



keonn

Modular RFID
Components

AdvanReader-70™

1 or 2 port RFID UHF reader





Benefits:

- High flexibility (1 or 2 ports)
- On board computer with fully open Linux OS
- Small form factor
- 2 digital/analog inputs
- 5 digital outputs and 1 relay output
- Acts as HID USB device
- Reduces time and cost of developing RFID systems
- You can make it your own reader by putting your company logo on the enclosure
- Direct connection to an external loudspeaker

Applications:

- Smart shelves
- Smart display fixtures
- Smart surfaces
- RFID portals
- RFID tunnels
- Point of Sales
- Loss prevention systems
- In general, any RFID application

Product overview

AdvanReader-70 is a flexible UHF reader with an on-board microcomputer and a fully open Linux operating system.

AdvanReader-70 comes with **two models**:

- 1 port, 27 dBm maximum output power
- 2 port, 30 dBm maximum output power

Thanks to its on-board microcomputer, AdvanReader-70 can work **stand-alone**, without needing to be connected to an external computer, thereby reducing equipment costs, installation costs, and maintenance costs.

Additional product features

AdvanReader-70 is also very flexible in terms of **inputs** and **outputs**:

- 5 x digital outputs and 1 relay output
- 2 digital/analog inputs
- Direct LED connections
- Loudspeaker: 8 ohm/2 W

AdvanReader-70 can become **your own reader**: your company logo can be the only logo on the enclosure.

AdvanReader-70 includes several **actuators** and **indicators** on-board:

- On-board buzzer
- On-board LED indicators for: power on (white), RF Tx (red), RF Rx (green), status (orange), etc.

AdvanReader-70 has small form factor (137 mm x 137 mm x 24 mm) and can be used in any RFID application.

AdvanReader-70 comes with a comprehensive set of built-in HW/SW communication options:

- USB HID emulation: allows generating keyboard events based on Reader events.
- HTTP: user-configurable HTTP request generation based on Reader events.
- MQTT: user-configurable MQTT packet generation based on Reader events.
- SQL: user-configurable SQL sentence generation based on Reader events.
- TCP: real-time TCP socket of Reader events.

Common RF specifications of all AdvanReader-70 models



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>
Max tag read distance	Up to 9 m (33 feet) with 6 dBi gain antennas

Common software specifications of all AdvanReader-70 models

On-board intelligence	<p>ARM board</p> <ul style="list-style-type: none"> • Cortex A-8 CPU (1 GHz) • 512 MB RAM • 4 GByte ROM with Operating System • 1 x USB connector
On-board software	<p>AdvanNet: advanced driver platform for Keonn components and systems</p> <p>Debian Squeeze (Debian 10.1) based distribution</p>
External software development	<p>AdvanNet based:</p> <ul style="list-style-type: none"> • Test and deploy web-based GUI utility (AdvanNet Monitor) • REST interface that can be used in any development environment
Internal development environments	<p>Java development</p> <p>C development</p>
Operating system	Fully open

Common electrical, communication and mechanical specifications of all AdvanReader-70 models



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"> • Supports IEEE 802.3af (Type I) and IEEE 802.3at (Type II) • Power consumption: Class 31 Power supply 24 V (DC) <ul style="list-style-type: none"> • 18 V to 26 V DC Maximum current rating 2.5 A
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.
On-board LED indicators	LED ON (White LED) LED status (Orange LED) LED USB HID Status (Green LED): HID port status
Inputs	2 x digital/analog input 0 V to 3 V (IN 1) 0 V to 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)
Temperature	Operating temperature: -20 °C to +50 °C Storage temperature: -30 °C to +60 °C
Humidity	20 % to 85 % without condensation
Size	137 mm x 137 mm x 24 mm (5.4 in x 5.4 in x 0.94 in)
Size with enclosure	143 mm x 143 mm x 30 mm (5.6 in x 5.6 in x 1.19 in)
Weight	180 g (6.35 oz)
Weight with enclosure	510 g (18.4 oz)



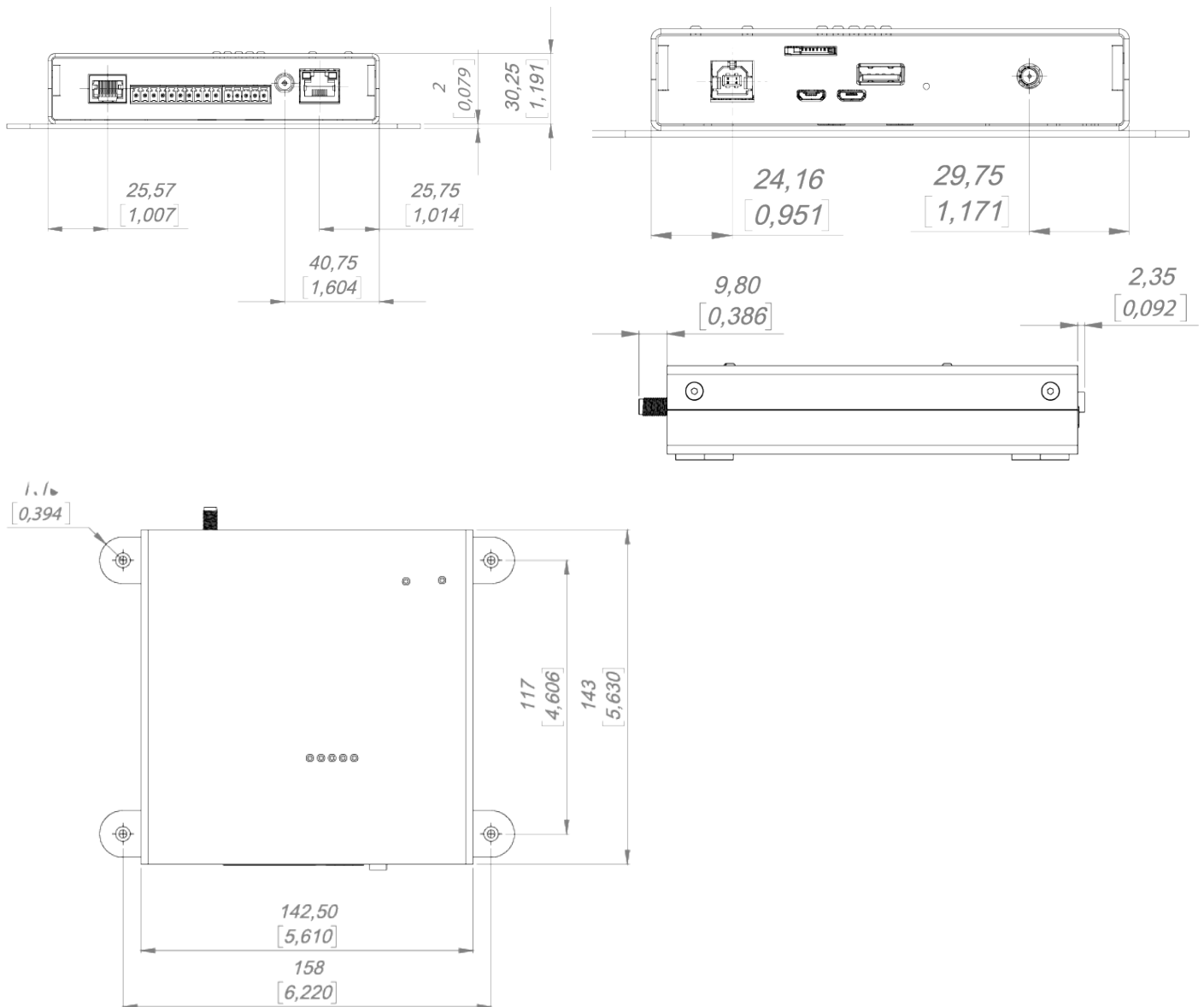
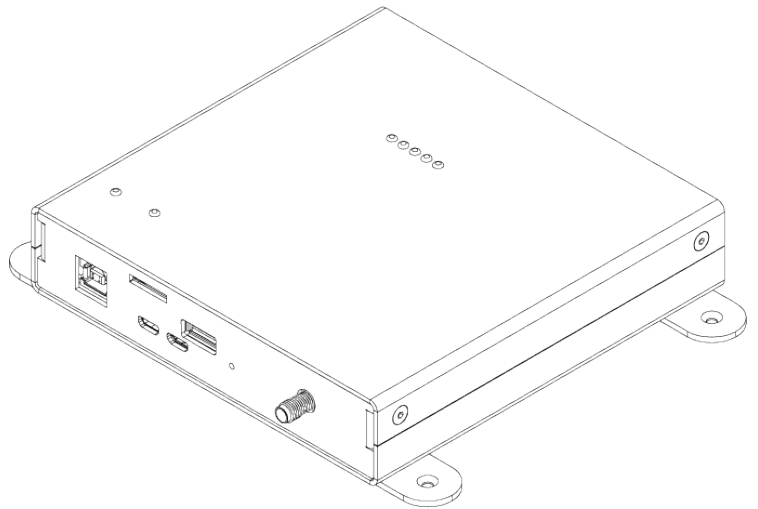
Specifications of AdvanReader-70 with one port

RF connections	One 50 ohm SMA connectors for monostatic antennas
RF Power	Programmable from 0 dBm to 27 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 (@27 dBm) < 7 W

Specifications of AdvanReader-70 with two ports

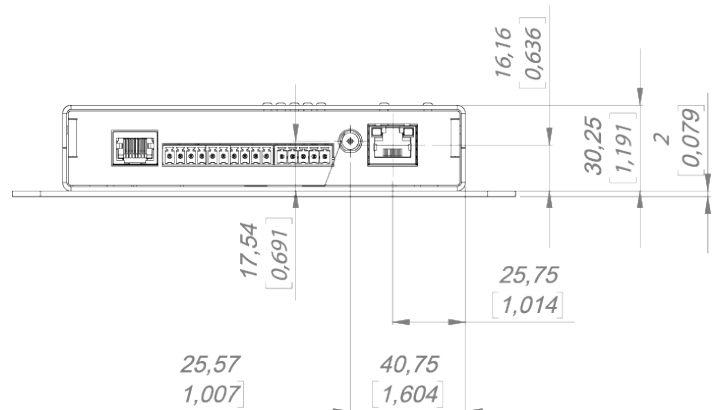
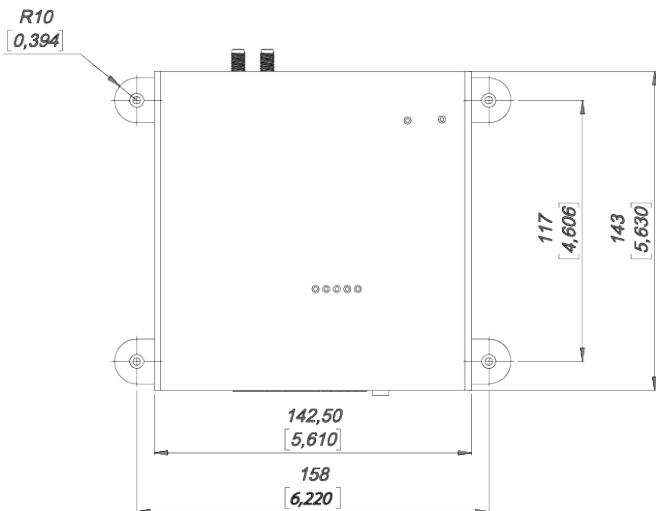
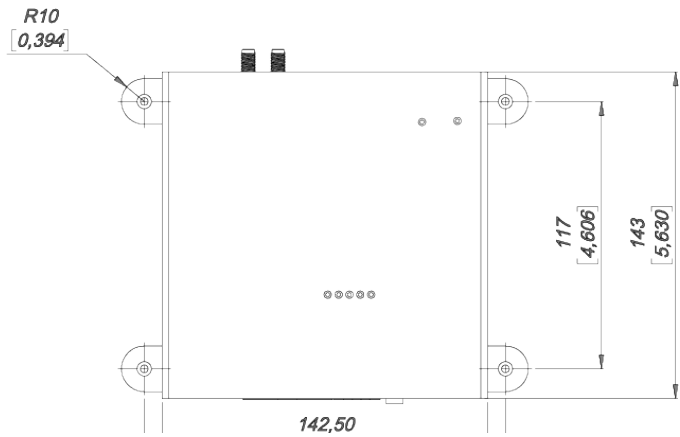
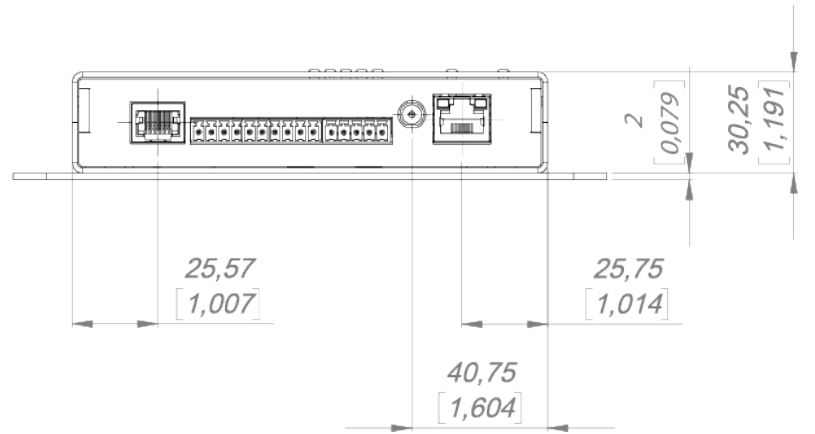
RF connections	Two 50 ohm SMA connectors for monostatic antennas
RF Power	Programmable from 0 dBm to 30 dBm in 0.5 dBm steps (Maximum power may have to be reduced to meet regulatory limits)
Max tag read throughput	Up to 50 tags/second
Power consumption	Idle consumption < 3 W Max consumption (@30dBm) < 9 W

Mechanical specifications of AdvanReader-70 with one port



Units in millimeters and [inches]

Mechanical specifications of AdvanReader-70 with two ports



Product codes for ordering

ADRD	-	MX	-	E	CT	-	SC	
								MX = number of ports
		M1						1 port
		M2						2 ports
								E = enclosure
				-				without enclosure
				E				with enclosure
								CT = connector type
					SMA			SMA Straight PCB mount
								SC = series code
							70	Serie 70

Examples:

ADRD-M1-SMA-70:

- AdvanReader
- With 1 port
- Without enclosure
- SMA connector type
- Model **70**

ADRD-M2-ESMA-70:

- AdvanReader
- With 2 ports
- With enclosure
- SMA connector type
- Model **70**



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