

X10 Operation Description

1. Logic Part

1) MT6223

MTK MT6223 integrated power management, voice-band, audio-band and base-band analog front ends.

The processor integrates both an AMR7EJ-S core and 2 digital signal processor cores. AMR7EJ-S is the main processor that is responsible for running 2G and 2.5G protocol software. Digital signal processors handle the MODEM algorithms as well as advanced audio functions. Except for some mixed-signal circuitries, the other building blocks in baseband processor are connected to either the microcontroller or one of the digital signal processors.

The PMU is highly integrated in baseband processor for power supply generation and battery charging and management. There're 8 low drop-out linear series regulators using PMOST element are available to supply all other functions in mobile systems. Furthermore, the PMU provides a microphone bias noise voltage generator and a SIM card supply regulator that supports 3.0V and 1.8V cards. Both devices enables a very efficient system deep sleep state since it incorporates a real time clock and several wake up functions.

3) MCP MEMORY [S71PL127NC0]

128M bit FLASH Memory and 34M bit SRAM for Embedded System Control Processor

4) CRYSTAL[26MHz]

Main Clock for Control Processor and RF Block, Subsystem

5) 32.768 KHz Sleep Crystal

32.768 KHz Clock for Sleep Mode Operation and RTC block.

6) Back up Battery [4.7UF]

Back Up Battery to Store Time Date Information on Power OFF state.

7) LCD Module

CSTN LCD Module including 65K Color Main 1.5" 128X128 LCD

2. RF Part

LTT X10 Operation Description

1) RF Transceiver (MT6139)

Complete RF Front End for Quad band 900MHz EGSM & 850 band & DCS & PCS.
The transmit section interfaces between baseband processor and the power amplifier.
The receive section interfaces between FEM and baseband processor.

2) PAM(RPF08155B-TB)

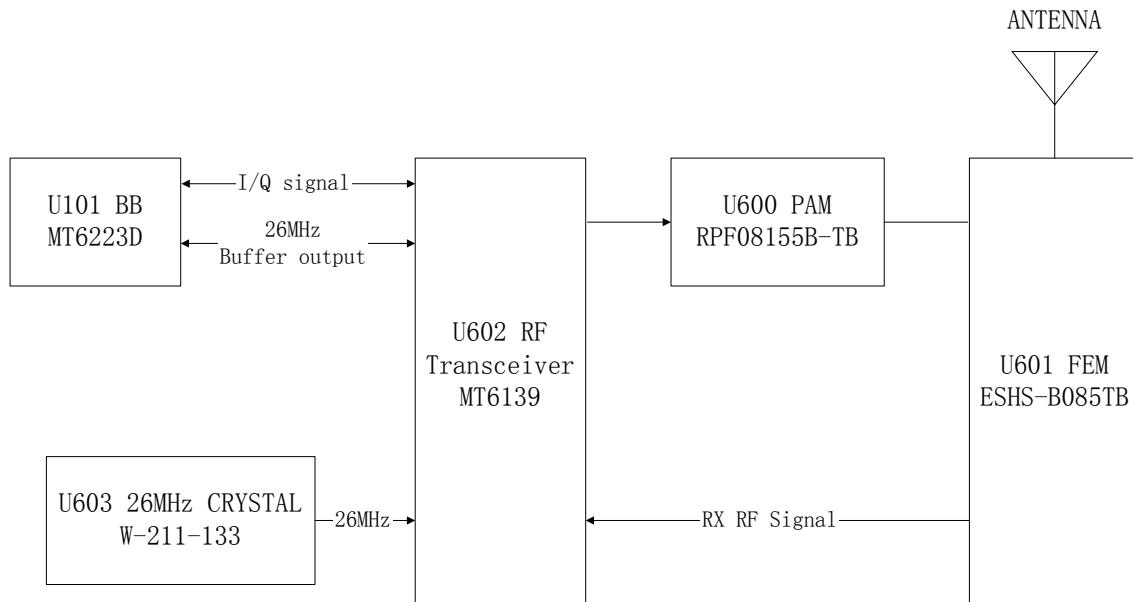
Power Amplifier Module for Quad band GSM850 & EGSM & DCS&PCS with integrated power control.

3) ASM (LMSP33AA-696TEMP)

Dual Band Antenna Switch Module EGSM OR GSM850 & DCS OR PCS.

4) SAW (EFCH881MTDA1 & EFCH1960TDA1)

3. X10 BLOCK DESCRIPTION



■ TX

1. From U101, GMSK modulated I/Q Signals come into U602
2. These signals frequency is up-converted in U602
3. U600 amplifies the power level of TX RF signal, and amplified signal is transferred to U601.

■ RX

1. RX RF signal comes into U602 through U601
2. RX RF signal's frequency is down-converted in U602, and the down-converted I/Q signal is transferred to U101

■ Clock

1. 26MHz clock signal comes into U602 from U603

LTT X10 Operation Description

2. **Clock buffer output of U602 is transferred to U101(Baseband chip), and this signal is used as a system reference clock**

■ Audio Part

