components together |
| Both passive RFID and IoT active technology in the same reader | Provides asset tracking on the surface and up to 100' away from the surface |
| Tri Color LED on Edges | Gives operator feedback directly without the need of a computer or screen |
| Integral store and forward capability for all transactions | Ready for the cloud |
| Sizes of surfaces from 9"x9" up to 3' by 6'* | Flexibility to fit the surface in any work area |
| POE (Power over Ethernet) capable | Reduces cabling and power requirements |
| Optional battery power | Can be used on mobile carts |

* Specify surface/table size at time of order up to 3' by 6'

Specifications

Electrical Specifications

| | |
|-----------------------|--|
| Model | SHELF_RDR_001_XX |
| RFID Reader | 1 Watt (30 dBm) class 1 GEN2 (ISO 18006c) reader, US (902-928 Mhz)(European frequencies ETSI - 865-868 Mhz also available) |
| RF Shelf Interfacing | Single 12V cable with CANBUS protocol. Up to 4 surfaces can be daisy chained |
| Power | POE or direct connect at 12V - 1.5 A, optional battery backup |
| Diagnostic Indicators | Red, Yellow and Green diffuse LED's for local notification and diagnostics |
| Edge LED's | Programmable Edge LED's - R, Y, G Modulated |
| RFID Antennas | Exclusive Venture Research Array antennas |

Interfacing

| | |
|----------------------------|--|
| Connection | Serial, Aux Serial, Ethernet Cat5/6 (RJ45), USB-A, Wifi (802.11 b/g), BLE, CAN Bus, Optional Cellular |
| Protocol | Simple text based configuration and tag read stream (via Telnet). Online help is built in for all commands. Up to 5 independent simultaneous sessions. |
| Cloud Computing | Store and Forward with all filtering / aggregation being performed in the reader. Direct Web Service update capability using HTTP Post. SD Card storage. |
| Optional Sensors | Biometrics, Card, HF Badge, Camera, Floor mat sensor, motion sensor |
| BLE (Low Energy Bluetooth) | Can read both Eddystone and iBeacon protocols |
| I/O | 2 In / 2 Out Conditioned |

Display

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|------------|---|
| Edge LED's | R,Y,G continuously variable programmable LEDs for operator feedback |
|------------|---|

Software/OS

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|------------------|---|
| Operating System | Open embedded Linux, Optional Android 4.X |
| Applications | Tool Management, Tag Verification, Material Expiration, BLE tracker, Tag Encoding, Check in/out |

Base Surface Trak Configurations

| | |
|----------------------------------|--------------------------|
| Reader Surface - Base | SHELF_RDR_001_XX |
| Options | |
| Power | Part Number |
| Battery Backup | SHELF_RDR-OPT-BATT-PACK |
| Battery Charger – Single Battery | SHELF_RDR-OPT-BATT-CHRG1 |
| Battery Charger – Quad Battery | SHELF_RDR-OPT-BATT-CHRG4 |
| Spare Battery | SHELF_RDR-OPT-BATT |
| POE Injector – 48v | SHELF_RDR-OPT-INJECT |

Communications

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|--------------------------|----------------------------|
| 4G LTE Module | SHELF_RDR-OPT-CELL |
| Carrier Service – 1 Year | SHELF_RDR-OPT-CELL-CARRIER |

Sensor

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|-----------------------------------|-----------------------|
| Mat Sensor - 3'x1.5' | SHELF_RDR-OPT_MAT |
| External Input (PIR Motion Sense) | SHELF_RDR-OPT-PIR |
| Facial Recognition | SHELF_RDR-OPT-FACEREC |

Operating System

| | |
|---------------------|---------------------------|
| Open Embedded Linux | SHELF_RDR-OPT_OS-LINUX |
| Android 4.0 | SHELF_RDR-OPT_OS_Android4 |

Cabling

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|-------------------------------|-----------------------|
| CANBUS Interconnect Cable 15' | SHELF_RDR-OPT_CAN_15 |
| Serial Interface Cable to USB | SHELF_RDR-OPT-USB-SER |

Notes

- Cellular requires yearly service contract
- Specify service provider at time of order (AT&T, Verizon, T-Mobile, Sprint)
- Each surface has a CANBUS interface to daisy chain additional surfaces together.
- ETSI / EU – 865-868 MHZ Version available at extra cost
- Specify surface size at time of order

Warranty

- 1 year parts and labor
- 1 year, post 1 year maintenance agreement available

Specifications are subject to change without notice