



# **BlueSoleil™ i40e**

## **Datasheet**

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## **BlueSoleil i40e**

BlueSoleil i40e is a Class2 Bluetooth module. It provides a Bluetooth specification V2.1+EDR fully compliant system for data with IVT Bluetooth stack: BlueLet™. It allows your target device to both send or receive the TTL data via Bluetooth technology without connecting a serial cable to your computer. It's easy to use and completely encapsulated.

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## **i40e Features**

- TTL data transparent transfer between a host Bluetooth device
- Bluetooth Specification V2.1 + EDR Compliant
- Class 2 type Output Power
- USB, UART, SPI and PCM Interfaces
- Support for 802.11 Co-Existence
- RoHS Compliant
- Dimension is 26.9mm(L)x13mm(W)x2.2mm(H)

## Electrical Characteristics

<b>Absolute Maximum Ratings</b>		
Rating	Min	Max
Storage temperature	-40°C	+105°C
Other terminal voltages	VSS-0.4V	VDD+0.4V

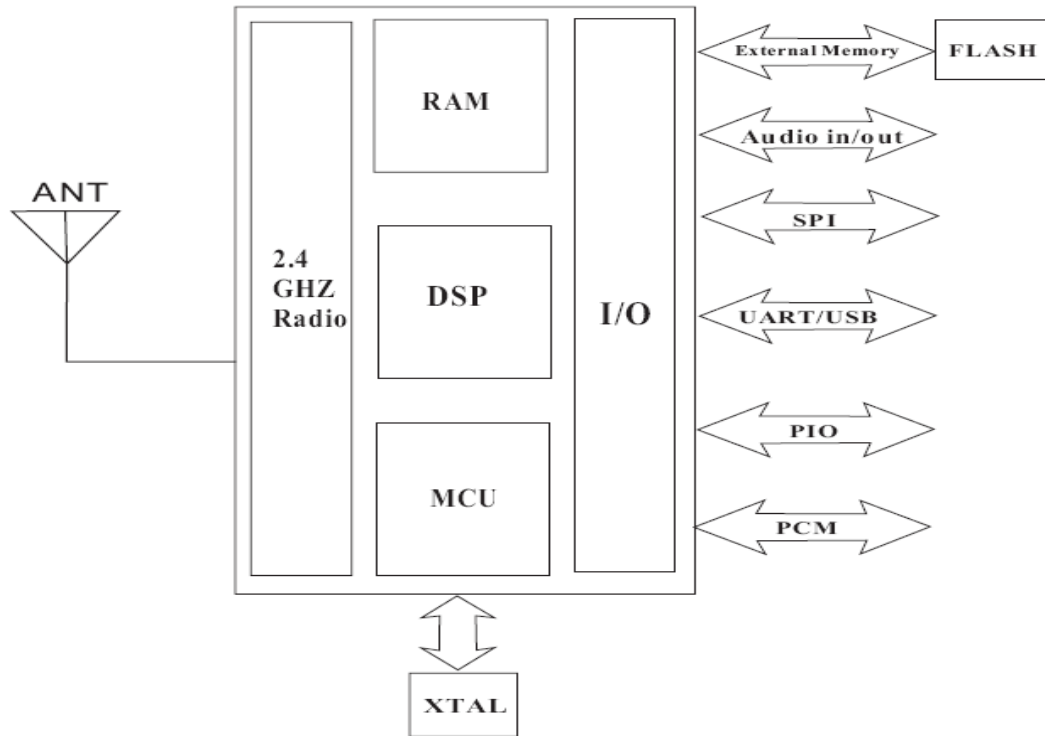
<b>Recommended Operating Conditions</b>		
Operating Condition	Min	Max
Operating temperature range	-40°C	+85°C
Supply voltage: VBAT	2.2V	4.2V(b)

## Power Consumption

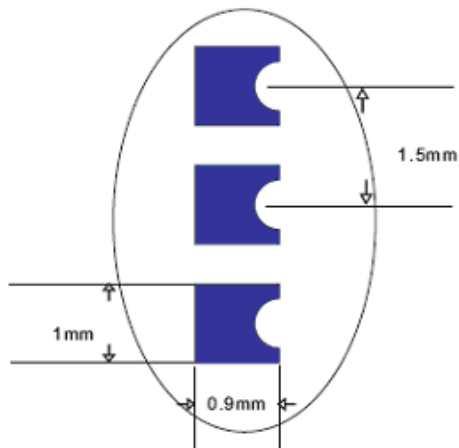
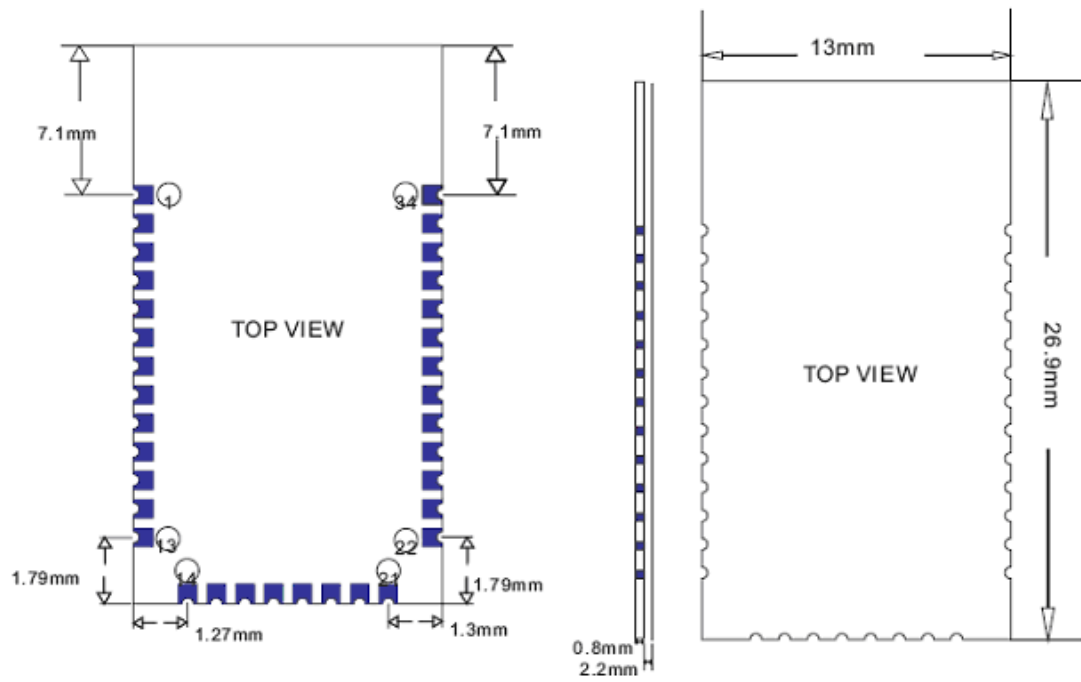
### BC

Operation Mode	Connection Type	UART Rate (kbps)	Average	Unit
Inquiry and Page scan	-		2.1	mA
ACL No traffic 500ms Sniff	Slave	9.6	1.9	mA
	Master	9.6	1.9	mA
ACL with file transfer	Slave	9.6	22.7	mA
	Master	9.6	11.5	mA
Stand by Host connection(a)	-		1.2	mA

# Block Diagram



## Dimension and PIN Definition



## PIN Description

<b>PIN NO.</b>	<b>NAME</b>	<b>TYPE</b>	<b>FUNCTION</b>
1	UART-TX	CMOS Output	UART Data Output
2	UART-RX	CMOS Input	UART Data Input
3	UART-CTS	CMOS Input	UART Clear To Send Active Low
4	UART-RTS	CMOS Output	UART Request To Send Active Low
5	PCM-CLK	Bi-directional	Synchronous Data Clock
6	PCM-OUT	CMOS Output	Synchronous Data Output
7	PCM-IN	CMOS Input	Synchronous Data Input
8	PCM-SYN C	Bi-directional	Synchronous Data Sync
9	AIO(0)	Bi-directional	Programmable Input/Output Line
10	AIO(1)	Bi-directional	Programmable Input/Output Line
11	RESETB	CMOS Input	Reset if low. Input debounced so must be low for >5ms to cause a reset
12	3.3V	POWER	+3.3V Supply
13	GND	GND	Ground
14	GND	GND	Ground
15	USBD-	Bi-directional	USB Data Minus
16	SPI-CSB	CMOS Input	Chip Select For Synchronous Serial Interface
17	SPI-MOSI	CMOS Input	Serial Peripheral Interface Data Input
18	SPI-MISO	CMOS Output	Serial Peripheral Interface Data Output
19	SPI-CLK	CMOS Input	Serial Peripheral Interface Clock
20	USB D+	Bi-directional	USB Data Plus with selectable internal 1.5K $\Omega$
21	GND	GND	Ground
22	GND	GND	Ground
23	PIO(0)	Bi-directional with programmable strength	Control output for external LNA(if fitted)
24	PIO(1)	Bi-directional with programmable strength	Control output for external PA(if fitted)
25	PIO(2)	Bi-directional	Programmable Input/Output Line
26	PIO(3)	Bi-directional	Programmable Input/Output Line

27	PIO(4)	Bi-directional with programmable strength	Programmable Input/Output Line or optional BT_Priority/CH_Clk output for co-existence
28	PIO(5)	Bi-directional with programmable strength	Programmable Input/Output Line or optional BT_Active output for co-existence
29	NC	NC	
30	NC	NC	
31	NC	NC	
32	PIO(9)	Bi-directional	Programmable Input/Output Line
33	PIO(10)	Bi-directional	Programmable Input/Output Line
34	PIO(11)	Bi-directional	Programmable Input/Output Line