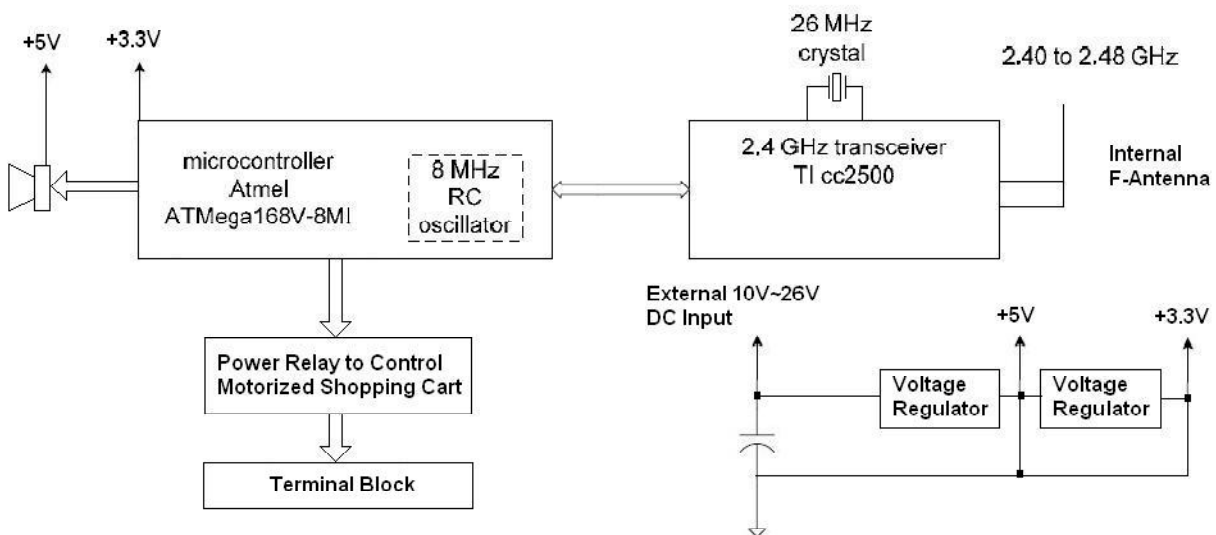


Overview

The Gatekeeper Systems E65500 MobilityManager is a tamper resistant unit mounted discreetly on the motorized shopping cart and it is used to Lock or Unlock the shopping carts by wireless operating system.

The MobilityManager contains a microprocessor (an Atmel ATmega168V) and a 2.4 GHz transceiver (TI cc2500). The ATmega168V uses an internal 8 MHz RC oscillator as its system clock. The cc2500 uses an external 26 MHz crystal oscillator. The bent F antenna is located internally inside the plastic housing.



Description of Operation

The MobilityManager is operated by external 10-26V DC power supply and it is used to receive or send acknowledges to the Gatekeeper D-9700 Indoor Manager Systems. Once commands are received, MobilityManager will control the power of the motorized shopping cart through terminal block.

MobilityManager RF Channel Plan

The MobilityManager divides the complete 2400 – 2483.5 MHz operating band is divided into 256 channels, numbered 0 through 255. MobilityManager will only operate at channel between 8 to 246.

When operating with 500 kbps MSK modulation (program download mode), the center frequency of the Nth channel is $2401.0 + 0.3142N$ MHz.

When operating with 20 kbps FSK modulation (uplink mode), the center frequency of the Nth channel is $2401.0 + 0.2000N$ MHz.

E65500 will only send out data with 20kbps FSK modulation and the worst case sent out data time in 100ms is 22ms.