*Kapsch TrafficCom*

Kapsch SRU-8110.
RFID UHF Reader 18000-63.

The Kapsch SRU-8110 is a high-performance and cost-effective RFID reader excellent suited for various Automatic Vehicle Identification (AVI) applications. The SRU-8110 enables customers to benefit from the rapidly evolving passive UHF RFID technology and the excellent cost-benefit ratio of RFID reader products compliant to the global EPC Class 1 Gen2/ISO 18000-63 standard. For global deployments the SRU-8110 reader is available in different product variants, pre-adjusted to specific frequency ranges within the 860-960MHz band of the UHF RFID spectrum and configurable according to local UHF radio regulations.

The Kapsch SRU-8110 reader is suitable for various ITS (Intelligent Transport System) applications ranging from traditional parking applications to high-speed, free-flow applications for Electronic Vehicle Registration (EVR) and Electronic Toll Collection (ETC).

The embedded Linux controller serves as a powerful application platform for highly scalable traffic solutions. The high degree of expandability of the application platform enables future enhancements of the identification performance of vehicles and the associated security functions, thereby protecting investments in the road-side infrastructure. Based on the latest RFID standards, such as EPC Gen2v2/ISO 18000-63, the Kapsch SRU-8110 reader supports all market leading RFID Transponder Chip Features
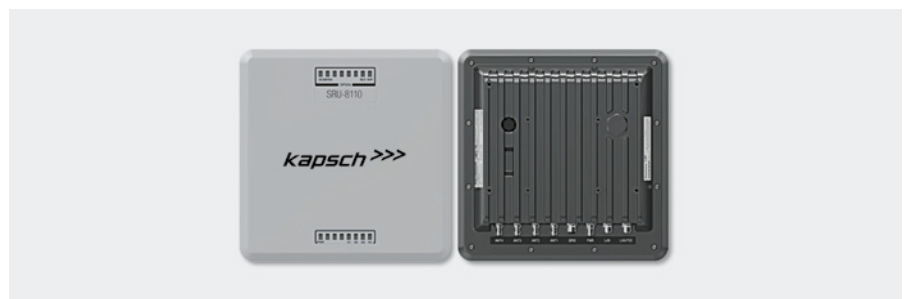
for security, authentication and encoding (e.g. NXP's UCODE DNA).

The Kapsch SRU-8110 reader is housed in a robust, die-cast, aluminum case with IP67 protection class. This makes the reader also suitable for outdoor use in a ruggedized environment.

Up to four external antennas can be driven

by the reader device. The RFID reader can also interface with external sensors, or control external devices via general purpose digital inputs and outputs.

The SRU-8110 reader has twelve freely programmable, multicolor LED elements integrated on the front side of the reader that facilitate direct interaction with the user.

The Kapsch SRU-8110 reader is equipped with an Ethernet communication interface allowing high-performance integration with roadside lane controllers via TCP/IP. In order to simplify the connection of remote RFID reader devices the Kapsch SRU-8110 reader utilizes the power-over-Ethernet technology compliant to the IEEE 802.3at standard, also known as PoE+. This enhanced power-over-Ethernet standard is designed for higher performance and allows an RFID transmission power of 2W with-out an external power supply.

Initial parameterization of the reader device is supported by an MS Windows™ application with a graphical user interface. The application also allows execution of basic reader device functions and offers selectable parameter sets compliant to the ISO 18000-63 standard and to national radio regulations, with respect to frequency allocation and maximum emitted RF power.

Various accessories to the Kapsch SRU-8110 reader are available as part of the product range offered by Kapsch.
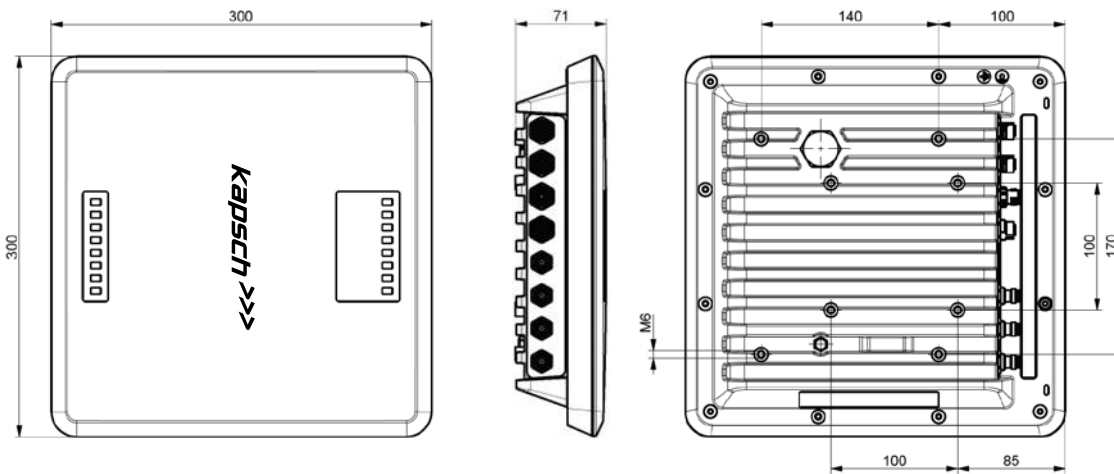
Technical data of the SRU-8110 series.

Type		SRU-8110-EU ETSI Version	SRU-8110-US FCC Version
Order No.		**34032600010**	**34032600110**
RFID			
Frequency range	[MHz]	865 – 868	902 – 928
Impedance antenna port	[Ohm]	50	50
max. TX power conducted	[dBm]	33	(33 dBm with ext. cable length)
max. TX power radiated	[ERP (ETSI)/ EIRP (FCC)]	33	36
RX sensitivity	[dBm]	typ. −80	typ. −80
Number of antenna ports	[R-TNC]	4	4
Standards		EN302208-2 V2.1.1, EN301489-3, EN50364, EN62368-1, EN60529, EPC Gen2 V2, UCODE DNA	FCC Part15, UL, IC, EPC Gen2v2, UCODE DNA
Voltage			
Local supply	[VDC]	+10 to +30	
Connector		M12, A-coded, 4-pole	
Remote-fed	[VDC]	PoE+ according to 802.3at (35-57) (internal supply of GPIO-VCC-Pin not possible with PoE+)	
Connector		M12, X-coded, 8-pole, port 1 only	
Power consumption			
Local supply	[W]	25,4	
Remote-fed	[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 visualization			
Freely programmable		12	
Fixed		1 (power LED)	

GPIO

Type		4 inputs, 4 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 600MHz
Flash memory eMMC	[Gbyte]	4
RAM DDR2	[Mbyte]	128
Operating system		Linux

Mechanical Properties

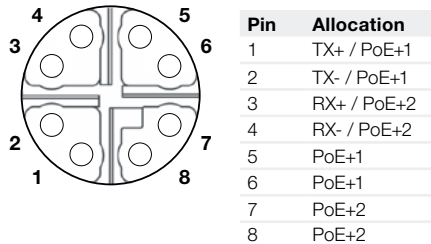|		
Weight	[kg]	4.00
Degree of protection		IP67
Operating temperature range	[°C]	−20 to +55
Storage temperature range	[°C]	−40 to +85
Dimensions (L x W x H)	[mm]	300 x 300 x 71

Dimensions [mm]:
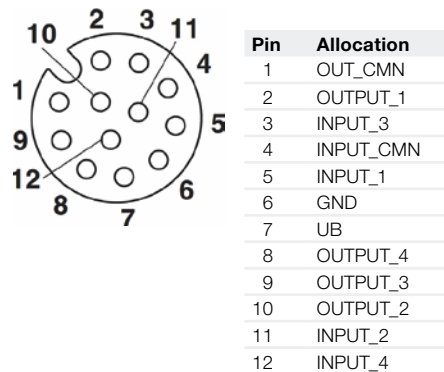

Power supply:
M12, A-coded, 4 pin, male

Pin	Allocation
1	+24V DC
2	GND
3	GND
4	+24V DC
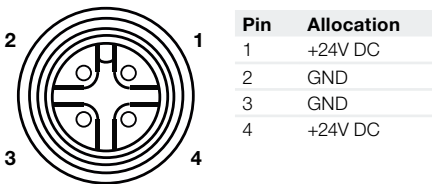
Ethernet:
M12, X-coded, 8 pin, female

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

GPIO:
M12, A-coded, 12 pin, female

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

Kapsch TrafficCom

Kapsch TrafficCom is a provider of intelligent transportation systems in the fields of tolling, traffic management, smart urban mobility, traffic safety and security, and connected vehicles. As a one-stop solutions provider, Kapsch TrafficCom offers end-to-end solutions covering the entire value creation chain of its customers, from components and design to the implementation and operation of systems. The mobility solutions supplied by Kapsch TrafficCom help make road traffic safer and more reliable, efficient, and comfortable in urban areas and on highways alike while helping to reduce pollution.

Kapsch TrafficCom is an internationally renowned provider of intelligent transportation systems thanks to the many projects it has brought to successful fruition in more than 50 countries around the globe. As part of the Kapsch Group, Kapsch TrafficCom has subsidiaries and branches in more than 30 countries. It has been listed in the Prime Market of the Vienna Stock Exchange since 2007 (ticker symbol: KTCG). Kapsch TrafficCom currently has more than 5,200 employees, and generated revenue of approximately EUR 693.3 million in fiscal year 2017/18.

>>> www.kapsch.net