A21512U
SUPERIOR SERIES

UHF

>>> OVERALL FEATURES

> Long-range RFID UHF reader with IP67 protection rate for harsh environment
> Designed and created to operate in harsh and hostile environments
> Die-cast aluminium robust casing
> Standard 5-pole M12 industrial connectors
> Ultra compact, easy installation, simple use
> Designed and produced in Italy
> Certifications: CE, RoHS, Reach

>>> APPLICATIONS
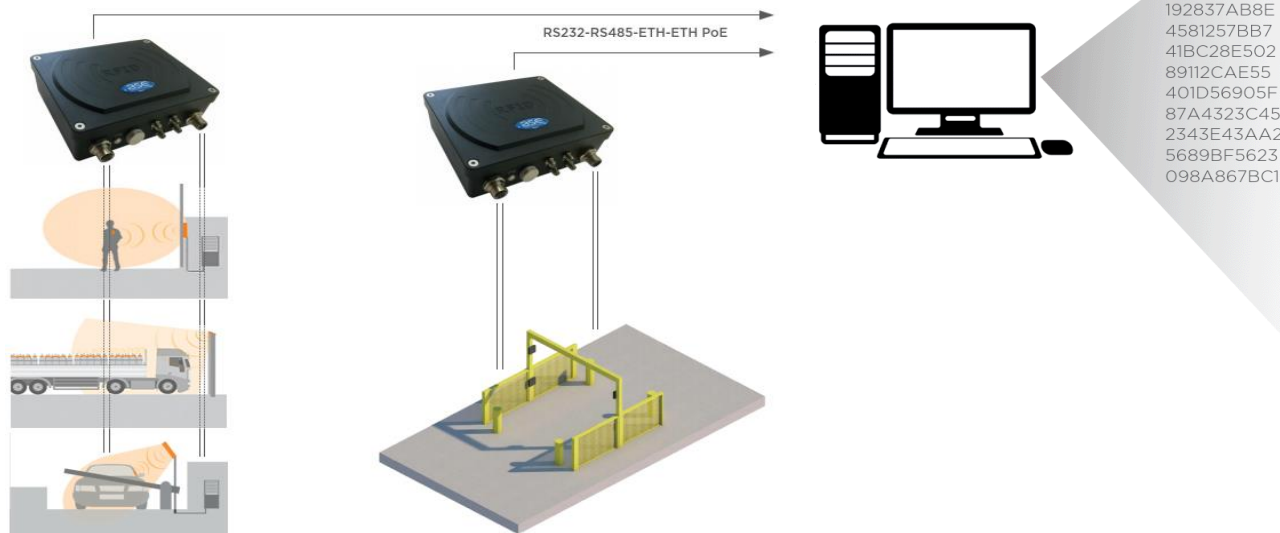
DATA COLLECTION   INDUSTRY 4.0   LOGISTICS   INDUSTRIAL AUTOMATION   WASTE MANAGEMENT

The new family of Industrial UHF RFID readers, called Superior, guarantees robustness, compactness, protection and flexibility. Versions with integrated antenna or up to 4 external antennas available. They are ideal for RFID automatic identification, access control, industrial automation, waste management, IoT applications. Available with wide power supply (8-30V), I/O management and various types of interfaces, such as RS232, RS485, Ethernet, Ethernet PoE

>>> EXAMPLE OF DATA COLLECTION IN THE INDUSTRIAL AREA

RS232-RS485-ETH-ETH PoE

192837AB8E
4581257BB7
41BC28E502
89112CAE55
401D56905F
87A4323C45
2343E43AA2
5689BF5623
098A867BC1

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TECHNICAL FEATURES

Supported tags	ISO18000-6C and EPC Class1 Gen2 tags
Operative frequency	860-940MHz
Antenna	integrated antenna or up to 4 external antennas managed in multiplex
	Integrated antenna with circular polarization and 5.5 dBi gain
	Antenna protection and auto-tuning circuit
Power	≤ 30dBm adjustable via software
Reading distance	typ. 10 meters , up to 20 meters (depends on tag and antenna)
Functions	FHSS / Fixed Frequency / RSSI / DRM / Buffer
Working mode	Spontaneous, polling, trigger, buffer, DRM, EPC/TID/EPC+TID inventory
Interface	RS232, RS485, Ethernet TCP/IP, Ethernet TCP/IP PoE, Wiegand
Power supply	8-30Vcc - max 35Vcc max 650mA (@ 1Watt RF) reverse polarity protection
Input and output	1x relay, led, buzzer, 1x trigger input, software adjustable
	Relay contacts : 0,5A @ 125 VAC - 1A @ 24 VDC
Size	148x125x41mm
Temperature	Operative -20°C ÷ +70°C Storage -20°C ÷ +80°C
Protection rate	IP67
Weight	1100g
Accessories	Mounting kit with wall and pole brackets, SDK, demo software
Extras	Wide range of UHF antennas for different applications
	Available with integrated antenna
	Output string with CRC check
	Pressure compensation circular vent
	Reading functions: EPC, TID, EPC+TID or User Memory

VERSIONS

Code		Version	Picture
A21512U-xx		Industrial IP67 high performance reader	
	1	1x integrated antenna	
	2	1x integrated antenna + 1x external antenna	
	5	1x external antenna	
	7	4x external antenna	
Interface			
	A	RS232 + Wiegand	
	B	RS485	
	C	Ethernet TCP/IP	
	D	PoE	
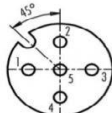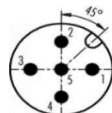
STANDARD FUNCTIONALITY

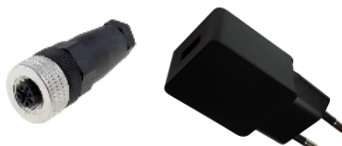| Function	Description
Antenna management	up to 4 external antennas
Antenna tests	Antenna efficiency test circuit with protection when threshold is exceeded
Antenna alarm threshold	Adjustable via software
Supported tags	Standard Iso18000-3 EPC GEN2 including QT type (public/private EPC)
Opto-isolated inputs	Opto-isolated external trigger input, manageable via software
Trigger	Active high/low
Relay output	Relay with closing contact (normally open), manageable via software
	Relay activated automatically at each tag reading
Working mode	Spontaneous, Polling, Trigger H, Trigger L, Dense Read Mode
Interfaces	RS232, RS485, Ethernet TCP/IP, Wiegand
Baud-rate	Selectable from 9600 to 115200 (default 57600)
Writing functions	Writing data blocks with Access password and Kill password management
Reading functions	EPC, TID, EPC+TID, USER, with/without 1sec delay, with/without CR-LF
	String options, selectable via software
Scan Time	Software adjustable
Address	Each reader can be addressed from 0 to 255
Code filter	Selectable from 1-1800 sec (30 min), up to 200 codes, with FIFO mode
Firmware	Remotely upgradeable
Power supply	8 - 30 Vdc with electrical protections
Power RF	0-30 dBm selectable by software, in steps of 1 dBm
Frequency band	5 frequency bands selectable via software; China-Korea-US-EU-EU3

ADDED FUNCTIONALITY V7.5

Function	Description
Timed input	Status acquisition delay, settable via software
Optical indications	LED with logic and timing selectable by software
Buzzer	Buzzer with logic and timing selectable by software
Code buffer	Code buffer up to 100 x 128 bit codes

CONNECTION

COM M12 5P F		ETH	RS485	RS232	COLORI	POW		POW M12 5P M
Female insert M12	1	NC	+5V	DATA1 (WGD)	MAR	VCC	1	Male insert M12
	2	TX+	D-	RXD (RS232)	BIA	IN1	2	
	3	RX+	GND	GND	BLU	GND	3	
	4	TX-	D+	TXD (RS232)	NER	RELE	4	
	5	RX-	GND	DATA0 (WGD)	GRI	RELE	5	

ACCESSORIES

Codice	Versione		Immagine
AA101	M12 5P F connector to wire for POW		
AA102	M12 5P M connector to wire for COM		
AA103	2m M12 5P F cable - wires for POW		
AA104	2m M12 5P M cable - wires for COM		
AA105	2m M12 5P M cable - DB9 for COM		
AA107	2m M12 5P M -RJ45 Crossed Cable for ETH		
AA108	2m M12 5P M -RJ45 Straight cable for ETH		
AA501	AC/DC power supply 220V-12V3A	with M12 connector	
AA502	AC/DC power supply 220V-24V3A	with M12 connector	
AA503	AC/DC power supply 220V-9V3A	with M12 connector	
AA803	Wall bracket + screw kit		
AA802	Pole bracket + screw kit		

OPTIONS AVAILABLE

Versions with single M12 connector (no ETH)	
Customized versions	

CERTIFICATIONS

EN301489-1-17	EMC	
EN302208	Radio	
EN62311	Exposure	CE
EN60950-1	Safety	
RoHS	Dangerous substances	
EN300220-1-2	Electromagnetic compatibility	

Complies with the new RED regulations in force since 13 June 2017

OTHER PICTURES

Top view

Front view

Pole bracket

Notes: reading and writing distances, carried out with isocard format tags, 30dBm power, 8dBi antenna

Specifications subject to change without notice

v301