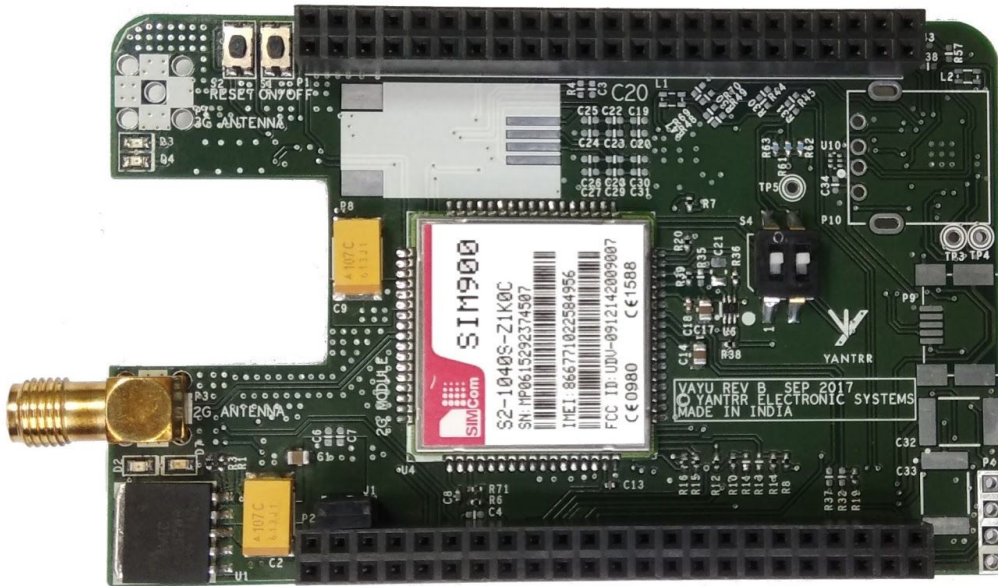




## VAYU-2G



## Quick Start Guide

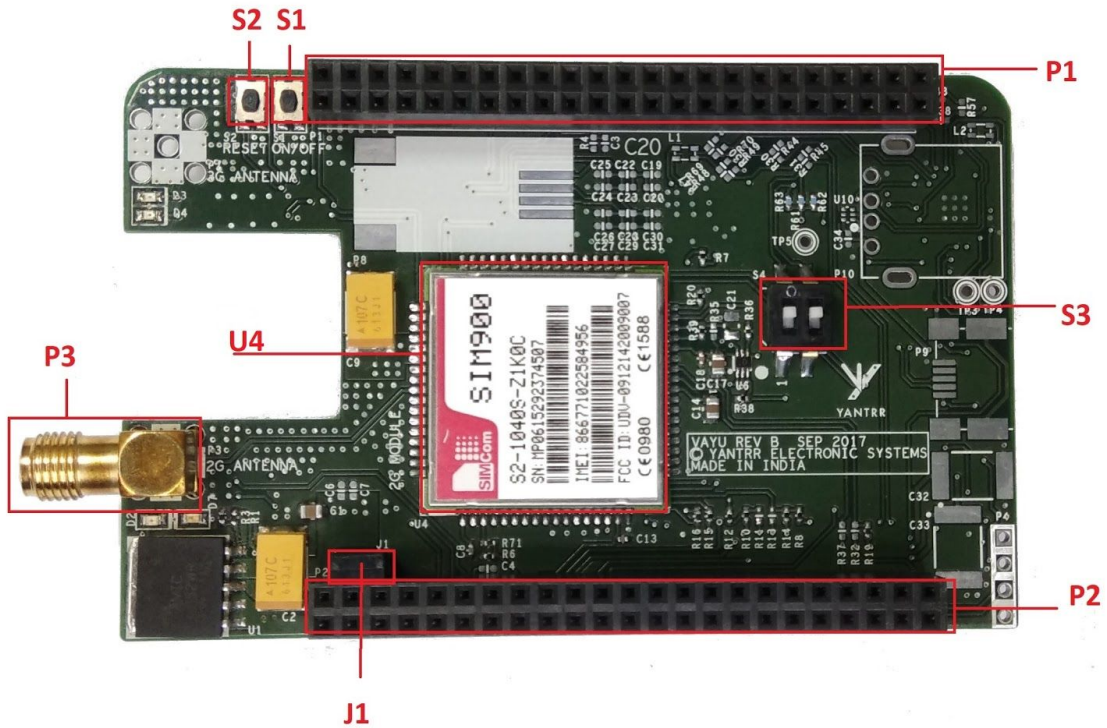
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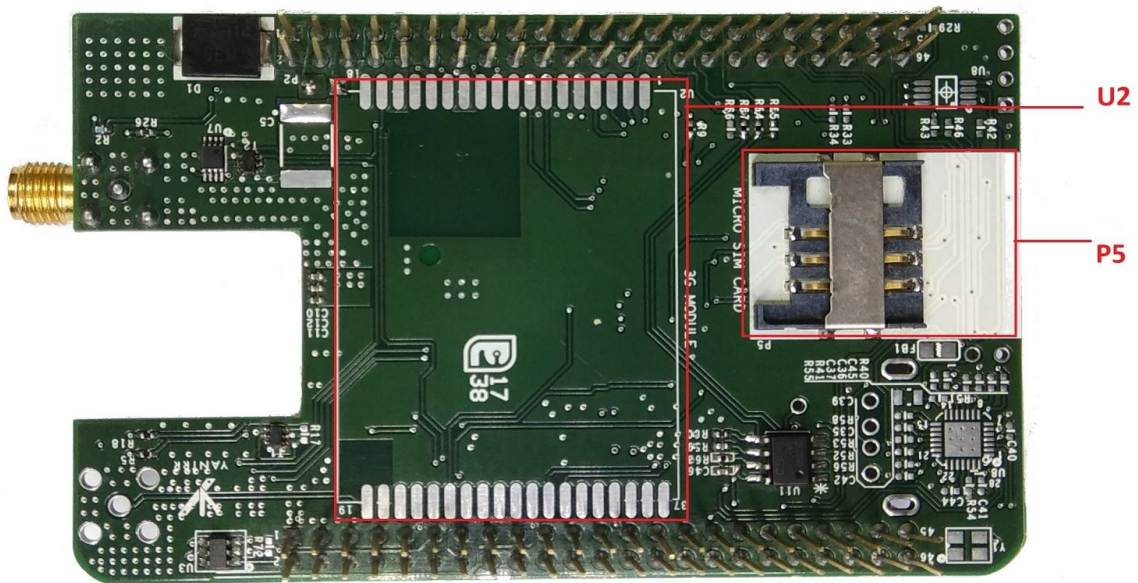
INDIA

# Board Layout:

## TOP VIEW



## BOTTOM VIEW



| Identifier | Description                             |
|------------|---|
| U2         | 3G Module                               |
| U4         | 2G Module                               |
| P1         | Stacking Connector with Beaglebone Cape |
| P2         | Stacking Connector with Beaglebone Cape |
| P3         | 2G Antenna SMA Connector                |
| P5         | SIM Card Holder                         |
| S1         | Switch for Module Power ON/OFF          |
| S2         | Switch for Module Reset                 |
| S3         | DIP Switch for Cape                     |
| J1         | Power Jumper for Cape                   |

## Specifications:

### Module:

| Specifications | SIM800 (2G)  |
|----------------|--|
| Bands          | Quad Band 850/900/1800/1900MHz   |
| Data           | GPRS class 12: max. 85.6 kbps (downlink/uplink)<br>PBCCH support<br>Coding schemes CS 1, 2, 3, 4<br>PPP-stack<br>CSD up to 14.4 kbps<br>USSD<br>Non transparent mode |
| Temperature    | -40°C ~85°C  |
| Voltage Supply | 3.4 ~ 4.4V. Typical 4.0V   |
| Generals       | GPRS multi-slot class 12/10  |

|           |  |
|-----------|--|
|           | GPRS mobile station class B<br>Compliant to GSM phase 2/2+<br>Class 4 (2 W @ 850/900MHz)<br>Class 1 (1 W @ 1800/1900MHz)<br>Bluetooth: compliant with 3.0+EDR<br>Dimensions: 24.0*24.0*3.0mm<br>Weight: 3.14g<br>Control via AT commands (3GPP TS 27.007,27.005 and SIMCOM enhanced AT Commands) |
| Approvals | CE<br>GCF<br>FCC<br>TA<br>CTA<br>CCC<br>ROHS<br>REACH<br>ANATEL<br>A-TICK  |

## Serial Ports:

The 2G modem interfaces with Beaglebone Black's UART1 serial port :

- /dev/ttyS1 : for AT Commands

## Setting up the System:

1. Place a SIM card in the SIM card slot on the bottom of the cape and connect a respective antenna to the SMA connectors.
2. Mount the VAYU cape on Beaglebone Black.
3. Ensure the main power jumper J1 is in closed position and if not, put a jumper cap on J1 to make the connections proper.
4. Power up the full setup using a 5V DC adapter (min 2.5A) to barrel jack. D2 LED on the cape will glow along with LEDs on the Beaglebone black.

**Note:** Before powering up, ensure correct software image is loaded in Beaglebone black or VAYU



Before proceeding further ensure D2 LED is glowing properly. Make sure that the adapter being used is of proper rating and has been connected properly.



Do not try to power up using USB cable alone. Always power up system with a DC adapter. Also while disconnecting power, USB cable should be removed before the DC adapter.



Before powering down the system always ensure to Turn OFF the Module using the PWRKEY turn ON/OFF control pin or using the AT Command *AT+CPOWD*.

### Useful Links:

1. <http://www.yantr.com/wiki/VAYU>
2. [http://elinux.org/Beagleboard:BeagleBoneBlack\\_Debian](http://elinux.org/Beagleboard:BeagleBoneBlack_Debian)
3. <https://simcom.ee/modules/gsm-gprs/sim800/>

### FCC Compliance Statement:

1. This product has not undergone tests to certify compliance with FCC Rule 15 Part B.
2. This product is provided to the buyers in USA as an engineering sample only for evaluation in the buyer's facilities.
3. This product cannot be further sold in USA or used for any other purpose other than evaluation by the original buyer.
4. Yantr Electronic Systems will not be responsible for any loss or damage resulting from any use of this product other than as an engineering sample for evaluation purposes.

### Still Have Questions or Technical Issues?

Please post your queries in the online helpdesk portal at <http://support.yantr.com> or email us at [support@yantr.com](mailto:support@yantr.com) for any question you might have providing the following details:

1. Product model
2. Serial Number
3. Your address, email address and phone contact information
4. Full description of the issue you are facing