



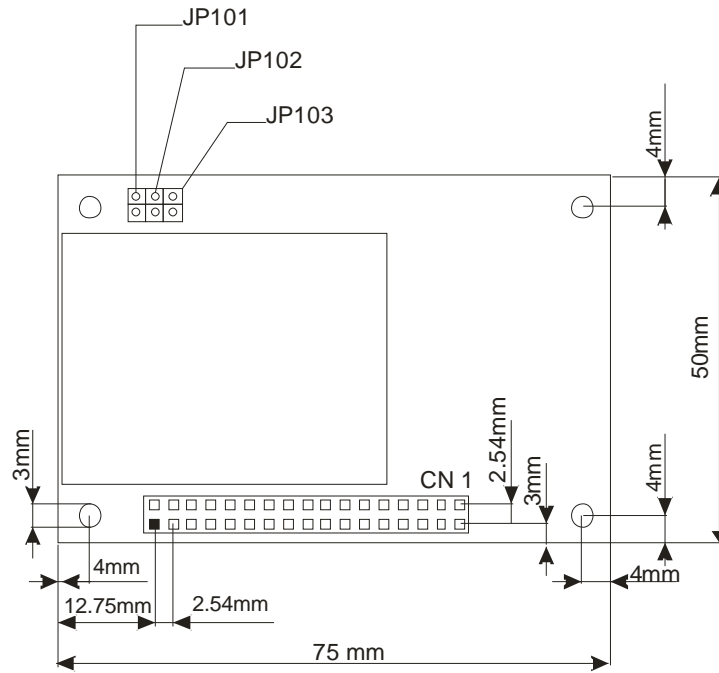
HCPSPF

Hardware description

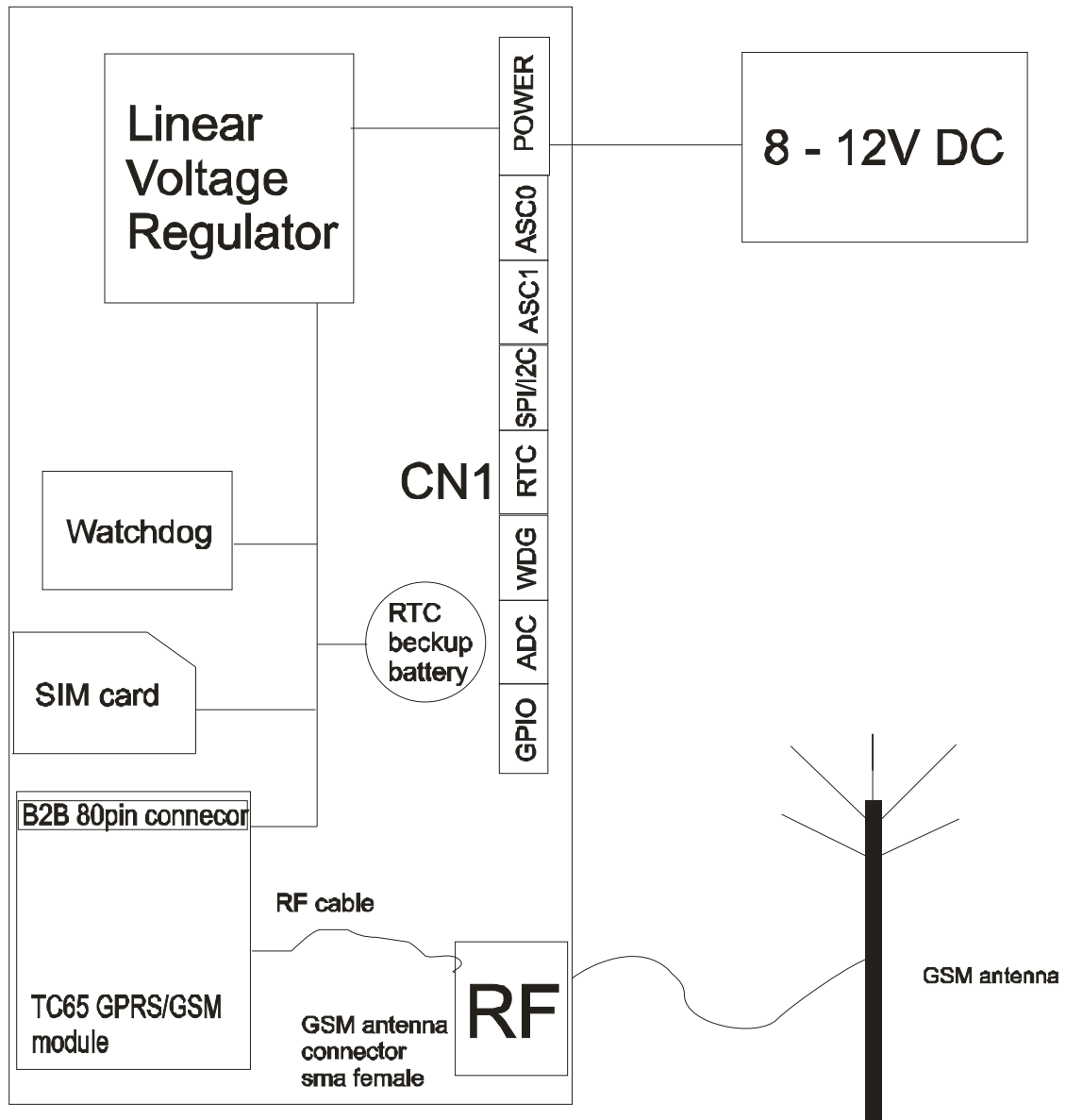
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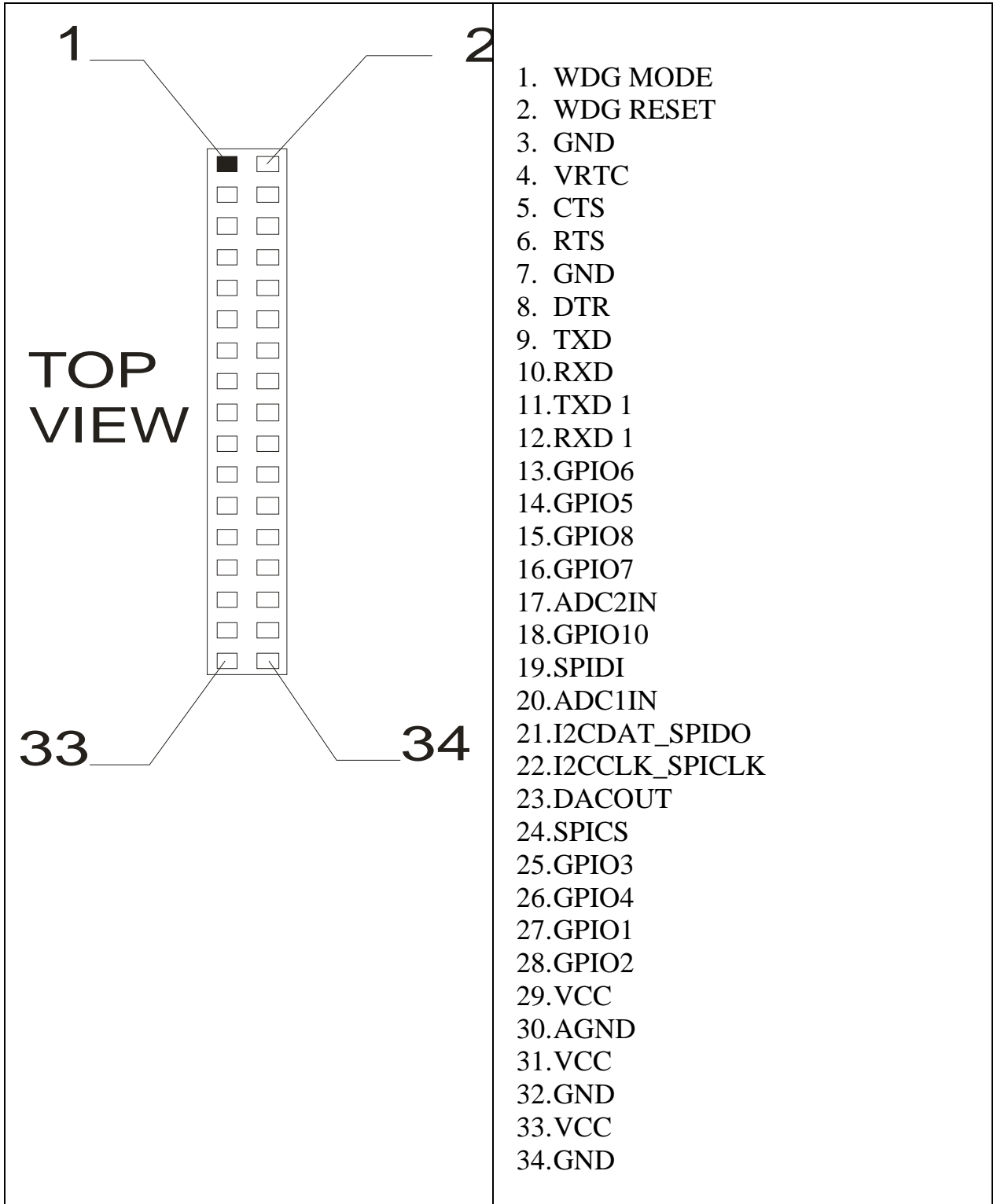
1. Board Dimensions



2. Block diagram



3. Connector pin-out



4. Power supply ratings

Parameter	Description	Min	Typ	Max	Unit
Vpower	Supply voltage	+8	+9	+12	V
Ipower	Supply current			800	mA
Pmax	Supply power			10	W

5. RS232 interface characteristic

Parameter	Description	Conditions	Min	Typ	Max	Unit
V _{OUT}	Transmitter Output Voltage for /TXD	@ 5kOhm load	±5	±5.4		V
R _{OUT}	Transmitter Output Resistance /TXD		300	50k		Ohm
V _{IN}	Input voltage range /RXD		-25		25	V
R _{IN}	Input resistance of /RXD		3	5	7	kOhm
V _{RIHYS}	Input Hysteresis			0.5		V
V _{ilow}	Input Threshold Low		0.6	1.1		V
V _{Ihigh}	Input Threshold High			1.5	2.4	V
Baudrate		Autobauding	1200		468000	bps
		Fixed bit rate	300		468000	bps

6. I/O description

The HCPSPF comes with 8 GPIOs on board. Each GPIO can be configured for use as input or output. All settings are done by AT commands.

GPIO0 – GPIO8

$V_{OLmax} = 0.2V$ at $I = 2mA$

$V_{OHmin} = 2.55V$ at $I = -0.5mA$

$V_{OHmax} = 3.05V$

$V_{ILmax} = 0.8V$

$V_{IHmax} = 2.15 V$,

$V_{IHmax} = V_{EXTmin} + 0.3V = 3.05V$

GPIO9 – watchdog

GPIO10 – also can be used pulse counter

7. Watchdog circuit

HCPSPF does have hardware watchdog circuit on board.

Watchdog jumper settings:

- J101 – For external reset of watchdog circuit. An high signal at CN1 will force watchdog to reset the module.
- J102 – Used for deactivation of hardware watchdog circuit. That has to be used when programming the TC65 or when no watchdog function is wanted.
- J103 – Mode selection for watchdog circuit.
 - With jumper removed it is acting as ignition and monitor circuit for MC75. With jumper present it is used as watchdog circuit for programmed TC65.

The watchdog circuit is connected to GPIO9 of TC65. The time interval is 120s, which means, that application has to send positive impulse of at least 100mS width in less than 120 seconds. If that will not happen the watchdog circuit will restart TC65 module.



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