Tune-up Procedure OF P51EU

1. Purpose

This panel gives the possibility to manage the device in transmit and receive mode.

2. General description
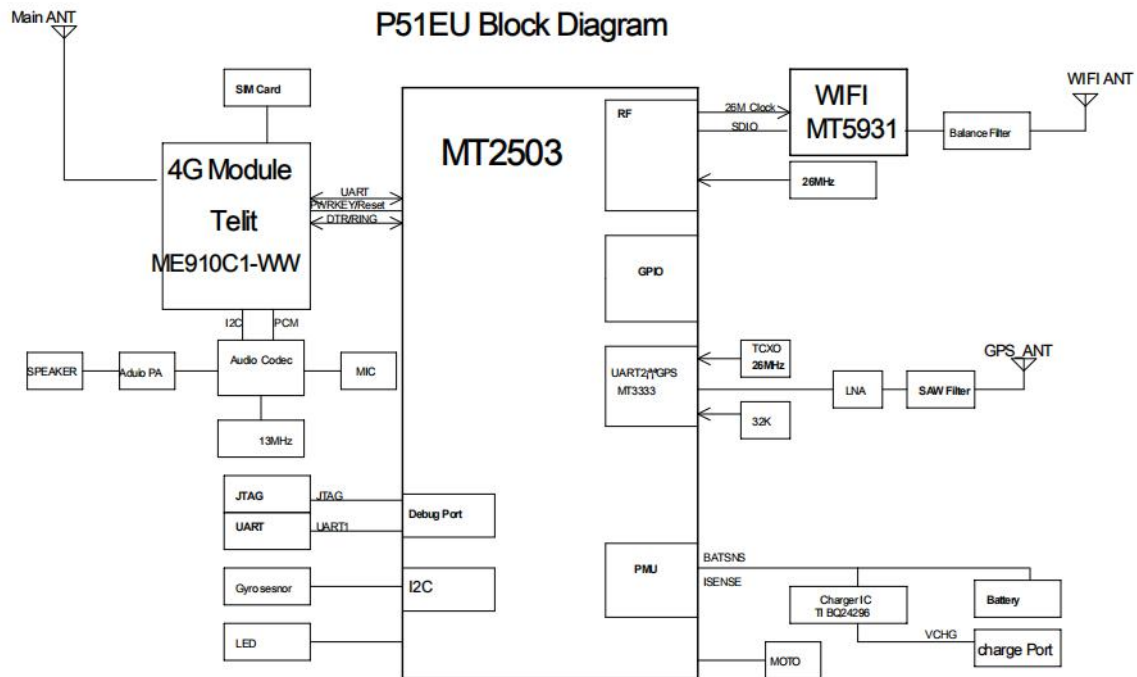
The SYS Block Diagram is shown in Figure 1.

Figure 1. SYS Block Diagram

2. RF Circuit

ME910C1-WW designed by Telit is a dual mode module which supports GSM:GSM 850/PCS 1900 and LTE- CATM/NB: B2/B4/B5/B12/B13/B26.

From MT2503 to antenna, a LTE TRX path includes a ME910C1-WW module.

3. Operating mode (TX)

3.1. Stop TX measurements

On hook the mobile, the test will be stop.

4. Operating mode (RX)

4.1 Stop Rx mode

On hook the mobile, the test will be stop.

4. Operating mode (RX)

4.1 Stop Rx mode

On hook the mobile, the test will be stop.

Technology/BAND	MODE	Antenna gain（dBi）
GSM850	GPRS/GMSK	2.15
PCS1900	GPRS/GMSK	2.15
NB-IoT Band2	BPSK/QPSK	2.15
NB-IoT Band4	BPSK/QPSK	2.15
NB-IoT Band 5	BPSK/QPSK	2.15
NB-IoT Band12	BPSK/QPSK	2.15
NB-IoT Band13	BPSK/QPSK	2.15
NB-IoT Band 26	BPSK/QPSK	2.15
CAT-M B2	16QAM/QPSK	2.15
CAT-M B4	16QAM/QPSK	2.15
CAT-M B5	16QAM/QPSK	2.15
CAT-M B12	16QAM/QPSK	2.15
CAT-M B13	16QAM/QPSK	2.15
CAT-M B26	16QAM/QPSK	2.15
WiFi 2.4G	--	1.75

Table 13.1: GPRS/EGPRS (GMSK Modulation)

GSM 850				
Channel		128	190	251
1 Txslots	Maximum Target Value (dBm)	33.0±1	33.0±1	33.0±1
2 Txslots	Maximum Target Value (dBm)	33.0±1	33.0±1	33.0±1
3 Txslots	Maximum Target Value (dBm)	29.0±1	29.0±1	29.0±1
4 Txslots	Maximum Target Value (dBm)	27.0±1	27.0±1	27.0±1
GSM 1900				
Channel		512	661	810
1 Txslots	Maximum Target Value (dBm)	29.0±1	29.0±1	29.0±1
2 Txslots	Maximum Target Value (dBm)	29.0±1	29.0±1	29.0±1
3 Txslots	Maximum Target Value (dBm)	29.0±1	29.0±1	29.0±1
4 Txslots	Maximum Target Value (dBm)	28.0±1	28.0±1	28.0±1

Table 13.2: EGPRS (8PSK Modulation)

GSM 850				
Channel		128	190	251

1 Txslots	Maximum Target Value (dBm)	27.0±1	27.0±1	27.0±1
2 Txslots	Maximum Target Value (dBm)	27.0±1	27.0±1	27.0±1
3 Txslots	Maximum Target Value (dBm)	27.0±1	27.0±1	27.0±1
4 Txslots	Maximum Target Value (dBm)	27.0±1	27.0±1	27.0±1
GSM 1900				
Channel		512	661	810
1 Txslots	Maximum Target Value (dBm)	26.0±1	26.0±1	26.0±1
2 Txslots	Maximum Target Value (dBm)	26.0±1	26.0±1	26.0±1
3 Txslots	Maximum Target Value (dBm)	26.0±1	26.0±1	26.0±1
4 Txslots	Maximum Target Value (dBm)	25.5±1	25.5±1	25.5±1

Table 13.3: NB-IOT

Band	RB	Low	Middle	High
Band2	1	21.5±1	21.5±1	21.5±1
	12	21.0±1	21.0±1	21.0±1
Band4	1	21.0±1	21.0±1	21.0±1
	12	21.0±1	21.0±1	21.0±1
Band5	1	22.0±1	22.0±1	22.0±1
	12	22.0±1	22.0±1	22.0±1
Band	**Sub-carrier Spacing [kHz]**	**Low**	**Middle**	**High**
Band12	3.75	22.0±1	22.0±1	22.0±1
	15	21.0±1	21.0±1	21.0±1
Band13	3.75	22.0±1	22.0±1	22.0±1
	15	20.0±1	20.0±1	20.0±1
Band26	3.75	22.5±1	22.5±1	22.5±1
	15	22.0±1	22.0±1	22.0±1

Table 13.4: CAT-M1

Band	Bandwidth (MHz)	RB	Low	Middle	High
Band2	1.4\3\5\10\15\20	1#0	22.0±1	22.0±1	22.0±1
	1.4\3\5\10\20	6#0	21.0±1	21.0±1	21.0±1
	15	6#0	22.5±1	22.5±1	22.5±1
Band4	1.4\3\5\10\15\20	1#0	22.0±1	22.0±1	22.0±1
	1.4\3\5	6#0	21.0±1	21.0±1	21.0±1
	10\15\20	6#0	22.0±1	22.0±1	22.0±1
Band5	5\10	1#0	23.0±1	23.0±1	23.0±1
	5	6#0	22.0±1	22.0±1	22.0±1
	10	6#0	23.0±1	23.0±1	23.0±1
Band12	1.4\3\5\10	1#0	22.8±1	22.8±1	22.8±1
	1.4\3\5	6#0	21.0±1	21.0±1	21.0±1
	10	6#0	22.0±1	22.0±1	22.0±1
Band13	5\10	1#0	23.2±1	23.2±1	23.2±1
	5	6#0	21.0±1	21.0±1	21.0±1
	10	6#0	22.0±1	22.0±1	22.0±1
Band26	1.4\3\5\10\15	1#0	23.0±1	23.0±1	23.0±1
	1.4\3\5	6#0	22.0±1	22.0±1	22.0±1
	10\15	6#0	23.0±1	23.0±1	23.0±1

Table 13.5: WIFI

WiFi 802.11b			
Channel	Channel 1	Channel 6	Channel 11
Maximum Target Value (dBm)	16.5±1	16.5±1	16.5±1
WiFi 802.11g			
Channel	Channel 1	Channel 6	Channel 11
Maximum Target Value (dBm)	16.5±1	16.5±1	16.5±1
WiFi 802.11n 20M			
Channel	Channel 1	Channel 6	Channel 11
Maximum Target Value (dBm)	16.5±1	16.5±1	16.5±1
WiFi 802.11n 40M			
Channel	Channel 1	Channel 6	Channel 11
Maximum Target Value (dBm)	16.5±1	16.5±1	16.5±1