

# GPS Module

## Ct-T30/Ct-30



### Specifications Sheet V0.1

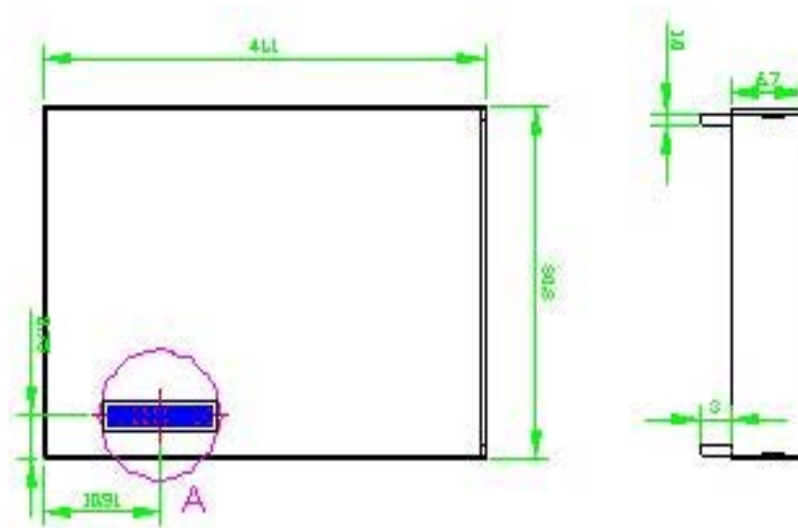
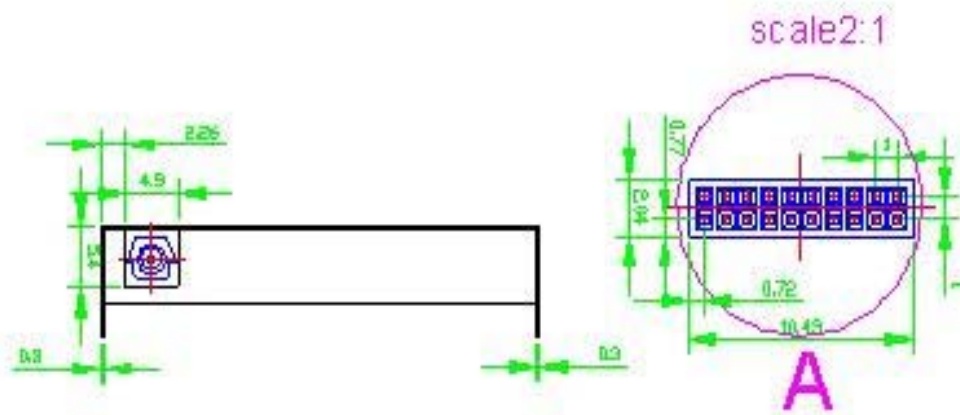
*Features:*

- ◆ *SiRF StarIV ultra low power chipset*
- ◆ *Compact module size for easy integration : 40 x 30 x 7 mm / 30.6 x 26 x 7 mm*
- ◆ *I<sup>2</sup>C pins reserved for customizing special user applications (Default: UART)*
- ◆ *Fully utilized SS4 upgrade features*

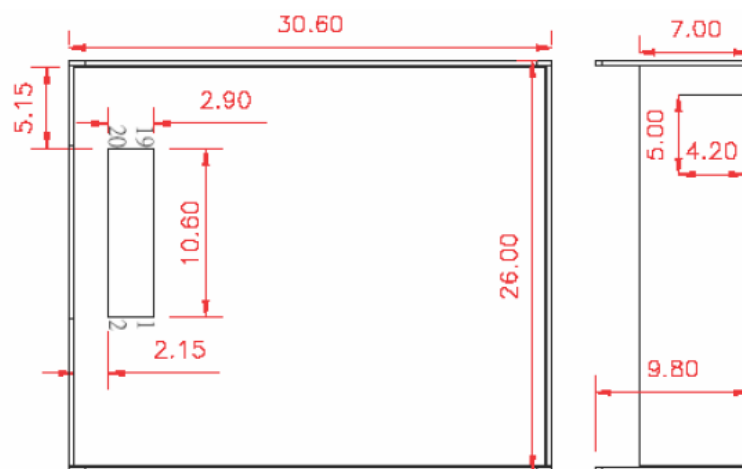
## 1. Technical specifications

Feature	Item	Description
<b>Chipset</b>	GSD4e	SiRF StarIV low power single chipset
<b>General</b>	Frequency	L1, 1575.42 MHz
	C/A code	1.023 MHz chip rate
	Channels	48
<b>Accuracy</b>	Position	10 meters, 2D RMS < 5 meters 2D RMS, WAAS corrected
	Velocity	0.01 meters/second
	Time	1 microsecond synchronized to GPS time
<b>Datum</b>	Default	WGS-84
	Other	selectable for other Datum
<b>Time to First Fix (TTFF) (Open Sky &amp; Stationary Requirements)</b>	Reacquisition	0.1 sec., average
	Snap start	1 sec., average
	Hot start	1~2 sec.
	Warm start	9~15 sec.
	Cold start	25~35 sec.
<b>Dynamic Conditions</b>	Altitude	18,000 meters (60,000 feet) max.
	Velocity	515 meters/second (1000 knots) max.
	Acceleration	4g, max.
	Jerk	20 meters/second <sup>3</sup> , max.
<b>Power</b>	Main power input	2.8 ~ 5.0 VDC input
	Power consumption	50 mA (Tracking Mode)
	Backup Power	2.8 ~ 5.0 VDC battery input
<b>Serial Port</b>	Electrical interface	Default UART:NMEA-0183@4800bps (I2C TBA)
	Protocol messages	NMEA-0183@4800 bps (Default)
<b>Temperature</b>	Operating range	-40 deg. C to +85 deg. C
	Storage range	-55 deg. C to +100 deg. C
<b>Physical characteristics</b>	Length	40 mm / 30.6 mm
	Width	30 mm / 26 mm
	Height	Around 7 mm
	Weight	10 gm
	Antenna connector	MMCX type
	Interface connector	20-pin low profile socket, 1 mm
<b>Antenna</b>	Active Antenna	

1.1. 20-Pin I/O Assignment



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## 1.2 Pin-assignment of the 20-pin digital interface connector

Pin #	Name	Description
1	VCC	2.8 ~ 5.0 VDC input
2	TXA	Host Serial Data Output A
3	RXA	Host Serial Data Input A
4	TXB	NC
5	RXB	NC
6	TIMEMARK	1PPS Time Mark Output
7	BAT	Battery Backup Power Input
8	GPIOA	NC
9	RESET	Reset, Active Low
10	RESERVED	Reserved
11	GROUND	Ground
12	BOOTSEL	Internal/External Boot selective
13	GPIOB	Default: NC GPIO by customer request
14	GPIOC	NC
15	GIPOD	NC
16	GPIOE	NC
17	GPIOF	NC
18	GPIOG	NC
19	GPIOH	NC
20	GROUND	Ground

※The Host Serial Data I/O is nominally logical high +3.3VDC.

※The Host Serial Data Input A (Pin# 3) suggest to an active high(ex.100KΩ[serial to +Vcc] when not used.

※The GPIO and 1PPS output driven only to 1.8V logic levels.