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# Kapsch SRU-8100 RFID Reader 18000-63.



The Kapsch SRU-8100 is a high-performance and cost-effective RFID reader ideally suited for Automatic Vehicle Identification (AVI) applications, allowing customers to capitalize on the benefits of 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 Kapsch SRU-8100 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-8100 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).

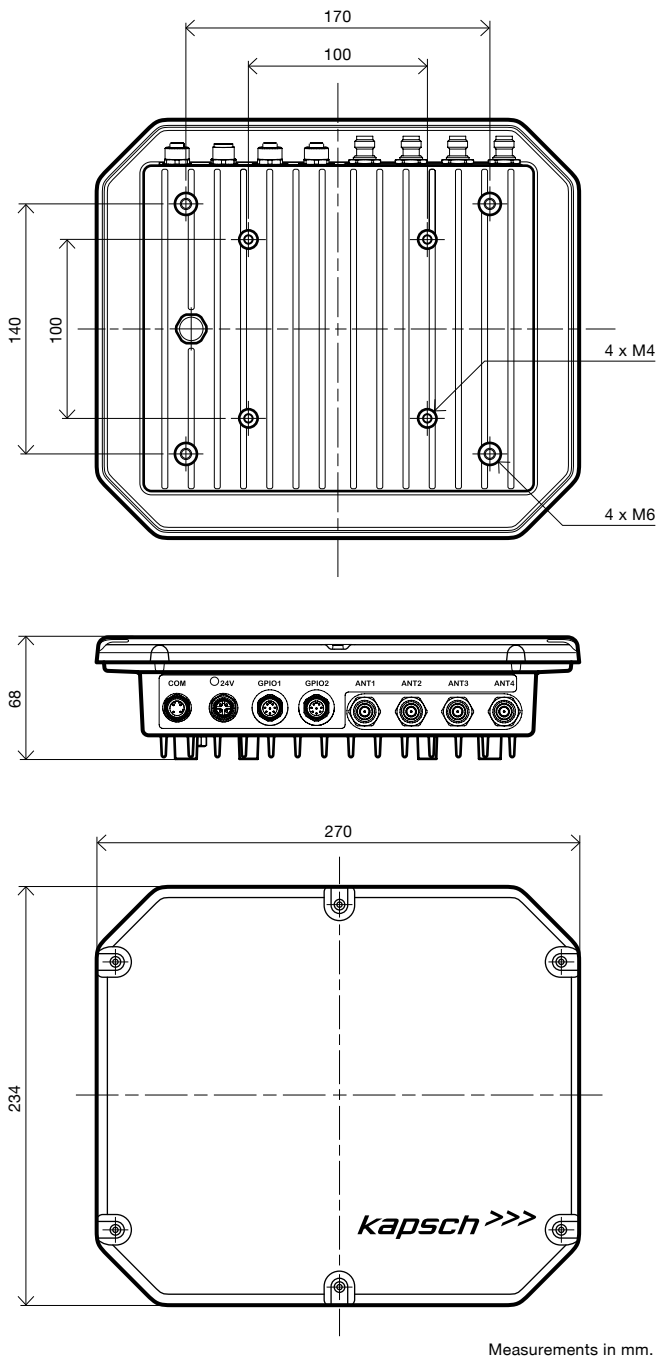
The embedded Linux controller of the Kapsch SRU-8100 reader serves as a powerful application platform for highly scalable traffic solutions. The high degree of expandability of the application platform enables future enhancements of the identification performance of vehicles and the associated security functions, thereby protecting investments in the road-side infrastructure. By means of additional software extensions, the operational reliability and accuracy of the RFID transponder identification, e. g. in

single-lane installations, can be further enhanced. In multi-lane installations, the SW extensions coordinate multiple reader devices to identify all passing vehicles on different lanes of the highway with high reliability.

The Kapsch SRU-8100 reader is housed in a robust, die-cast, aluminum case. This makes the reader also suitable for outdoor use. The reader device can drive up to four external antennas, can interface with external sensors, or can control external devices via general purpose digital inputs and outputs. Various RFID antennas with different RF characteristics are available for use in combination with the reader device to ensure the most suitable footprint for the antenna beam within the vehicle capture zone for different site conditions. Wall and pole mounting kits

are also part of the product range available from Kapsch.

The Kapsch SRU-8100 reader is equipped with an Ethernet communication interface allowing high-performance integration with roadside lane controllers via TCP/IP. Initial parameterization of the reader device is supported by an MS Windows® application with a graphical user interface. The application also allows one to execute 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.



### Technical features for the SRU-8100 series

<b>Product variant SRU-8100-EU</b>	<ul style="list-style-type: none"> <li>ETSI frequency band (865-868 MHz)</li> <li>RF output power (measured on antenna port): max. +30 dBm (+3 dB cable loss compensation)</li> <li>Order No: 34032600000</li> </ul>
<b>Product variant SRU-8100-US</b>	<ul style="list-style-type: none"> <li>FCC frequency band (902-928 MHz)</li> <li>RF output power (measured on antenna port): max. +30 dBm (+3 dB cable loss compensation)</li> <li>Order No: 34032600100</li> </ul>
<b>Power supply</b>	<ul style="list-style-type: none"> <li>+24 VDC (+/- 10%)</li> <li>800mA (w/o use of GPIO outputs)</li> <li>max. 2500mA (incl. GPIO outputs)</li> </ul>
<b>Interfaces</b>	<ul style="list-style-type: none"> <li>4x TX/RX antenna ports, 50 Ohm TNC reverse (male) connectors</li> <li>Ethernet 100BaseT: TCP/IP, IPv4 and IPv6 supported</li> <li>GPIO: 4 isolated inputs, 4 isolated outputs</li> <li>1x LED + 1x Buzzer status indication</li> </ul>
<b>Embedded Controller</b>	<ul style="list-style-type: none"> <li>Processor: OMAP3 1 GHz</li> <li>Flash memory: SSD with 512MB, eMMC 4GB</li> <li>RAM: 512MB 200 MHz DDR SDRAM</li> <li>Linux operating system</li> </ul>
<b>Environmental Conditions</b>	<ul style="list-style-type: none"> <li>Operation: -20 °C to + 55 °C</li> <li>Storage: -40 °C to + 85 °C</li> <li>Ingress Protection: IP65</li> <li>Rel. humidity: 95% (non-condensing)</li> <li>Vibration: <ul style="list-style-type: none"> <li>5 – 25,7 Hz, 7,5 mm displacement</li> <li>25,7 – 150 Hz, 20 G acceleration</li> </ul> </li> <li>Shock: 50 G at 11 ms duration</li> <li>MTBF: 125 446 h (@55 °C)</li> </ul>
<b>Mechanical</b>	<ul style="list-style-type: none"> <li>Aluminum die-cast, plastic cover</li> <li>Dimension : 270 x 234 x 68 mm</li> <li>Weight: 2,8 kg</li> </ul>
<b>Compliance</b>	<ul style="list-style-type: none"> <li>EPC Class1 Gen2/ISO 18000-63</li> <li>FCC, UL, CE</li> <li>RoHS2, WEEE</li> </ul>
<b>RF performance</b>	<ul style="list-style-type: none"> <li>Sensitivity: typ. -80 dBm</li> <li>Nominal output power: software adjustable from +17 dBm to +33 dBm</li> <li>Dense Reader Mode (DRM)</li> </ul>
<b>Accessories</b>	<ul style="list-style-type: none"> <li>Linear or circular polarized flat panel antennas</li> <li>Wall and Pole Mounting Kit</li> <li>Low loss RF cables</li> <li>Ethernet cable</li> <li>GPIO cables</li> <li>Power supply</li> <li>Shipment: <ul style="list-style-type: none"> <li>Kapsch SRU-8100 reader device</li> <li>Protection caps for unused connectors</li> <li>10 m power cable with open end</li> <li>CD-ROM with manuals and software</li> </ul> </li> </ul>

### About Kapsch Group.

Kapsch is one of Austria's most successful technology corporations to specialize in the future-oriented market segments of intelligent transport systems (ITS) and information and communications technology (ICT). Kapsch. Always one step ahead.