

# Operation Description

SCV500 is controlled by the on board CPU S5P4418. When powered on, the CPU will load the installed OS including communication between all peripheral devices connected.

The LCD & Touch Panel are connected to and controlled by S5P4418 via I2C.

Debugging of device via USB OTG port.

GPRS Module (SIM5360E) is a customized for Validator SCV500, thus the module will shield all unnecessary Bands by software. Only keep 2G(GPRS850) and (GPRS1900). The module itself does not reserve an interface that can update the system software, so that the user can be prevented from modifying the relevant settings.

The 9PB17& 9NE1D are memory chip.

RF specification: WIFI Module is AP6212with Crystal:26MHz

GPRS Module is SIM5360E with Crystal:25MHz

GPS module is U-Blox 6 with Crystal:24MHz,32.768KHz

The MAX32590S is DeepCover Secure Microcontroller with Crystal:24MHz,32.768KHz

802.11b/g/n(HT20): 2412MHz~2462MHz

GPRS 850: 824.20MHz-848.80MHz

GPRS 1900: 1850.20MHz-1909.80MHz

Modulation: GPRS:GMSK

WiFi:802.11b (DQPSK, DBPSK, CCK), 802.11g/n (OFDM/64-QAM, 16-QAM,QPSK,BPSK)

GPS only for Receiver frequency1575.42MHz

Antenna: Internal antenna with 2dBi peak gain

## 2.4 G WIFI

Mode	Conducted Power(max) (dBm)	Turn-up Power (dB)	Max tune up power (dBm) [P]
802.11B	15.302	15±1	16
802.11G	14.843	14±1	15
802.11N(HT20)	14.735	14±1	15

## Tune Up Procedure

<b>GSM 850 GPRS (GMSK) (Burst Average Power)</b>				
Channel		128	190	251
1 Txslot	Target (dBm)	30.0	30.0	30.0
	Tolerance $\pm$ (dB)	1.0	1.0	1.0
2 Txslot	Target (dBm)	29.0	29.0	29.0
	Tolerance $\pm$ (dB)	1.0	1.0	1.0
3 Txslot	Target (dBm)	27.0	27.0	27.0
	Tolerance $\pm$ (dB)	1.0	1.0	1.0
4 Txslot	Target (dBm)	26.0	26.0	26.0
	Tolerance $\pm$ (dB)	1.0	1.0	1.0
<b>GSM 1900 GPRS (GMSK) (Burst Average Power)</b>				
Channel		512	661	810
1 Txslot	Target (dBm)	28.0	28.0	28.0
	Tolerance $\pm$ (dB)	1.0	1.0	1.0
2 Txslot	Target (dBm)	26.0	26.0	26.0
	Tolerance $\pm$ (dB)	1.0	1.0	1.0
3 Txslot	Target (dBm)	25.0	25.0	25.0
	Tolerance $\pm$ (dB)	1.0	1.0	1.0
4 Txslot	Target (dBm)	24.0	24.0	24.0
	Tolerance $\pm$ (dB)	1.0	1.0	1.0