

# CELLv1.0 Datasheet

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The CELLv1.0 is a tiny Cellular development board that gives you Wireless Worldwide. That means internet to anything anywhere!

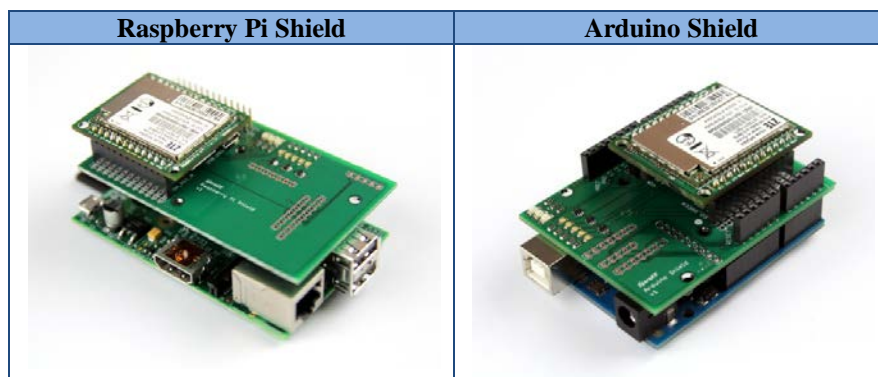
With an integrated mini SIM card holder, power supply, and cellular module, the CELLv1.0 is the smallest module on the market, the least expensive 2/3G device out there, and the easiest to use!

The CELLv1.0 uses a 2G+3G chipset, which means it will use 3G primarily worldwide and only fall back to 2G if 3G is unavailable.

- SparqEE: <http://sparqee.com/>
- CELLv1.0: <http://www.sparqee.com/products/CELLv1-0>
- Forum: <http://www.forum.sparqee.com/>
- Code/Drivers: <http://www.sparqee.com/code-cell/>

## Super Easy to Use!

Check out the **Arduino and Raspberry Pi Shields** to see just how easy it is to connect the CELLv1.0 to your Arduino and Raspberry Pi!



## Ecosystem:

SparqEE helps you every step of the way with the CELLv1.0 to easily get your data from Your Device, through The Cloud, and back out to Your Smartphone or Computer!



## SIM Card:

In order to communicate over a cellular network, you'll also need a SIM card. SIM cards aren't as painful as they used to be. With the CELLv1.0 you can use any SIM, here are some suggestions:

SparqSIM	Phone	Pre-paid
<i>SparqSIM</i> – We've contracted with a worldwide SIM provider for this project, so SIMs from us are not only the lowest cost you'll find, but they work anywhere in the world <a href="http://www.SparqSIM.com">www.SparqSIM.com</a>	For development, just take it out of your phone and pop it in	You can purchase a prepaid SIM from any retailer – Target, RadioShack

## Features:

- Worldwide internet
- Available shields for the Raspberry Pi and Arduino development environments
- Available sample code
- Available development servers
- Certifications: FCC/CE/IC



## Specification:

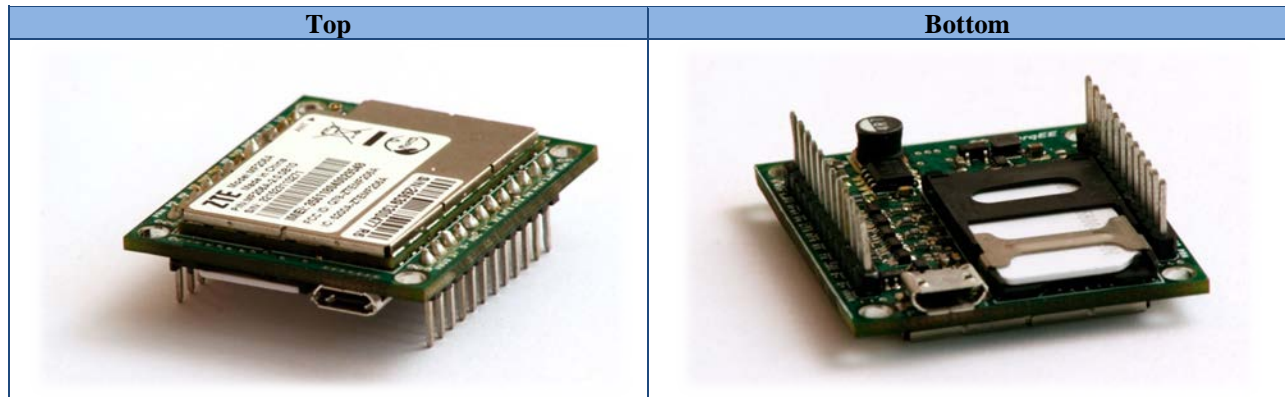
- ZTE MF206A
- Certifications: FCC/CE/IC
- Data (TCP/UDP)
- SMS ready
- Serial UART interface (3.3V or 5V)
- I/O (3.3 or 5V)
- USB 2.0 interface (can power the module, modem communication to module)
- Coverage: AT&T/T-Mobile in US, 3G and GSM/GPRS Worldwide
  - WCDMA/HSDPA 2100/1900/900MHz
  - 384Kbps, DL3.6Mbps HSDPA
  - GSM/GPRS/EDGE 850/900/1800/1900MHz
- Current Required:
  - <5mA standby
  - <75mA average normal working (w/o services)
  - <500mA average normal working
  - <2.3A peak
- Windows, Linux, Android drivers available from ZTE

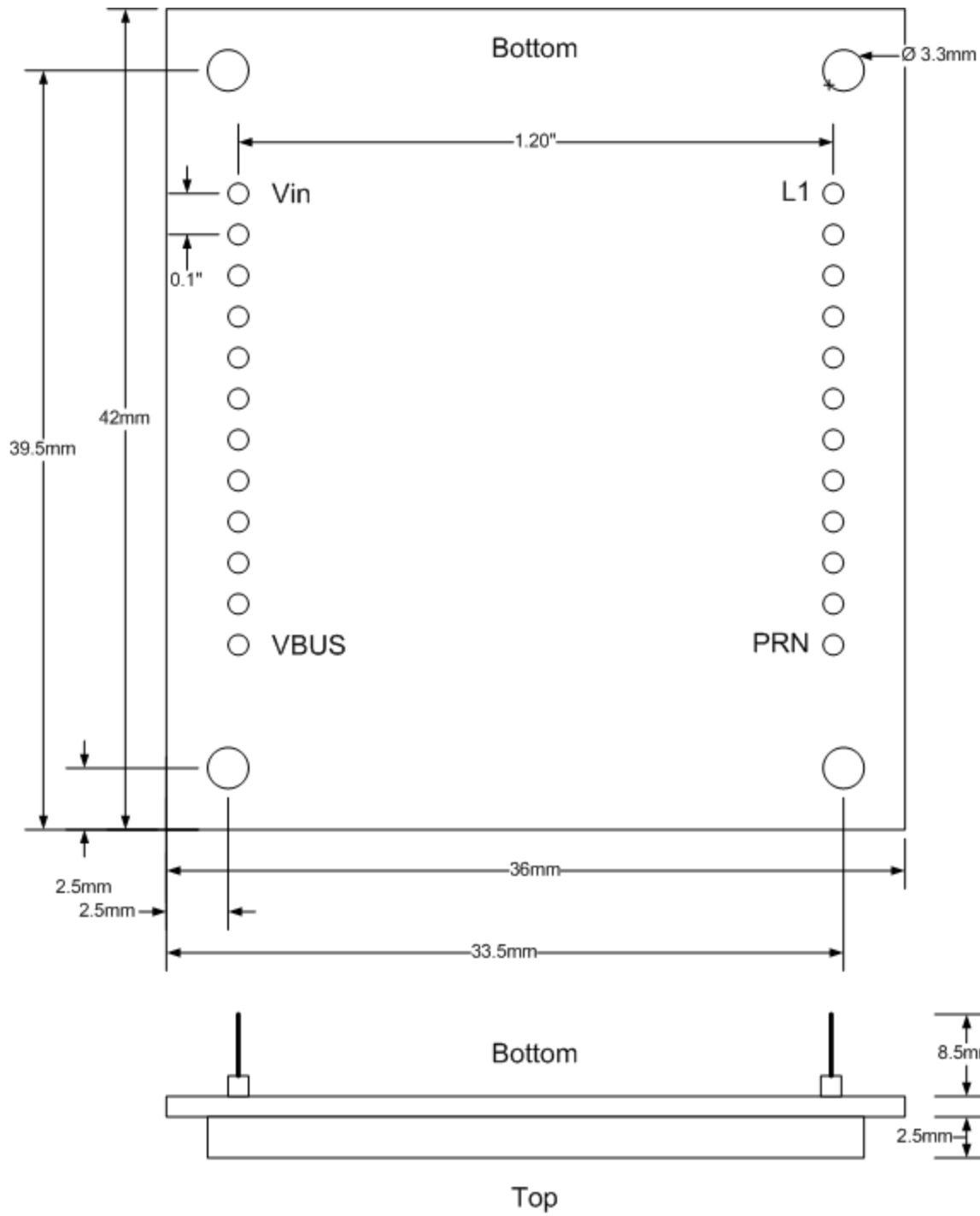
## Power

- Supply voltage range: 3.7-5V (powered from included USB cable or header pins)

## Physical

- 36mm x 42mm (1.42" x 1.65")
- Weight: 0.50oz





### Operating Temperature

- -40°C to +85°C

## Pin Assignment:

Pin	#	Function	Optional/Required	Voltage	I/O
VBUS	1	USB 5V (jumper to Vin)	Optional	3.3-5.25V	I
D+	2	USB +	Optional	-	I/O
D-	3	USB -	Optional	-	I/O
ADC	4	ADC	Optional	0-2.2V	I
TX	5	UART port TX	Optional	Vref	O
RX	6	UART port RX	Optional	Vref	I
RFR	7	UART port RFR	Optional	1.65-1.95V	O
CTS	8	UART port CTS	Optional	1.65-1.95V	I
Vo	9	3.5V output	Optional	-	O
Vref	10	Reference voltage for level shifters	Optional	3.3V, 5V	I
1.8V	11	1.8V output	Optional	-	O
Vin	12		Required	3.4-4.2V	I
PRN	13	PON_RST_N Module reset  High = no reset Low = reset if pulled low for 100ms	Optional	Vref	I
PO	14	POWER_ON Power-on/Power-off PIN  High = awake Low = wakeup if pulled low for 50ms, turn off if pulled low for 5s	Required	Vref	I
AR	15	AP_READY Module queries AP sleep status pulling upward by default L: Active H: Sleep  High=sleep=lit Low = wakeup *** DARK, set low	Optional	Vref	I
MR	16	MODULE_READY GPIO/AP queries Module sleep status pulling upward by default L: Active H: Sleep  High = asleep = lit Low = awake *** DARK	Optional	Vref	O
AWN	17	AP_WAKEUP_MODULE GPIO/AP wakes up Module pulling upward by default L: valid H: invalid  High = sleep = lit Low = wakeup *** DARK, set low	Optional	Vref	I
MWA	18	MODULE_WAKEUP_AP GPIO/Module wakes up AP pulling upward by default L: valid H: invalid  High = AP awake *** LIT Low = wake AP	Optional	Vref	O
MP	19	MODULE_POWERON MODULE power-on status indication pulling upward by default L: power-off H: power-on  High = power *** LIT Low = off	Optional	Vref	O

GND	20	Ground	Required	0	I
GND	21	Ground	Required	0	I
L3	22	Blue 3G network: solid=registered, flashing=registered+data service *Sense voltage on input line	Optional		I
L2	23	Red Not registered to the network *Sense voltage on input line	Optional		I
L1	24	Green 2G network: solid=registered, flashing=registered+data service *Sense voltage on input line	Optional		I

