



The EDGE-60R-M reader is a UHF RFID reader that combines the technology and performance of the M6e Micro Module with the durability of industrial equipment, all in a single device. It has been meticulously designed to endure the most challenging environments, being especially suitable for vehicle identification systems, especially in toll applications.

Certificação SJ5511 - Protocolo **ARTESP**  
Artefato: #R2017080101

Homologação  
01371-17-08437 **ANATEL**

Advanced technology and exceptional performance of the M6e Micro Module;

Robustness and durability of industrial equipment, designed to withstand harsh environments;

It has an IP66 rating, making it suitable for installation in outdoor environments;

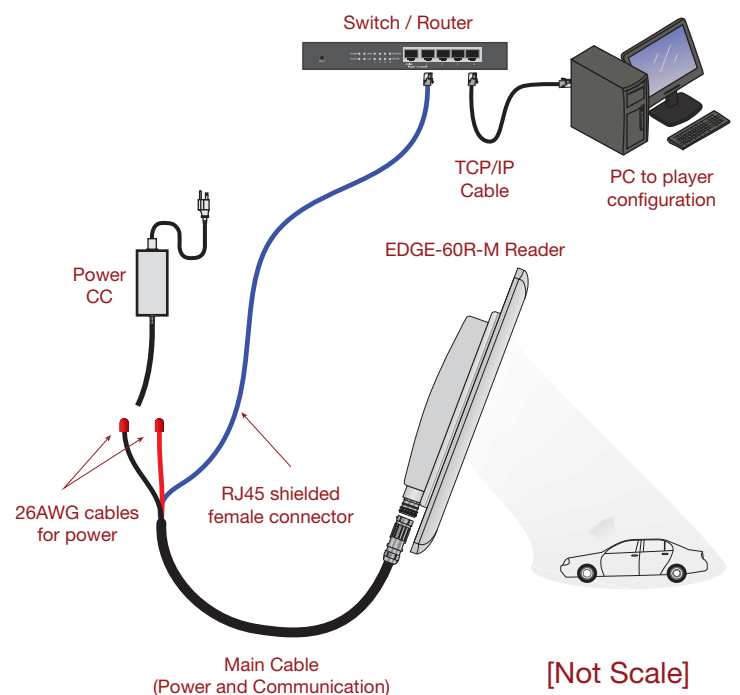
Ethernet connection for integration and data reception;

Ideal for vehicle identification systems, offering accuracy and reliability;

Specially developed for toll applications, ensuring a fast and efficient reading;

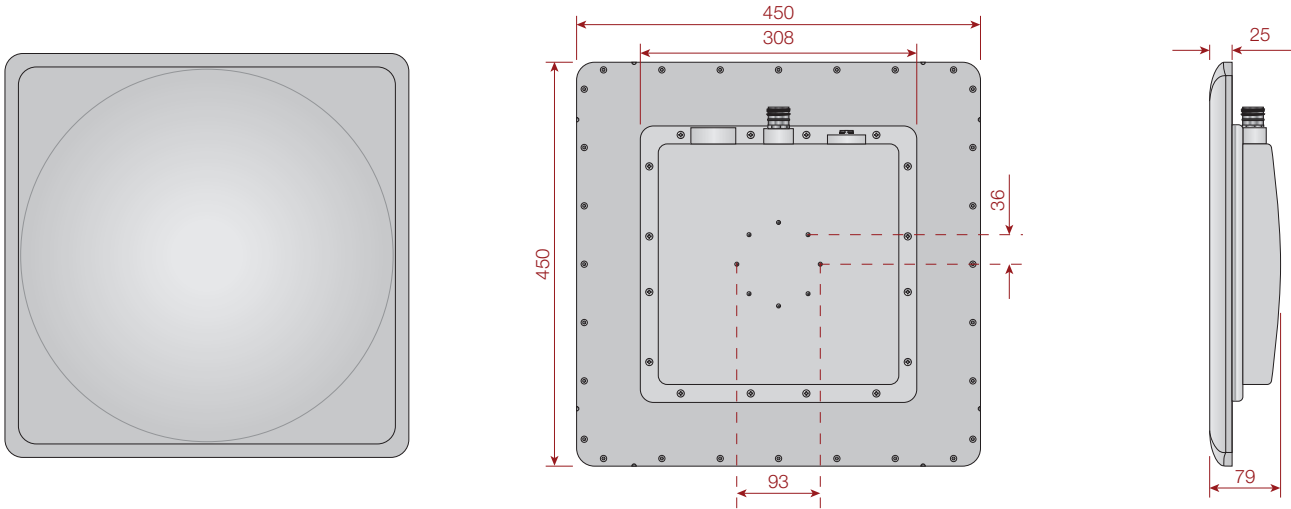
Advanced security features to protect data integrity.

## General Diagram





## Dimensions [mm]



Protocols	ARTEFATO PA SJ5511 v.1.01 <sup>1</sup> SINIIV G0 v.1.0.01 BRASIL-ID P63 EPC Gen2 (ISO 18000-6C) ISO 18000-6B
Artefato PA SJ5511 Protocol	Activate_Secure_Mode Authenticate_OBU
Siniiv G0 Protocol	Activate_SINIIV_Mode OBU_Auth_ID OBU_Auth_Full_Pass1 OBU_Auth_Full_Pass2 OBU_Auth_Full_Pass (Pass1 + Pass2) OBU_ReadFromMemMap OBU_WriteToMemMap
Brasil-ID P63 Protocol	ReadSec   WriteSec
EPC Gen2 (ISO 18000-6C)	All mandatory commands (Read, Write, Lock, ReadMemBlock, WriteMemBlock, etc)
RF output power	Separately configurable read and write power from 5 to 30 dBm with 0.5 dBm increment above +15 dBm <sup>2</sup>
Mode	Frequency Hopping or Fixed Frequency (Table of configurable frequencies)
RF Modulation	PR-ASK
RF Codification	FM0, Miller M2, M4 and M8
Backscatter Link Frequency (BLF)	250 kHz, 320 kHz and 640 kHz
Maximum read rate	Up to 750 tags / second (Using the high-performance settings)
Maximum reading distance	More than 9 meters using integrated 12.5 dBi antenna (36 dBm EIRP) <sup>3</sup>

### Data / Control interface

Data communication	<b>Ethernet:</b> 10/100 Mbps communication speed 1.5KVCA galvanic isolation. Surge protection (overvoltage and overcurrent) with GDT COORDINATE CIRCUIT - TBU - TVS
Programming	API SDK (Software Development Kit) at no cost in the following languages: C#/ .Net, Java, C. (Sample source code and demo software provided)
Environment Tests	Low temperature: IEC 68-2-1 (72h -55°C) High temperature: IEC 68-2-2 (72h +71°C) Temp. cycle: IEC 68-2-14 (1h -45°C +71°C) Vibration: IEC 60721-3-4 (30 min/eixo 4M3) Mechanical shock: IEC 60721-3-4 (4M3) Relative humidity: ETSI EN300-2-4 T4.1E (144h 95%) Water resistance: IEC 529 (IP64) Solar radiation: ASTM G53 (1000h) Wind speed: Operation 160 Km/h / Limit supported 220 Km/h Wind load (limit supported): Front 58,3 Kg / Side 3,9 Kg

### Environmental

Operating temperature	-10°C to + 65°C
Storage temperature	-10°C to + 70°C
Relative humidity	95%
IP Rating	IP66 (with the M23 connector properly locked in the reader)



**Electrical**

Power	Input voltage: 24 VDC $\pm$ 1% Maximum Ripple supply: 200 mVpp
Consumption	Maximum 15 W. With maximum power of 30 dBm and high duty cycle

**Physical**

Integrated antenna	linear polarization (Vertical or Horizontal)
Dimensions	450 x 450 x 79 mm
Weight	6 kg $\pm$ 0,5 kg

**Integrated Antenna**

Frequency	865 MHz to 868 MHz
Gain	12,5 $\pm$ 0,5 dB
Beam width 3dB	42° (typical)
Polarization	Linear horizontal or vertical

Level of side lobes	-19 dB (máx.)
Front-sided ratio	-24 dB
Input impedance	50 Ohms
Input power	6 W (máx.)
Lightning protection	DC Grounding
Material	Front: Sturdy plastic Back: Alumínio
Operating temperature	-10°C to + 65°C
Storage temperature	-10°C to + 70°C

<sup>1</sup> Brazilian protocol standards for toll and supply chain applications.  
<sup>2</sup> The maximum power must be reduced to respect the regulatory limits of the region, depending on the combination of Reader, Antenna, Cable, etc.  
<sup>3</sup> The reading distance may vary according to the tag, cable and reader usage environment.

**Part Number:**

100.747: UHF Reader ACURA EDGE-60R-M\_IN

**Accessories:**

100.431: Cable EDGE-60R-M - 60 meters TCP/IP | 100.477: Cable EDGE-60R-M - 35 meters TCP/IP | 100.595: Cable EDGE-60R-M - 40 meters TCP/IP | 100.679: Cable EDGE-60R-M - 30 meters TCP/IP | 100.598: Cable EDGE-60R-M - 5 meters TCP/IP | 100.593: Cable EDGE-60R-M - 10 meters TCP/IP | 100.617: Cable EDGE-60R-M - 26 meters TCP/IP | 100.499: Cable EDGE-60R-M - 50 meters TCP/IP