The Kathrein ARU 3560 antenna reader is the next generation of RAIN RFID readers with an integrated 65° wide-range antenna. It is the first choice for professional IoT solutions, such as industrial automation and vehicle identification in ruggedised environments.

Its best-in-class 33-dBm UHF RF unit, optional connectivity modules, e.g. PoE+, Wi-Fi, 3G mobile interface and the powerful scalable processing unit change the way identification works.

Based on the latest RFID standards, such as EPC Gen2v2 / ISO 18000-63, Kathrein ARU 3560 antenna reader supports all market-leading transponder chip features for security, authentification and encoding.

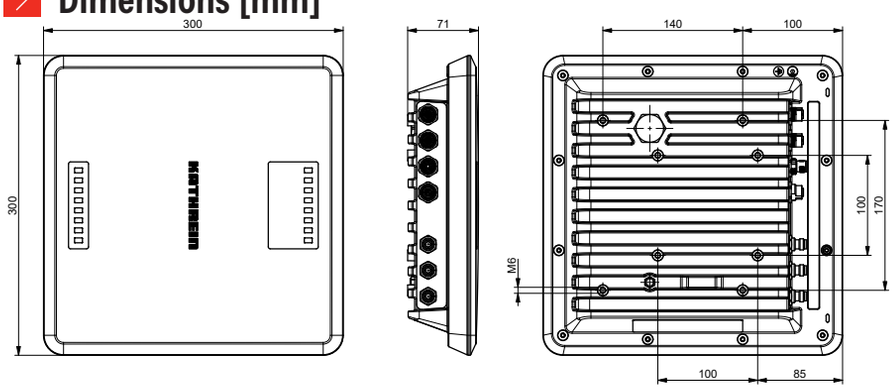
Features

- ruggedised high-end RAIN RFID reader with an integrated switchable polarisation antenna
- powerful IoT gateway
- enhanceed RF design
- integrated high secure memory module
- 3 antenna ports
- +33 dBm port power
- GPIO
- PoE+
- Wi-Fi
- Bluetooth
- basic computing module
- embedded dual-core 800 MHz PC
- open source Linux OS
- advanced LED visualisation
- IP67 outdoor use
- type approval for Europe, US and RoW

Key Applications

- Logistics
- Industrial Automation
- Vehicle Identification
- Smart City Applications

Dimensions [mm]



Note

Risk of material damage!

► Make sure that the depth at which the screws are put into the housing of the reader does not exceed 10 mm (the tightening torque is 5 Nm).

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936B138/C/1018 | Subject to change.

General Specifications

Type		ETSI Version ARU 3560	FCC Version ARU 3560
Order number		**52010293**	**52010301**
RFID			
Frequency range	[MHz]	865–868	902–928
Impedance antenna port	[Ohm]	50	
Max. TX power conducted	[dBm]	33	30 (33 dBm with extended cable length)
Max. TX power radiated	[ERP (ETSI)/ EIRP (FCC)]	33	36
RX sensitivity	[dBm]	typ. –80	
Number of antenna ports	[R-TNC]	3	
Standards		EN302208-2 V2.1.1, EN301489-3, EN50364, EN62368-1, EN60529, EPC Gen2 V2, UCODE DNA	FCC Part15, UL, IC, EPC Gen2 V2, UCODE DNA
Antenna			
Half-power beam width	[°]	65	
Gain, linear	[dBi]	7.0	
Gain, circular	[dBiC]	6.5	
Voltage			
Local supply	[VDC]	+10 to +30	
Connector		M12, A-coded, 4-pole	
Remote feed	[VDC]	PoE+ according to 802.3at (35–57) ▸ Make sure that the router/switch supports 30 W in the static mode. ▸ Use the cable the length of which does not exceed 100 m. ▸ Make sure to use a Cat 6 cable or a higher level cable. ▸ Note that the internal supply of GPIO-VCC-pin is not possible with PoE+.	
Connector		M12, X-coded, 8-pole, port 1 only	
Power consumption			
Local supply	[W]	25.4	
Remote feed	[W]	25.4	
Embedded PC			
Processor		ARMv7-A based processor, 2 cores @ 800 MHz	
Flash memory (eMMC)	[Gbyte]	8	
RAM DDR3	[Gbyte]	1	
Operating system		Linux	
Ethernet			
Number of Ethernet ports		2	
Data rate	[Mbit/s]	10/100	
Connector		M12, X-coded, 8-pole	
LED visualisation			
Freely programmable		12	
Fixed		1 (power LED)	

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General Specifications

Type		ETSI Version ARU 3560	FCC Version ARU 3560
Order number		**52010293**	**52010301**
Wi-Fi			
Supported standards		a, b, g, n	
2.5 GHz band	[GHz]	2.412–2.484	
Max. TX power (dependent on country)	[dBm]	max. 17.3	
5 GHz band	[GHz]	4.910–5.825	
Max. TX power (dependent on country)	[dBm]	max. 18	
Max. channel bandwidth	[MHz]	max. 40	
Bluetooth			
Frequency range	[GHz]	2.402–2.480	
Max. TX power	[dBm]	11.7	
GPIO			
Type		3 inputs, 3 outputs (double insulation possible)	
Max. input voltage	[V]	30	
Max. output voltage	[V]	30	
Max. current per output port	[mA]	500	
Max. current over all outputs	[mA]	1500	
Connector		M12, A-coded, 12-pole	
RFID controller			
Processor		ARMv7-A based processor with 600 MHz	
Flash memory eMMC	[Gbyte]	4	
RAM DDR2	[Mbyte]	128	
Operating system		Linux	
Mechanical properties			
Weight	[kg]	4.26	
Degree of protection		IP67	
Operating temperature range	[°C]	–20 to +55	
Storage temperature range	[°C]	–40 to +85	
Dimensions (L x W x H)	[mm]	300 x 300 x 71	

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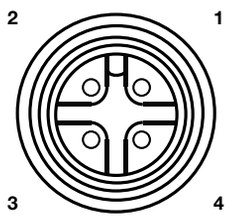
Power Supply

M12, A-coded, 4-pin, male

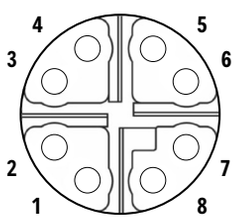


Pinout Power Supply

Pin	Allocation
1	+24 V DC
2	GND
3	GND
4	+24 V DC

Ethernet

M12, X-coded, 8-pin, female



Pinout communication PoE+

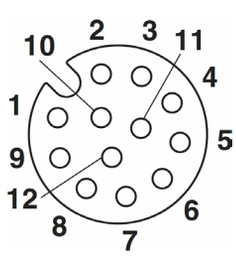
Pin	Allocation
1	TX+ / PoE+1
2	TX- / PoE+1
3	RX+ / PoE+2
4	RX- / PoE+2
5	PoE+1
6	PoE+1
7	PoE+2
8	PoE+2

Pinout communication LAN

Pin	Allocation
1	TX+
2	TX-
3	RX+
4	RX-
5	
6	
7	
8	

GPIO

M12, A-coded, 12-pin, female



Pinout general purpose input output

Pin	Allocation	Pin	Allocation
1	OUT_CMN	7	UB
2	OUTPUT_1	8	OUTPUT_4
3	INPUT_3	9	OUTPUT_3
4	INPUT_CMN	10	OUTPUT_2
5	INPUT_1	11	INPUT_2
6	GND	12	INPUT_4

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