



DATASHEET

Product: Nordic ID FR22 IoT Edge Gateway

Part Number: NPI00001

THE NEW ERA OF MODULAR FIXED READERS

The Nordic ID FR22 is the core device of a new approach for RFID fixed systems with wide communication options and a modular design. The FR22 is a critical building block for various track & trace and intelligent manufacturing solutions. It enables different use cases for different segments depending on which modules are attached to it.

Using the same API for backward compatibility with all the other Nordic ID devices and with an improved connectivity, the Nordic ID FR22 is the evolution towards a smarter platform, more powerful, scalable, flexible, and manageable than ever. Two variants of FR22 are available: the standard and the LTE version.

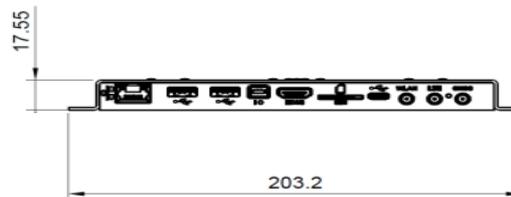


Back panel



Front panel





UHF RFID

Supported standard	ISO 18000-63 (EPC Class 1 Gen2v2)
Frequency band	ETSI 865.6-867.6 MHz and FCC/IC 902-928 MHz
Regulatory	
Max conducted power	+32dBm (+30dBm in FCC region)
Max receive sensitivity	-87dBm
Typical reading speed	Up to 1000 tags/second
External antenna port	4 ports RP-SMA female
Isolation between external antenna ports	Nordic ID Extension Port to connect Nordic ID accessories
RFID module	Nordic ID NUR3-1W, powered by Impinj E710 RAIN RFID chip

PLATFORM

CPU	Quad-core A7 1.1GHz
Operating system	Linux
Memory	1GB RAM + 8GB Flash

USER INTERFACE

SIM (*)	Mini SIM
Indicators	9 LEDs: 4 LEDs indicating the enabled antennas, Connection LED, Application LED, Power LED, RF LED, Extension Port LED

CONNECTIVITY

GPIO	Industrial mini IO port (4 GPIO)
USB	2x USB host, type A USB device, type C
Bluetooth	BT 2.1 + EDR/3.0/4.1 LE /BT4.2
Bluetooth profiles	SPP, HID, HOGP (HID over GATT)
Wireless LAN	2.4G/5G, 802.11 a/b/g/n
Wireless WAN (*)	GSM/EDGE, LTE-FDD B1/B3/B5/B7/B8/B20, LTE-TDD B38/B40/B41, WCDMA B1/B5/B8
GNSS (*)	GPS/BeiDou/GLONASS
HDMI (video)	1280x720 and 640x480 resolution

POWER

External power	PoE+ 802.3at
Operating power	Max 25.5W with max RFID tx level and all radios enabled Max 18W with max RFID tx level and all radios disabled 4W in idle state

SIZE AND WEIGHT

Dimensions	(W) 203.2 x (L) 78.4 (91 with connectors) x (H) 17.6 mm
Weight	306 grams

ENVIRONMENT

Environmental sealing	IP20, for indoor use only
Inbox content	1 WLAN/Bluetooth antenna (and 1 LTE antenna in LTE variant)
Operating temperature	-20 °C to 55 °C (-4 to 130 °F)
Storage temperature	-40 °C to 85 °C (-40 to 185 °F)
Mounting	With 4 screws (not included)

SOFTWARE INTERFACE

Data management	Nordic ID Radea
Firmware update	Via Web management UI and the RESTful service
Management interface	Web management UI and SSH for developers
IP Address configuration	IPv4 DHCP or Static IP
API support	NUR API for RFID and RESTful service to access reader configuration
Software development	Ready-to-use Nordic ID NUR API that provides full control over the reader Application can be written with modern programming languages Compatible with existing Nordic ID fixed readers
Security	TLS v1.3

All information is subject to change without prior notice.



(*) The feature is available in the LTE version of FR22

PRODUCT HIGHLIGHTS

- Fast and reliable edge computing with support for custom embedded applications
- Wide communication options that enable flexibility in system designing and no need for external connectivity hardware
- New UHF RFID engine based on the very latest technology
- Develop embedded web apps with user interface. Eliminating the need for external PC/tablet
- Nordic ID extension connector for plug and play accessories like Nordic ID MUX16
- Connect external devices, sensors, triggers, lights and buzzers
- Full set of API's available for controlling the reader