

## 1. Introduction

### 1.1. Product definition

In the Module product line there will be 2 versions of products:

Raw Serial Module – External Power - Provide a basic Serial Cable replacement function with some user accessible command modes

Bluetooth HCI module – Provide Host Command Interface for Bluetooth stack implemented on an external local host processor.

This document will describe only the Raw Serial Module.

### 1.2. Feature List

- Very small size
- Low Cost
- Socket Cost : External Power Version: \$30-35 range
- Industrial Application target design
- Initially offered in Class 2 BT Radio but will offer Class 1 later
- External Power device will run off 3.3 external power
- Firmware and module code upgradeable in the field via programming interface
- Security and bonding supported
- Low power Bluetooth modes: Sniff, Park and Hold
- Not suitable for Baud Rates below 9600 Baud

### 1.3. Notation

Numbers are in decimal except:

- Numbers with an “h” suffix are in hexadecimal.
- Numbers with a “0x” prefix are in hexadecimal.
- Numbers with a “b” suffix are in binary.

## 2. Physical/Environmental

Description	Min		Max	Unit
Operating Temperature	-20		+85	deg.C
Storage Temperature	-40		+85	deg.C
Supply Voltage VDD	-0.4		3.6	V

**Table 1: Ratings**

Humidity: 5% to 95% (non-condensing)

### 3. Electrical Requirements

Description	Min	Typ	Max	Unit
Operating Temperature	-20	+25	+85	deg.C
Supply Voltage, VDD	2.7	3.0	3.6	V

**Table 2: Operating Conditions**

	Min	Typ	Max	Unit
<b>Input Voltage</b>				
VIL input logic level low (VDD=3.0V)	-0.4		+0.8	V
VIH input logic level high	0.7VDD		VDD+0.4	V
<b>Output voltage</b>				
VOL output logic level low, (IO = 4.0mA), VDD=3.0V	-	-	0.2	V
VOH output logic level high, (IO = -4.0mA), DD=3.0V	VDD-0.2	-	-	V
<b>Input and Tristate Current with:</b>				
Strong pull-up	-100	-20	-10	μA
Strong pull-down	+10	+20	+100	μA
Weak pull-up	-5	-1	0	μA
Weak pull-down	0	+1	+5	μA
I/O pad leakage current	-1	0	+1	μA
Ci Input Capacitance	2.5	-	10	pF

**Table 3: Input/Output Terminal Characteristics**