HCP **ET-3** GPRS Terminal

hardware description

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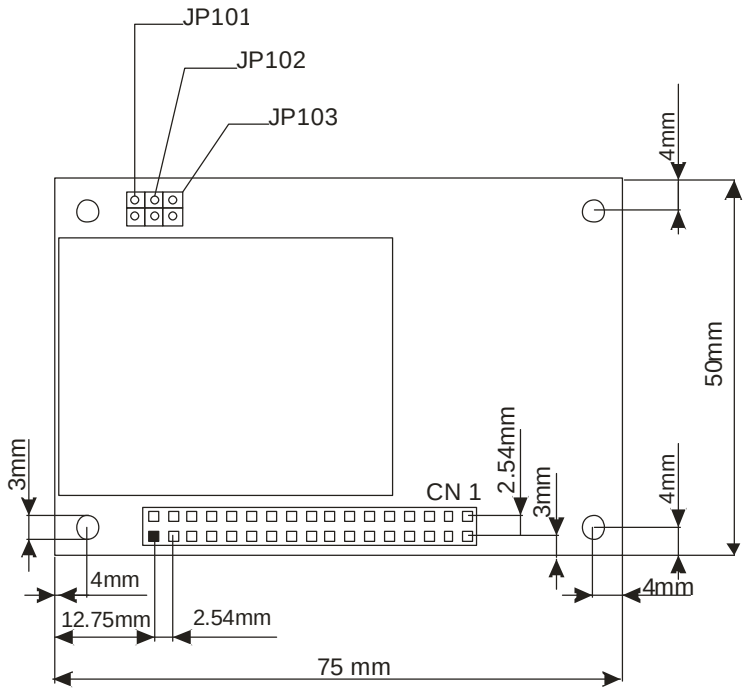
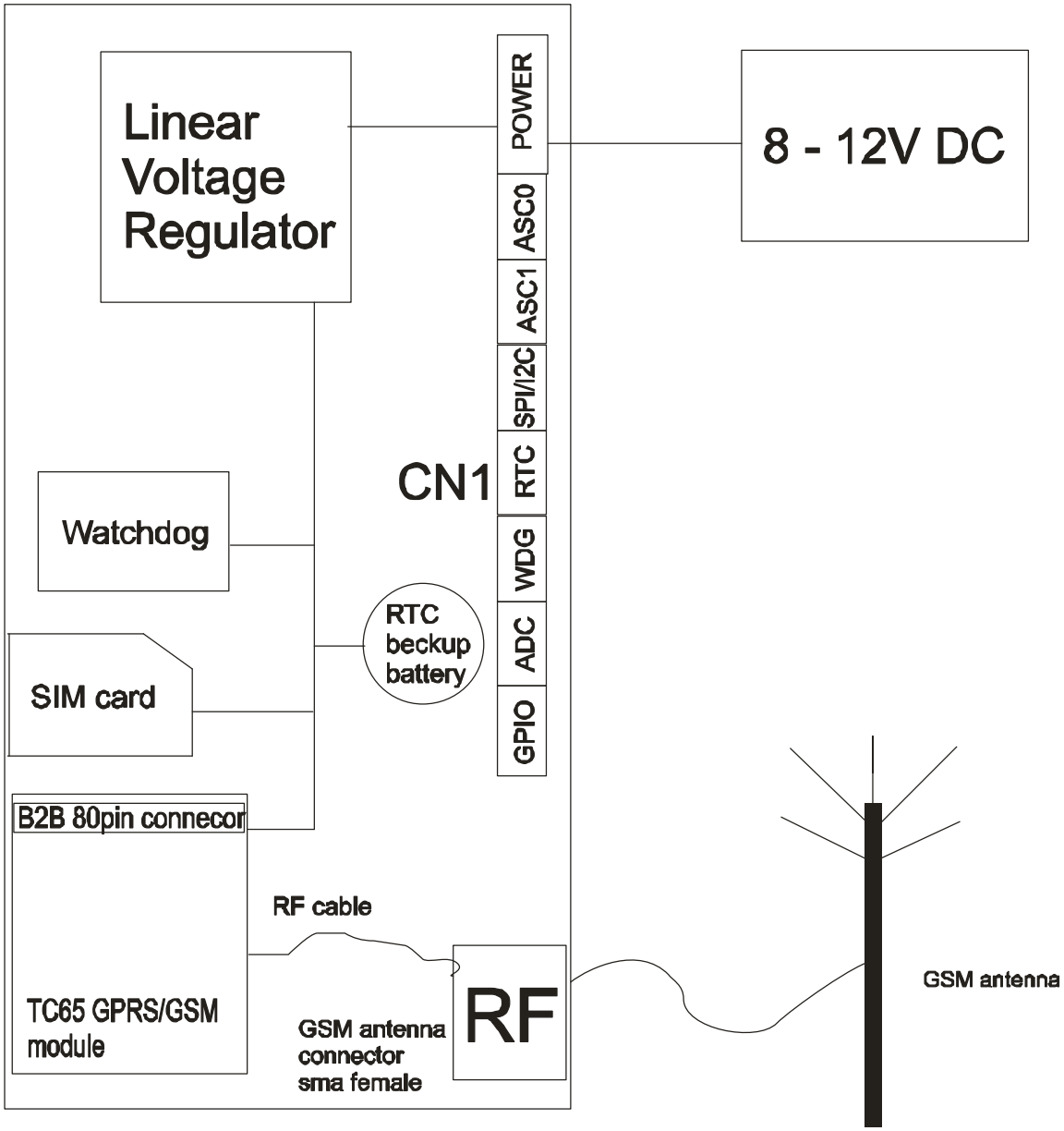
Contents

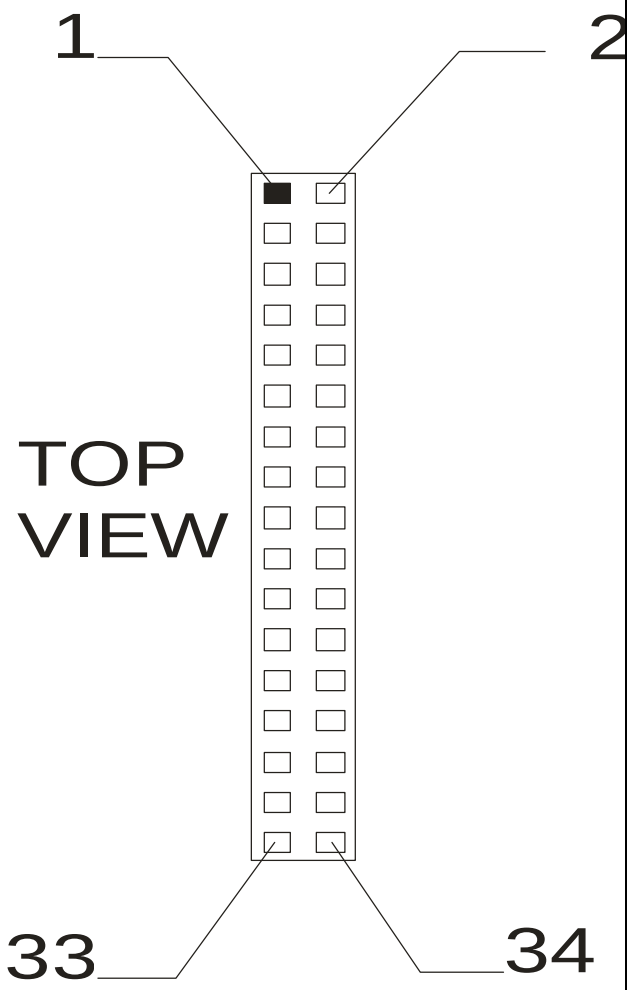
1. Board Dimensions



2. Block diagram



3. Connector pin-out



1. WDG MODE
2. WDG RESET
3. GND
4. VRTC
5. CTS
6. RTS
7. GND
8. DTR
9. TXD
10. RXD
11. TXD 1
12. RXD 1
13. GPIO6
14. GPIO5
15. GPIO8
16. GPIO7
17. ADC2IN
18. GPIO10
19. SPIDI
20. ADC1IN
21. I2CDAT_SPIDO
22. I2CCLK_SPICLK
23. DACOUT
24. SPICS
25. GPIO3
26. GPIO4
27. GPIO1
28. GPIO2
29. VCC
30. AGND
31. VCC
32. GND
33. VCC
34. GND

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

HCP HT-3 has 8 GPIO on board. Each GPIOs can be configured for use as input or output. All settings are AT command controlled.
GPIO0 – GPIO8
$V_{OL}max$ = 0.2V at I = 2mA
$V_{OH}min$ = 2.55V at I = -0.5mA
$V_{OH}max$= 3.05V

$V_{IL}max$ = 0.8V
$V_{IH}max$ = 2.15 V,
$V_{IH}max$ = VEXTmin + 0.3V = 3.05V

GPIO9 – watchdog
GPIO10 – can also serve as a pulse pulse counter

7. Watchdog circuit

HCP HT-3 has hardware watchdog circuit on board.

Jumpers description:

- J101 – is jumper for reset of watchdog circuit. This watchdog reset signal is available on application connector CN1 and it can be used for reset of module.
- J102 – is jumper used for deactivation of hardware watchdog circuit. It is used during programming of the Siemens module
- J103 – is mode selection for watchdog circuit. With jumper removed it serves as ignition and monitor circuit for MC75. With jumper present it is used as watchdog circuit for programmed TC65. Watchdog circuit is connected to TC65 GPIO9. Watchdog interval is 120s, that is, application must send positive impulse of 100mS width every 120 seconds. If that not happens the watchdog circuit will restart TC65 module.