

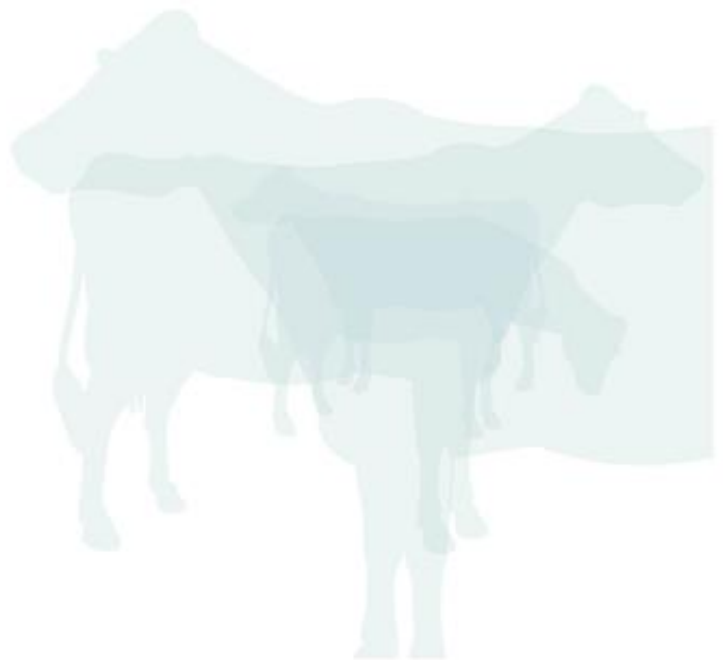
SCR

BU-500-LU

SPECIFICATIONS

[CONFIDENTIAL]

Zeev K.
Version 0.3



Version History:

0.10	Initial version
0.2	Product Name change to BU-500-LU
0.3	FCC label correct

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BU-500-LU Contains FCC ID: AMULDLUMODULE

Manufacturer: SCR Engineers Ltd.

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

The FCC Wants You to know

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Warning

Changes or modifications to this equipment not expressly approved by the party responsible for compliance (SCR Engineers Ltd.) could void the user's authority to operate the equipment

1 Global system specifications

All units are for outdoor use, required Radio regulations according to target market & Low voltage 24VDC regulation (except for tags which powered by internal battery).

2 Target market

- Europe (EU), Swiss, Norway
- USA, Canada
- Eastern/North Europe (Belarus , Ukraine, Baltic states & All former Soviet union republic)
- South/Center America (Brazil, Argentina, Chile, Columbia, Peru, Ecuador, Mexico)
- China
- Japan
- Vietnam
- South Korea
- India
- New Zealand
- Australia
- South Africa
- Turkey
- Israel

3 System components

BU-500-LU – Locating Unit for Wireless locating and Tracking of the cow's position.

BU-500/E – LD Base unit, with RS485 or RS232 serial network interface and RF transceiver.

H-TAG-LD – Activity based tag with RF transceiver & IRDA receiver.

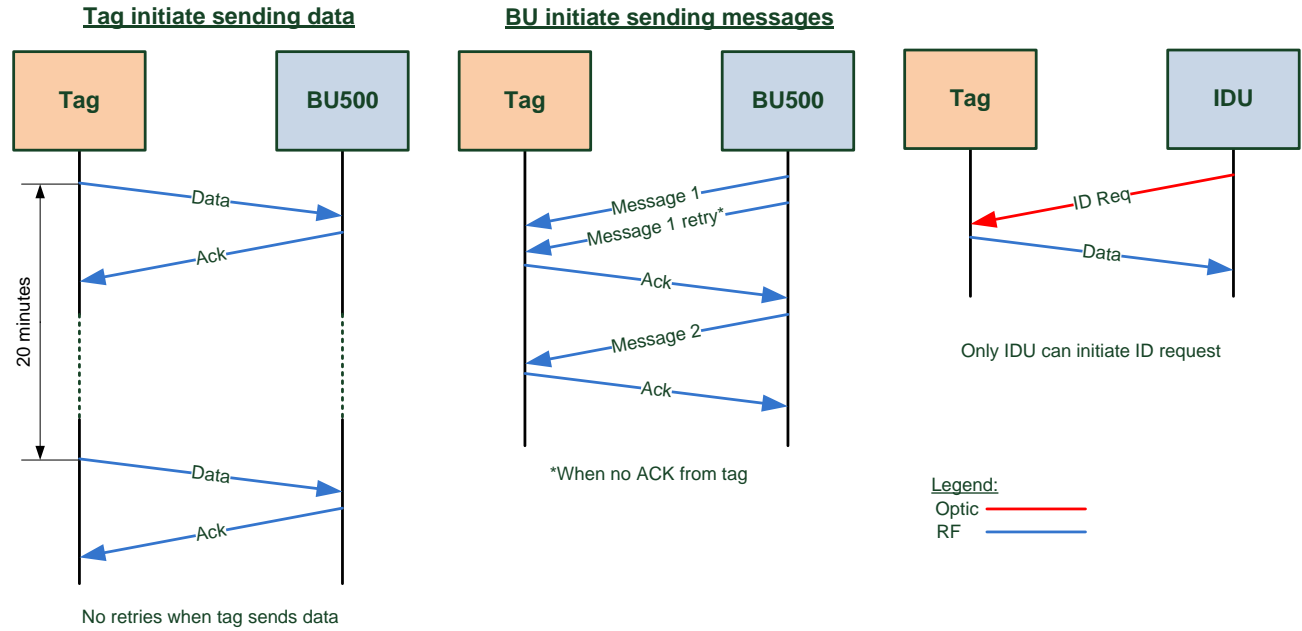
HR-TAG-LD – Activity & Rumination based tag with RF transceiver & IRDA receiver.

IDU530 – Tag identification unit with CAN-Bus network interface, IRDA transmitter & 2.4GhZ Receiver ONLY.

IDU510 – Tag identification unit with SCR C.L. network interface, IRDA transmitter & 2.4GhZ Receiver ONLY.

BU-500E – LD Base unit, with 10BASE-T/100BASE-TX Ethernet network interface.

4 TAG/IDU/BU communication overview

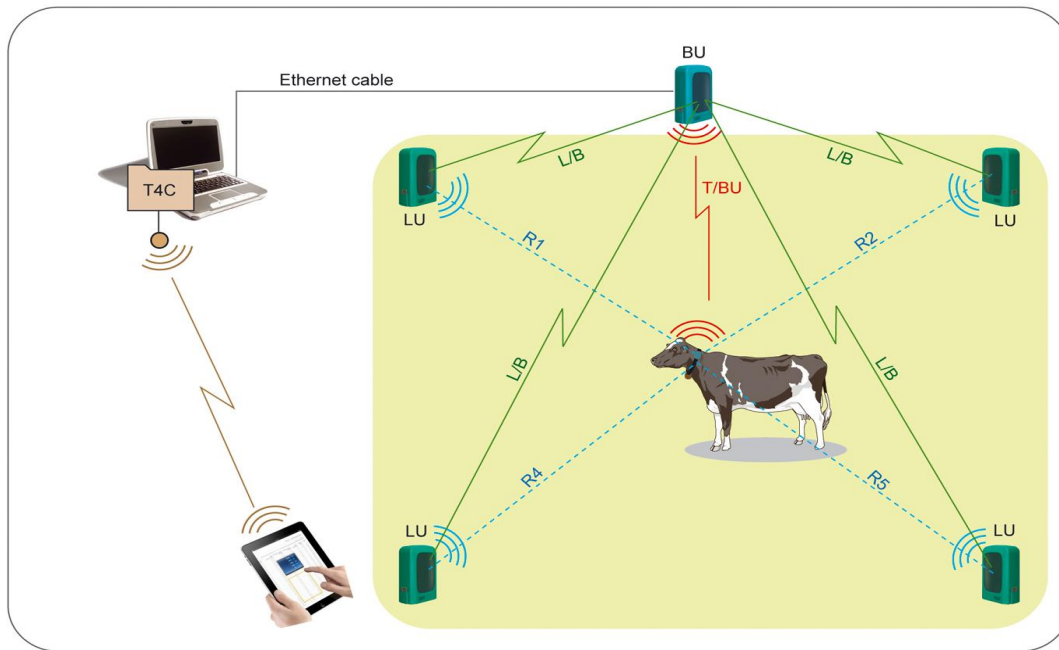


5 BU-500-LU

BU-500-LU (Location Unit) is a unit used to collect messages from tags and send them to central management system.

The unit replies to each tag upon receiving a message. They unit is also used to set various tag parameters and to update software inside the tag.

Outdoor unit powered from limited 24V DC via external AC to DC PS – 110/220VAC.



5.1 BU-500-LU Radio Parameters

Standalone LD-LU Module FCC ID: AMULDLUMODULE

RF Transceiver: Atmel AT86RF233

RF Frequency: 2.4GHz

Modulation type: QPSK

RF Channels: 16 RF Channels

Baud Rate: 250K Bit/Sec (Not configurable)

RF Module output power: 3dBm

5.2 BU-500-LU Units contains Internal Antenna

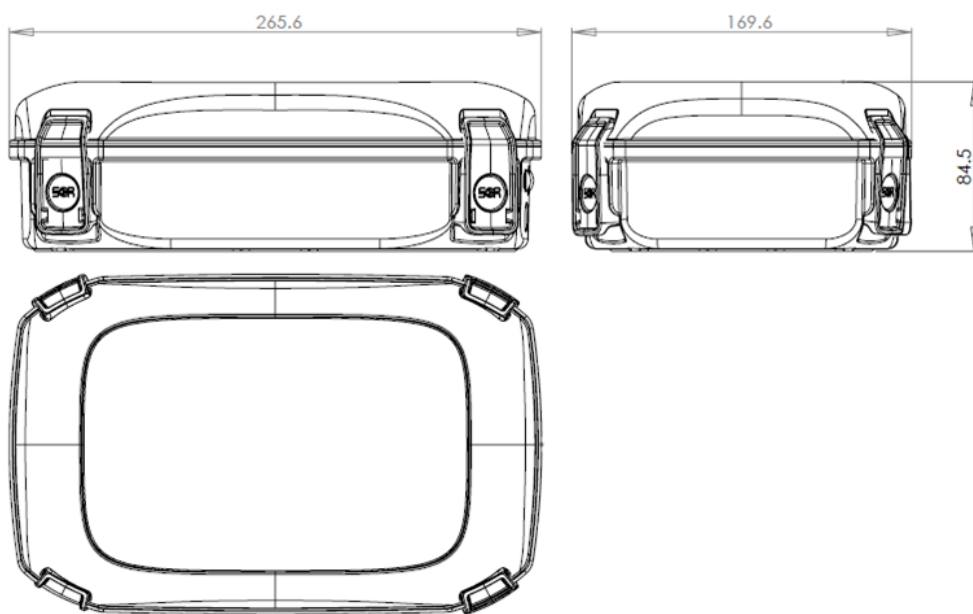
Internal Antenna type: Internal diversity patch antenna, ~11dBi, directional (beam width 100deg)

Average RF data:

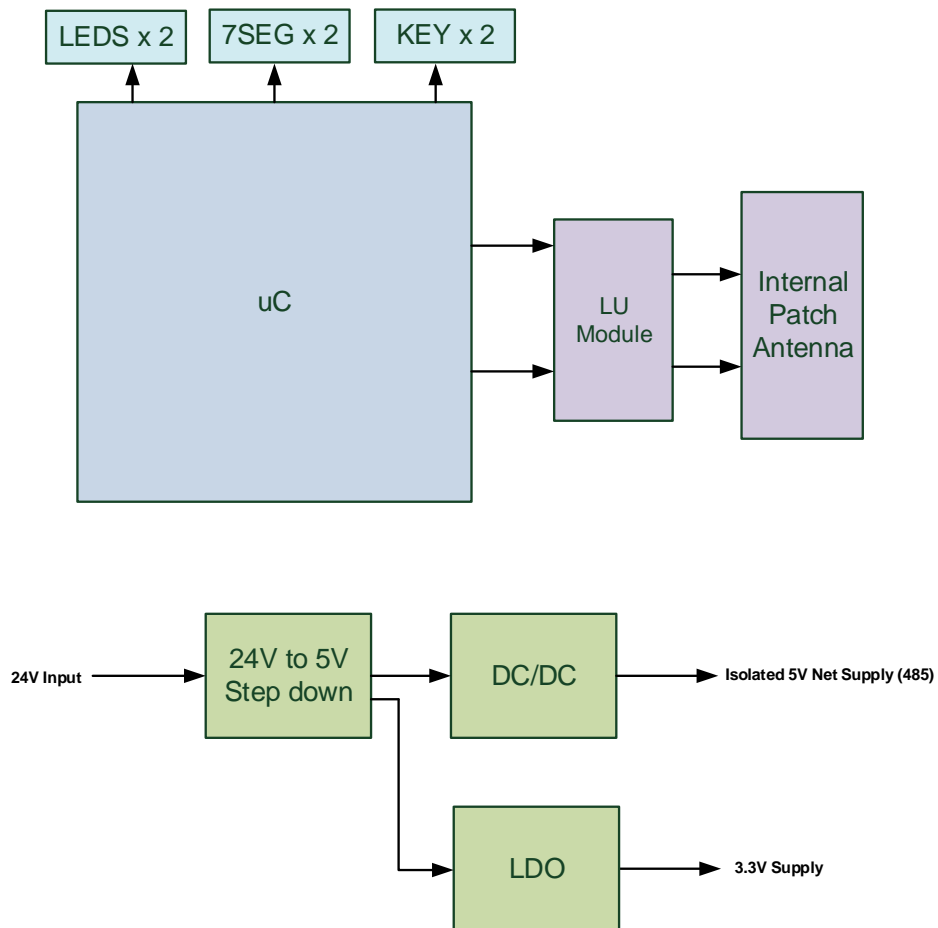
Standby: 6 messages per hour, 20byte/message.

Operating: 10 messages per second ~100 bytes/message.

5.3 Mechanical dimensions

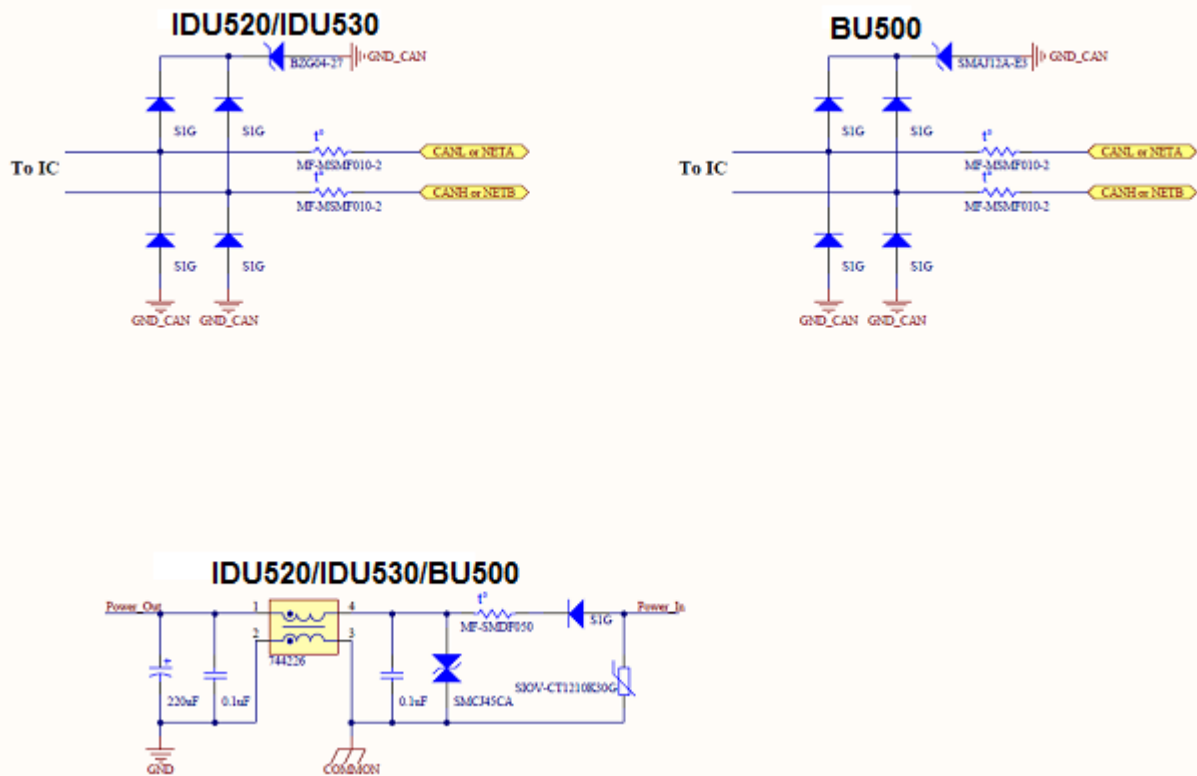


5.4 Block diagram



BU-500-LU Block diagram

5.5 Circuit protections



5.6 Environmental Conditions

1. IP – required IPx5.
 2. Operational temperature -33°C to 50°C.
 3. Storage - TBD
 4. Transportation
- Complies with ETS 300 019 -2-2 T2.3
Complies with ETS 300 019 -2-1 T 1.2

6 BU-500-LU Installation

BU-500-LU is the SCR Base Station unit that enables coverage of a large area, 500m x 200m. The BU-500-LU is connected to BU-500 by RF Link.

The Antenna portion of the BU-500-LU must be installed at least 3 Meters above ground or 1 Meter below the rafters when installed inside a building.

