



TESLANET AMI DATA COLLECTORS

We've got you covered.

Tesla Net is a two-way, 450 MHz, point-to-multi-point Licensed Private Network (LPN) for smart water and gas AMI meters. LPN data collectors use the 450-470 MHz band because licensed frequencies are quiet and do not require transmission signals to compete with other RF technologies as the unlicensed 900 MHz and LoRa bands do. 450 MHz signal waves are lower, so they penetrate objects better and transmit much farther just like bass notes in music carry farther than higher treble notes.

The LPN point-to-multi-point network topology minimizes required infrastructure equipment and associated costs. The benefits are focused around deployment and resiliency. Because any endpoint can talk to any data collector, extending the network is very straightforward. As long as the new endpoint can see any data collector in the network, it has complete connectivity. At installation, Tesla Net AMI endpoints automatically connect to data collectors with no user configuration.

Planned redundancy ensures that most Tesla AMI endpoints have more than one path to reach the network, which increases reliability. The two-way system incorporates rich security features and is end-to-end upgradable remotely with over-the-air updates. The proprietary LPN RF protocol provides time-synced operations to alleviate network RF collision. Data is time-stamped and mapped to show how it travelled through the network.

Tesla Net AMI Data Collectors

	Fixed Network Collector	Duo Collector	Solo Repeater
Enclosure Dimensions	20" x 16" x 8"	6.5" x 3.2" x 3.1"	6.5" x 3.2" x 3.1"
Weight	34 lbs	3 lbs	3 lbs
Mounting Options	Tower mount	Tower or pole mount	Tower, pole or wall mount
Operating Temperature	-4°F to +140°F	-40°F to +185°F	-40°F to +185°F
Enclosure Rating	NEMA 3R	IP-68	IP-68
Operating Power	110VAC	110 VAC, Solar	110VAC, Solar
Backup Battery (UPS)	Yes	No	No
Frequency Band	450-470 MHz	450-470 MHz	450-470 MHz
Backhaul Options	Ethernet, Wi-Fi	Cellular	--
Endpoints Served	48,000	1,000	3,000
Repeaters Served	12	--	--
Capacity of Read Storage	38,000,000 reads	38,200 reads	--
Backup AMR Retrieval	Yes	Yes	--

