

# RFR-RAIN-4-SMART-ADV-C ADVANCED READER

The Advanced Reader provides system integrators and customers with the most intelligent plug and play smart reader with advanced features that are perfectly suited for mobile applications such as Forklifts, AMR robots, Drones, Access Control, and more.



## Key Features & Benefits

- ▶ True plug and play. Start reading your tags automatically using a browser and the built-in Zone Manager UI software.
- ▶ Zone Manager software included.
- ▶ Store and access the data directly on the reader, on a server on-premise or in the cloud.
- ▶ Access control capabilities.
- ▶ Run the reader from anywhere using its built-in battery.
- ▶ Multi-functional UHF RFID reader with combined camera and GPS data capture capabilities.
- ▶ Access the reader cables using its built-in hotspot in case the reader is located in a hard to reach area.
- ▶ Rest API support. A Python, .Net, and C++ SDK's.
- ▶ Setup and receive JSON push notifications alerts to RFRain Web Services (RWS), Amazon Web Services (AWS), or Azure based on custom rules such as tag detection.
- ▶ Read and store on the reader a large amount of tags with a rate of 1000's tags in a few seconds.

## Applications

- ▶ Asset Tracking
- ▶ Smart Cabinets with access control
- ▶ Toll detection - Conveyor belts
- ▶ Inventory Management
- ▶ Moving vehicles: Robots, trucks, drones, buses, and Forklifts

## OVERVIEW

The award winning RFRain Advanced Reader (RFR-RAIN-4-SMART-ADV-C) supports up to four monostatic antennas, which covers a tag read distance that is over 80 feet with 9 dBiL antenna. The large number of ports allows to track a maximum of 4 zones using one reader. Some of the features include camera, GPS, and access control. Read 1000's of tags in seconds and detect movement of assets in and out of zones at a very fast rate. Configure the readers in minutes using the Built-in Zone Manager UI. Start reading tags automatically, and store up to 200K unique events at a time. Create the next generation of smart stores, track movement inside multiple zones, install the reader on a drone or robot using its internal battery, and much more. Reader comes pre-installed with the built-in Zone Manager Software UI. No programming necessary



DATA/CONTROL INTERFACE	
Communication	USB, WIFI, Ethernet, PoE+, Access point, optional Cellular.
Communication Protocol	RFRain Rest API Interface.
Software	The Zone Manager software comes pre-installed and pre-configured with the RFR-RAIN-4-SMART-ADV-C. See extensive features' list from the RFR-ZM software specs.
RSSI	Yes
Modes of operation	Server Mode: Entry and transit doorway, conveyor belt, overhead reader, large doorway requiring additional ports. Server Mode Enhanced: Automatically access user data, Extended EPC or TID data. Write Mode: Easily modify the content of user data or EPC info in bulk.
Brown-out Recovery	Yes
Live Upgrade Capability	Yes
Interface	Standalone: Configure and access the data using the built-in UI from any web browser.
RF INTERFACE	
Regulatory	Supports different regions based on the order number. Please refer to the order information below
Tag Protocol	EPC-global UHF Class 1 Gen 2 (ISO 18000-6C) with anti-collision, DRM, and advanced anti-jamming
Antenna Connector	4 RP-TNC female monostatic ports
RF Power Output	Adjustable from 10 dBm to 30 dBm power up to (1.4 W) per channel or the maximum that the region allows whichever is less.
ARCHITECTURE	
RFID Processor	Indy R2000
Memory	1 GB RAM, up to 64 GB Extended Flash
POWER	
DC Power required	DC Voltage: 5 V ± 5%; DC power: 24W max when transmitting
PHYSICAL	
Dimensions	6" x 8" x 2" / 15.2 x 20.03 x 5.8 cm
Weight	2.2 lb / 1.5 kg.
Interface	GPIO, USB 2.0 x 2, Ethernet TCP/IP (RJ45), WIFI, and Built-in Access Point.
Button	Power Push button.
Enclosure Material	Sheet Metal.
Mount Type	Four 1/4" Mounting holes
ENVIRONMENT	
Certification	US, Canada and other regions following U.S. FCC. Europe and other regions following ETSI EN 208 302 China , Korea , and Malaysia.
Operating Temp.	-20°C to +65°C
Storage Temp.	-40°C to +85°C
PERFORMANCE	
Max Tag Read Rate	Up to 700 tags/second
Max Tag Read Distance	Up to 80 feet (24 m) with 9 dBiL antenna
Max Tag Read Rate for moving objects	100 items at walking speed 25 items at 25 mph
OPTIONAL FEATURES	
Hardware	Battery: 24000 mAh battery with 5 hours run time or more based on usage. GPS: External GPS available. Camera: 1 MP Camera. (GPS feature is not standard and must be requested when product is ordered). Access Control: Control access to a doorway. Alert: Send audible alerts based on a user alert setting. GPIO: 4 ports isolated. 5V/20mA.
Order Information	Based on the reader prefix RFR-RAIN-4-SMART-ADV-XX, pre-configured for the following regions: XX: CE: European Frequency 865-868 MHz NA: North American Frequency 902-928 MHz KO: Korean Frequency 908.5-914 MHz AU: Australian Frequency 915-928 MHz CH: Chinese Frequency 915-928 MHz.