# WiSN_v5.0.0 – Product Book (Part 1)
# (starting from WiSN_v4.3.0 project)

Wi4B Doc.rev.20220928

## Description: WiSN with JN5169 Chip (Module-on-PCB)

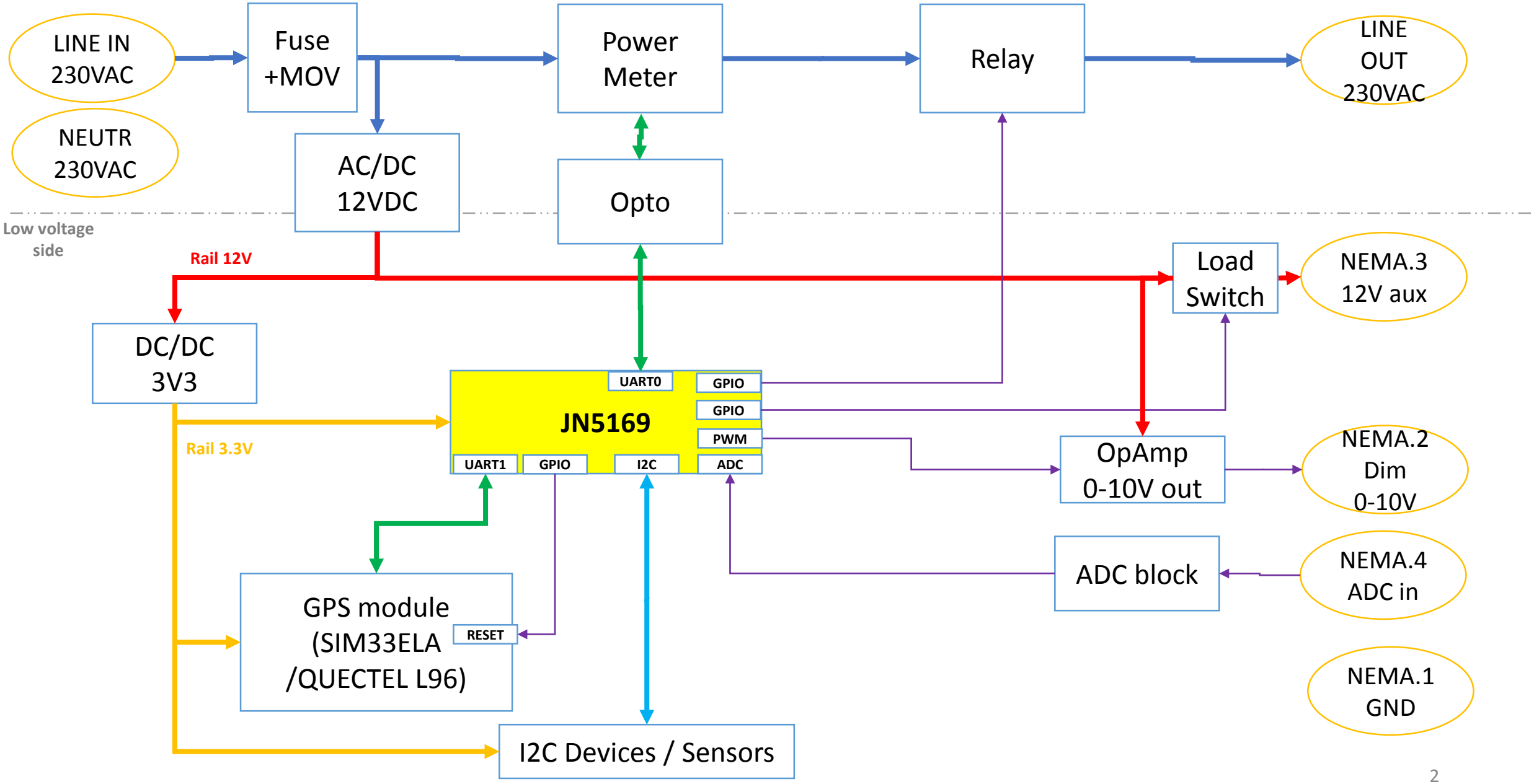
**Starting from WiSN v4.3.0, make the following changes:**

- Assign new version v5.0.0 to project
- Change JN5168-M06 module with JN5169 Chip (use the JN5169 block of WiCL_v1.0)
- Maintain AC side components
- Maintain the same PCB position for the main components
- Maintain the same position for Prog Header and Debug Header (for existing JIG test)
- If necessary make some PCB placement optimization

The changes are detailed in the following pages

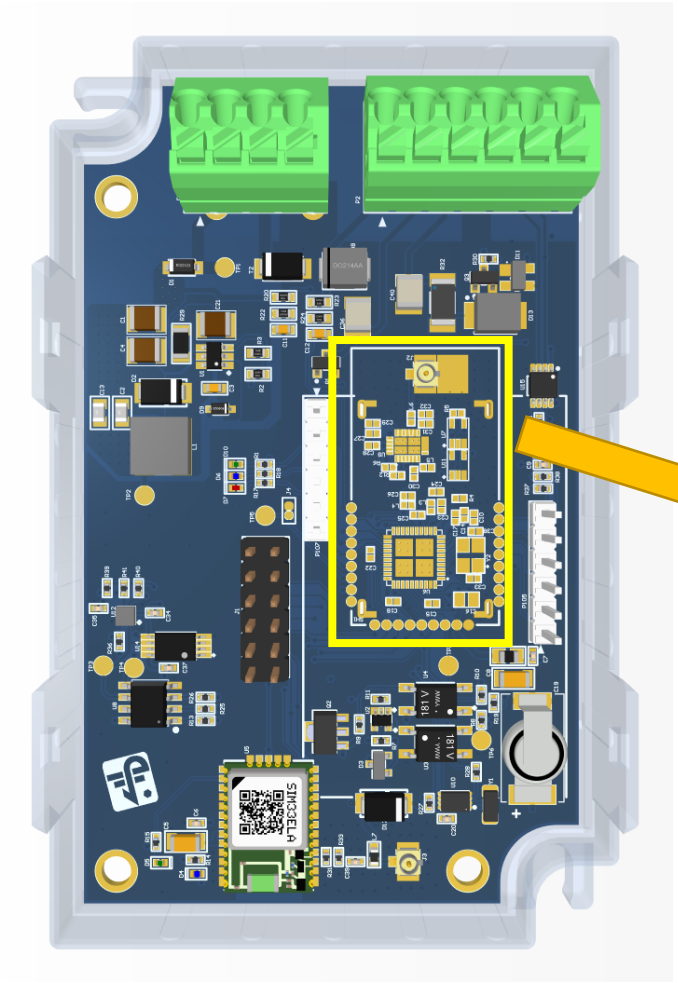
# WiSN_v5.0.0 - Block Diagram

→ Changes in this version

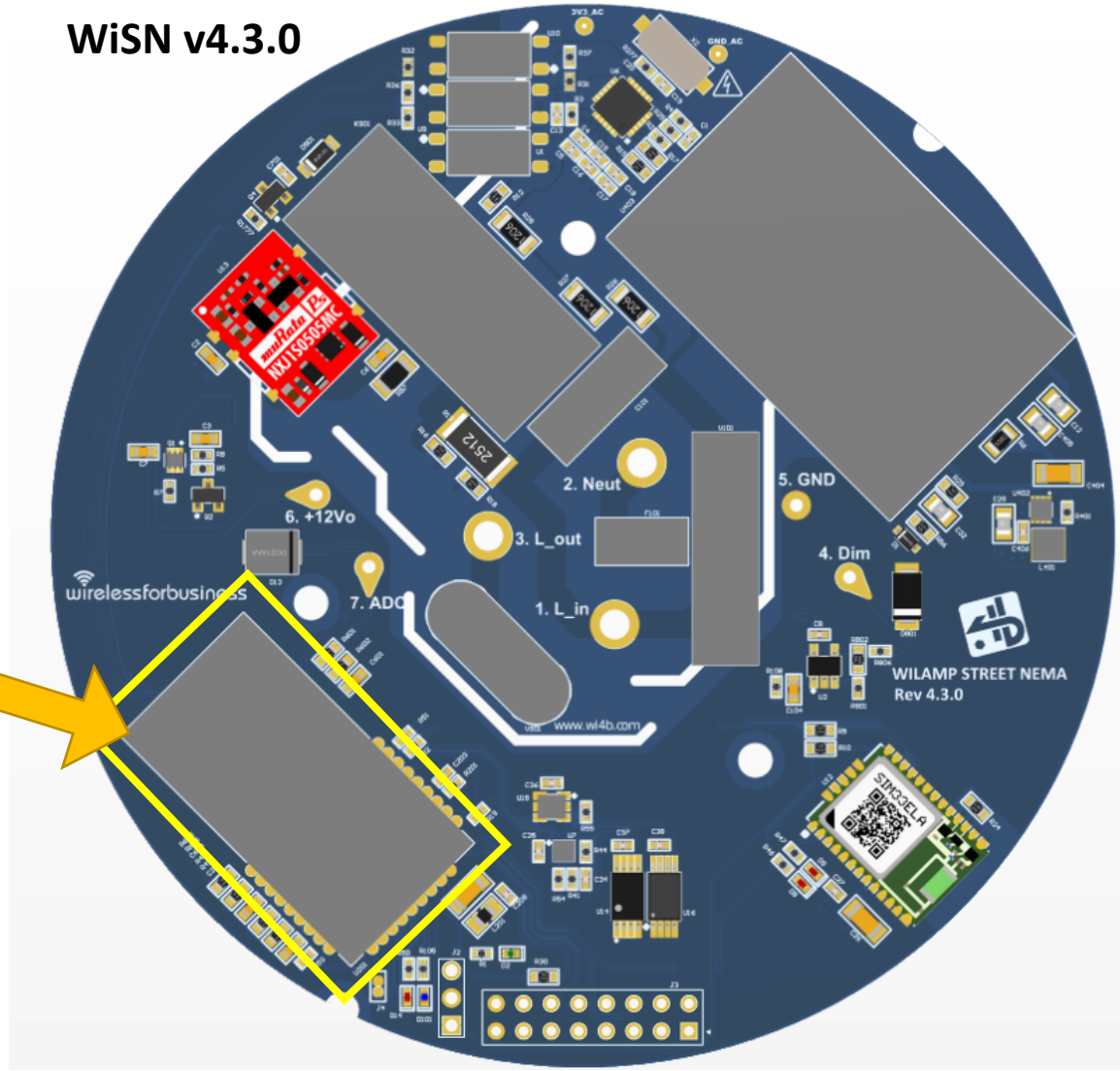


- **Change JN5168-M06 module with <u>JN5169 Chip</u> (use the JN5169 block of WiCL_v1.0)**

**WiCL 1.0**
with JN5169 module on PCB



**WiSN v4.3.0**



## JN5169 – Pinout connections

See the '***WiSN_v5.0.0 - JN5169-MoB Pin assignment.xlsx***' for Jennic connections

## J2 – DEBUG Header Pinout

UART1 DEBUG HEADER

**J2 (Top View)**

| | | dir | | |
|---|---|---|---|---|
| 1 | JENNIC TXD1 / (GPS_RX) | ▶ | out | JENNIC Debug output + PMTK command to GPS |
| 2 | GND | | | |
| 3 | JENNIC RXD1 / GPS_TX | ▶ | out | NMEA Sentence output |

## J3 – PROG Header Pinout

PROG HEADER

**J3 (Top View)**

| | dir | | | | | dir | |
|---|---|---|---|---|---|---|---|
| | | | 2 | 1 | +3.3V | | |
| | | | 4 | 3 | JENNIC TXD0 | ▶ | out |
| in | ▶ | JENNIC_RESET_L | 6 | 5 | JENNIC RXD0 | ◀ | in |
| | | | 8 | 7 | JENNIC PROG | ◀ | in |
| | | | 10 | 9 | PIC MCSP_DAT | ◀▶ | in/out |
| in/out | ◀▶ | JENNIC I2C_SDA | 12 | 11 | PIC MCSP_CLK | ◀ | in |
| out | ◀ | JENNIC I2C_SCLK | 14 | 13 | PIC MCLR_L | ◀ | in |
| | | GND | 16 | 15 | GND | | |

## AC part / Isolation Slot - considerations

Some modifications to this part of the PCB will be required to increase the mechanical strength.

In current versions it occasionally happens that the welds of the Murata DC / DC break / crack.
We have noticed that as a result of external stresses, the two parts of the PCB, separated by the too long slot, undergo deformations at that point that cause the weld to break.

A solution could be to distance the Murata from the Relay in order to have more space in between and space for a slot with a different layout and possibly shorter under the Murata.

We are considering this point, we will give you more details later on how to proceed with the placement of the components