



**keonn**

Retail RFID  
Systems

## **AdvanTrack-50™**

Overhead tracking system





### Benefits:

- Asset tracking
- Item tracking
- People tracking
- Compact design
- Easy installation, configuration and integration
- Cost effective

### Applications:

- Corporate buildings
- Hospitals
- Factories
- Warehouses
- Any low ceiling space where item tracking is required

### Product overview

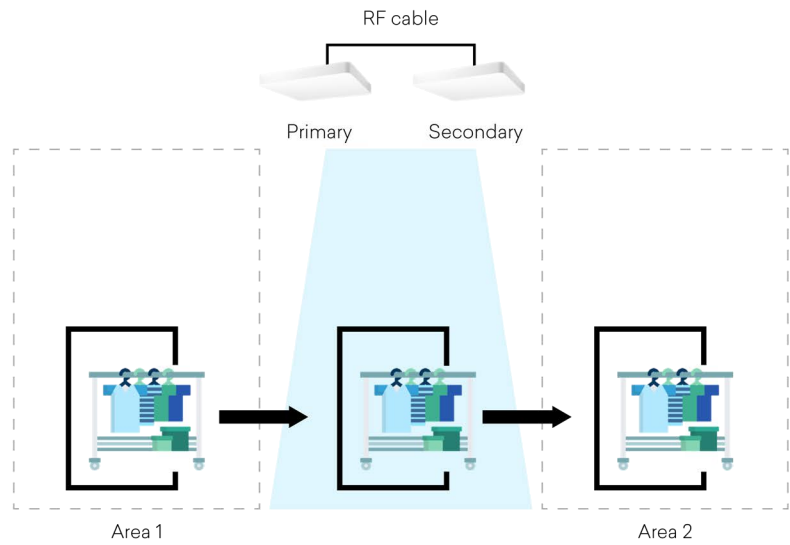
AdvanTrack-50 is an RFID UHF overhead system that accurately tracks assets, items and people in a wide variety of spaces, like corporate buildings, hospitals, factories, warehouses, etc.

AdvanTrack comprises a high performance, high flexibility reader with a high gain stationary antenna, capable of scanning all tagged items crossing below.

By using primary and secondary units, AdvanTrack achieves high read-rate and is very cost efficient:

- The primary unit comprises a reader and antenna
- The secondary unit comprises an antenna

One primary unit can be connected up to one secondary unit.





### Technical specifications of AdvanTrack-50

RF connections	One 50 ohm SMA connector for a secondary antenna
RF Power	Programmable from 0 dBm to 30 dBm in 0.5 dBm steps (Maximum power may have to be reduced to meet regulatory limits)
Max tag read throughput	Up to 50 tags/second
Power consumption	Idle consumption < 3 W Max consumption (@30dBm) < 9 W
Inputs	2 x digital/analog inputs, 10 bits resolution Inputs accepted in the range: 0 V – 3 V (IN 1) 0 V – 10 V (IN 2)
Outputs	4 x digital outputs (100 mA) 1 x digital outputs (8 mA) 1 x relay output (24 VDC / 0.5 A / Resistive load) Loudspeaker (8 ohm / 2 W)
Dimensions	Primary: 25 cm x 25 cm x 8 cm (9,8 inches x 9,8 inches x 3,1 inches) Secondary: 25 cm x 25 cm x 4,5 cm (9,8 inches x 9,8 inches x 1,8 inches)
Weight	Primary: 1,495 kg (3296 lb) Secondary: 1,085 kg (2392 lb)
Data communications	Ethernet: IEEE 802.3 up to 100 Mbps Ethernet over USB (micro USB Type-B connector) USB HID hardware emulation (USB Type-B connector)
Power supply	Power Over Ethernet (PoE) <ul style="list-style-type: none"> <li>• Supports IEEE 802.3af (Type I) and IEEE 802.3at (Type II)</li> <li>• Power consumption: Class 31</li> </ul> Power supply 24 V (DC) <ul style="list-style-type: none"> <li>• 18 V to 26 V DC Maximum current rating 2.5 A</li> </ul>
Output power	5 V (DC) @ 100 mA non-isolated power supply to feed external devices and circuitry
On-board sensors and actuators	Buzzer RTC chip to keep Date&Time between reboots. Battery life time more than 10 years in power off mode.
Temperature	Operating temperature: -20 °C to +50 °C Storage temperature: -30 °C to +60 °C
Humidity	20 % to 85 % without condensation



### Software specifications of AdvanTrack-50

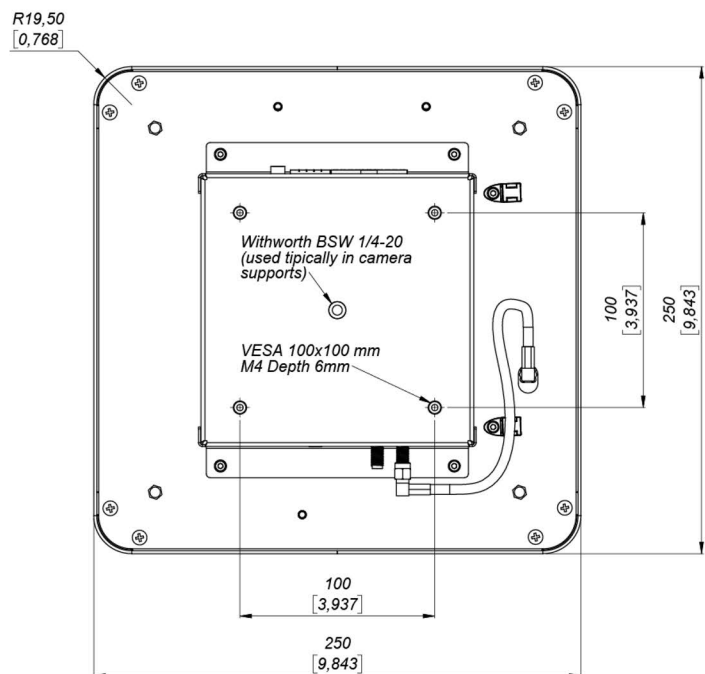
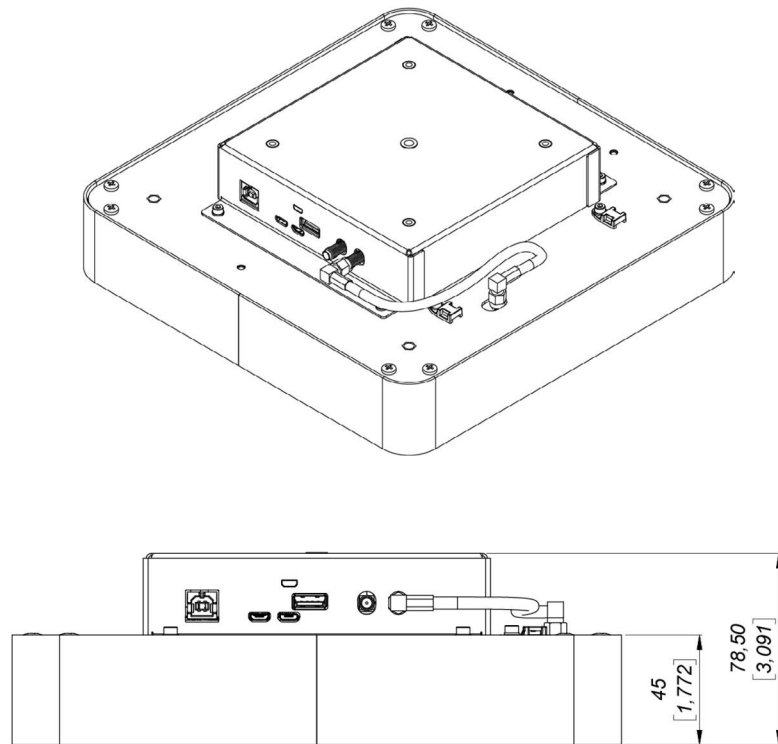
On-board intelligence	<p>ARM board</p> <ul style="list-style-type: none"> <li>• Cortex A-8 CPU (1 GHz)</li> <li>• 512 MB RAM</li> <li>• 4 GByte ROM with Operating System</li> <li>• 1 x USB connector type A</li> </ul>
Included software	<p>On-board software</p> <ul style="list-style-type: none"> <li>• Debian 10 based distribution.</li> <li>• Patched kernel from the 4.14 branch</li> <li>• AdvanNet-2.5.x: advanced driver platform for Keonn components and systems.</li> </ul>
Development	<p>Embedded Development:</p> <ul style="list-style-type: none"> <li>• Java development: based on a modified ThingMagic Mercury API <ul style="list-style-type: none"> <li>• Java development (Java JRE 1.8 )</li> </ul> </li> <li>• C development: based on Mercury API <ul style="list-style-type: none"> <li>• C development (libc 2.24)</li> </ul> </li> <li>• REST API</li> </ul> <p>External Development:</p> <ul style="list-style-type: none"> <li>• AdvanNet based: <ul style="list-style-type: none"> <li>• AdvanNet Manager: test and deploy web-based GUI utility.</li> <li>• REST interface that can be used in any development environment.</li> </ul> </li> </ul> <p>Other options:</p> <ul style="list-style-type: none"> <li>• The OS is fully open<sup>12</sup></li> </ul>

### RF specifications of AdvanTrack-50

Air Protocol Interface	EPC global UHF Class 1 Gen 2 / ISO 18000 - 6 C
Supported regions	<p>FCC (NA, SA) (902 to 928) MHz</p> <p>ETSI (EU) (865.6 to 867.6) MHz</p> <p>TRAI (India) (865 to 867) MHz</p> <p>KCC (Korea) (917 to 923.5) MHz</p> <p>MIC (Japan) (916.9 to 923.4) MHz</p> <p>ACMA (AU) (920 to 926) MHz</p> <p>NZ (New Zealand) (922 to 927) MHz</p> <p>SRRC-MII (P.R.China) (920.125 to 924.875) MHz</p> <p>MY (Malaysia) (919.0 to 923.0) MHz</p> <p>ID (Indonesia) (923.0 to 925.0) MHz</p> <p>PH (Philippines) (918.0 to 920.0) MHz</p> <p>TW (Taiwan) (922.0 to 928.0) MHz</p> <p>MO (Macao) (920.0 to 925.0) MHz</p> <p>RU (Russia) (866.0 to 868.0) MHz</p> <p>SG (Singapore) (920.0 to 925.0) MHz</p> <p>VN (Vietnam) (866.0 to 869.0) MHz</p> <p>TH (Thailand) (920.0 to 925.0) MHz</p> <p>AR (Argentina) (915.0 to 928.0) MHz</p> <p>HK (Hong Kong) (865.0 to 868.0) MHz</p> <p>BD (Bangladesh) (925.0 to 927.0) MHz</p> <p>Brazil (917.4 to 927.2) MHz by using channel selection</p> <p>Chile (917.4 to 927.2) MHz by using channel selection</p> <p>Peru (917.4 to 927.2) MHz by using channel selection</p> <p>Taiwan (922.600 to 927.2) MHz by using channel selection</p> <p>Open Region (859 to 873) MHz and (915 to 930) MHz</p>

### Mechanical specifications

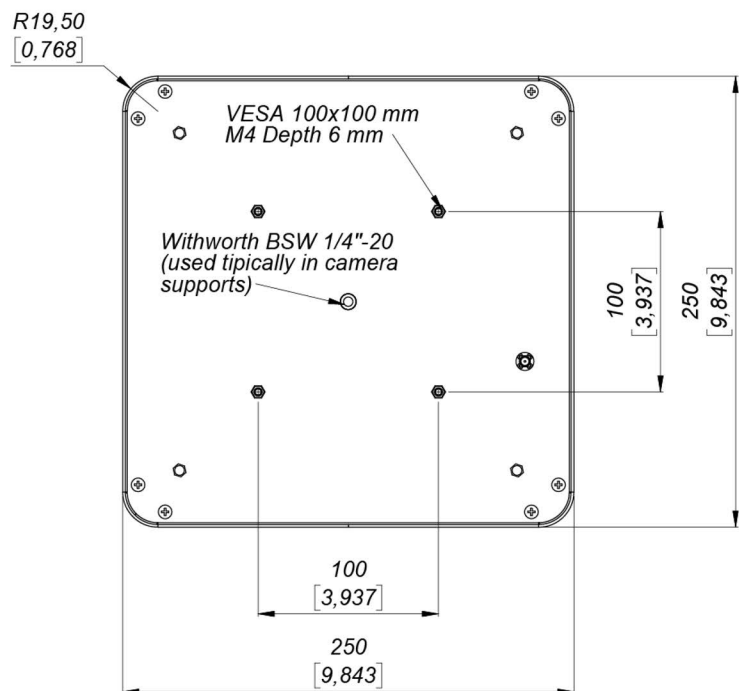
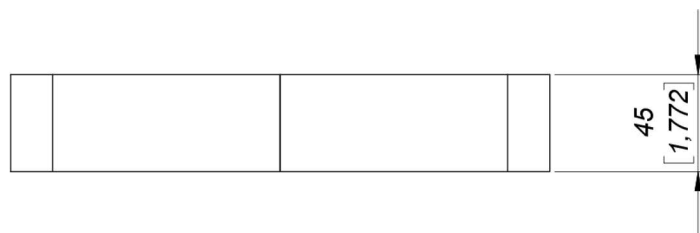
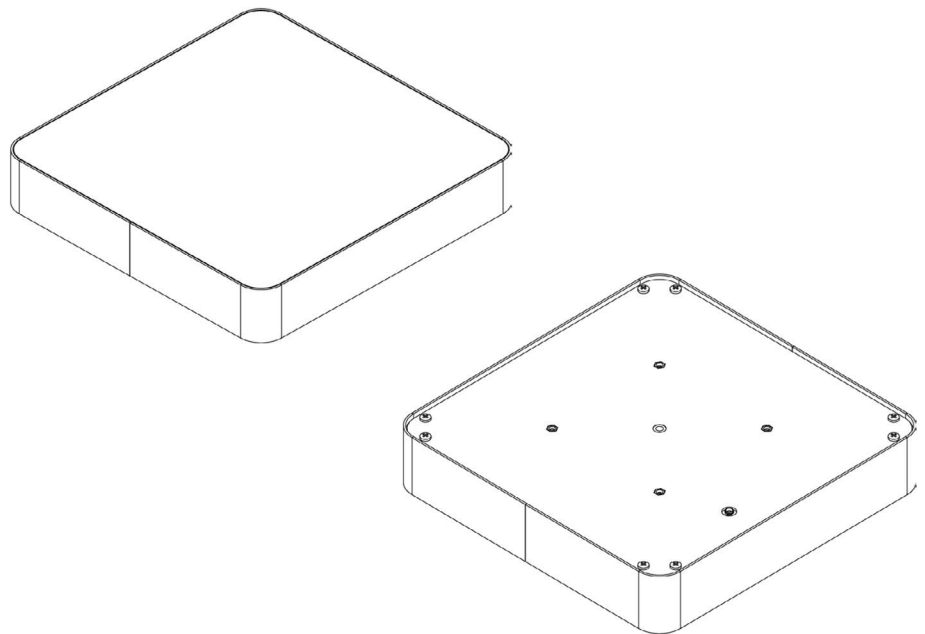
#### Primary unit



Units in millimeters and [inches]

### Mechanical specifications

#### Secondary unit



Units in millimeters and [inches]

### Product codes for ordering

ADTR	-	O	T	M	FF	-	MMM	
								<b>O = Overhead</b>
		O						Overhead
								<b>T = Type</b>
			M					Primary
			S					Secondary
								<b>M = mount</b>
				C				Ceiling / wall mount (attached to the ceiling or suspended with a pole, pole not included)
								<b>FF = frequency band</b>
					EU			865,6 MHz - 867,6 MHz
					US			902,0 MHz - 928,0 Mhz
								<b>Model</b>
							50	Model number

Examples:

#### ADTR-OMCEU-50:

- AdvanTrack
- Overhead
- Primary unit
- Ceiling mount (attached to the ceiling or suspended with a pole)
- ETSI frequency band
- Model 50

#### ADTR-OSCUS-50:

- AdvanTrack
- Overhead
- Secondary unit
- Ceiling mount (attached to the ceiling or suspended with a pole)
- FCC frequency band
- Model 50



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