FCC ID:WP3PMASTER360
IC:1467C-PMASTER360

PM360 control panel description

General

The PM360 is a platform enabling addition of security capabilities to home automation systems. It connects to home automation servers on the internet via ETHERNET cable to the customer's home router, or through 2G or 3G cellular module. In the house it connects to Zwave home automation devices via Zwave module, and to WiFi cameras via WIFI module acting as access point. It has 4 radio modules:

    RF units: PG2, WiFi, Cellular and Z-wave.

PG2 Small FFD Module Operation Description

The Small FFD Transceiver is based on a Chipcon (Texas Instruments) Transceiver IC, CC1110, integrating in a single component the transmitter, receiver and microcontroller functionality
In addition to the RF IC, the design includes also:
• RF Switches for TX-RX port separation
• LNA based on a single RF transistor
• SAW band-pass filter for front filtering
• PA based on a single or double stage discrete RF amplifier
• Protection and control circuitry
The modulation type is GFSK 0.5BT , 50 kbps, Deviation = 25 kHz, Rx Bandwidth = 135 kHz
The Small FFD is designed for operation in 902 MHz-928 MHz (50 hop channels).

Wi-Fi Information

Visonic's Wi-Fi transceiver consists of WL18SBMOD TI chip.
The W-Fi is part of the PM360 System for communication with Wi-Fi camera.
The transceiver supports IEEE Std 802.11b, 802.11g and 802.11n with 20MHz SISO.
The Wi-Fi transceiver operats with one antenna and is assembled on separated PCB. This PCB also contains printed dipole antenna.

Cellular module technical information

Visonic's Cellular module consists of TELIT UE910 NAR modem.
The Cellular Module is used for data transfer from the alarm system to the remote server
The modules are supporting frequency bands:
UE910 NAR: 850, 1900 (2G), 850, 1900 MHz (3G)
The UE910NAR modem is assembled on separate PCB and connected to the PM-360 PCB.
The PCB includes also internal antenna.

Z Wave Information

Visonic's Z-Wave transceiver consists of ZM5202 Sigma chip and is used for home control applications.
The Z-Wave module operates at 908.4 MHz and 916.1 MHz with 40/100 kbps.
The Z Wave chip is assembled on separate PCB and connected to the PM-360 PCB.
The PCB includes also Internal Helical antenna.

Power block

This block includes the switch/charger and PMIC

PWR SW/Charger block

The SW/Charger receives 5 Vdc from the wall adapter (current up to 2.1A) and distributes its output voltage (4.2 V dc) to the PMIC and to the cellular module. Also the charger controls the charging of the back-up battery and switches the battery in automatically when Power from mains falls.

PMIC Block

The PMIC (Power Management IC of the IMX6 CPU) receives the charger output voltage and gives the different levels of voltage to the components of the panel.

CPU iMX6

This processor controls the following modules: Z-wave, WiFi, Cellular Module, ETHERNET port, USB port.
Also this processor supports the I2C interface to the PMIC and the eMMC, LPDDR2 and SD card memories.
This unit makes the data transfer between panel and servers (via ETHERNET and /or Cellular modules) and external devices via Z-wave and WiFi modules.

LPDDR2 block

This is a low power Synchronous dynamic RAM chip with 256Mbytes capacity serving as RAM to the IMX6 CPU

eMMC block

This is a NAND flash chip with embedded controller with 512Mbyte capacity.

uSD card

This is a micro SD card connector for adding a uSD card – not in use now, works with SDIO interface.

Eth PHY block

This is an Ethernet PHY chip connecting the MAC in the IMX6 CPU to an RJ45 Ethernet connector that includes the magnetics.

USB and SW/protect blocks

The Switch/Protect block has a 5V switch chip for the USB and a surge/ESD protection chip. The USB is a standard micro USB connector.