DESCRIPTION

— Modem is a central controller of the system and must be always active, when the system is running
— Modem's HW supports up to 250 beacons – mobile + stationary – in any combination
— Modem is used to set up the system, monitor it, and interact with the Dashboard
— Modem can be placed anywhere within the radio coverage for permanent radio connection with all beacons (star architecture) — usually, in the radius of up to 100 meters with antennas from the Starter Set
— Radio coverage can be extended farther to a few hundred meters by using a radio profile with lower bitrate, for example, 38kbps and a full-size antenna on both ends (modem & beacon). The option shows up to 400+ m range in ideal conditions
— There is currently only 915/868MHz of modem version available for Modem v5.1. The 433MHz version can be produced for 100+ pcs order within 5 weeks
— A proprietary radio protocol used for communication and synchronization
— More on modem interfaces: https://marvelmind.com/download/

Modem v5.1 vs. Modem v4.9 comparison

Modem v5.1 is a newer and nearly in all aspects superior version of Modem v4.9. Modem v5.1 is recommended for new designs.

Modem v4.9 will continue be supported in new SW releases. But all new SW features will be introduced to Modem v5.1 only.

	Modem v5.1	Modem v4.9
TX output power	4x*	x
RX sensitivity	11x**	x
Processor	10x	x
Certification	– T108 (Japan): 018-200238 – FCC (US): 2AL2L-MODEM51 – Other certifications – on request	– FCC ID: 2AL2L915MHZM – No new certifications
SW support	– Supported in new SW releases – New SW features added	– Supported in new SW releases – No new features added
Bands	– 868/915MHz – On request	– 868/915MHz – 433MHz

* Gives up to 2 times longer range with equal other conditions. Can be limited due to certification. For example, the maximum allowed power for the TELEC T108 Japanese certification is +2dBm

** Gives up to 3.5 time longer range with equal other conditions. Can be limited by external noise or interference.