

# SNAPstick 220

## USB to SNAP Bridge

### SNAP Network Access from a USB Port

The SNAPstick 220 provides a USB connection between your computer and a SNAP wireless network. It contains an SM220 SNAP module, and has a user programmable multi-color LED for custom applications.

The SNAPstick 220 is powered by the Synapse SNAP network operating system. The SNAP operating system automatically networks SNAP nodes to create a common communications infrastructure for Internet of Things (IoT) solutions.

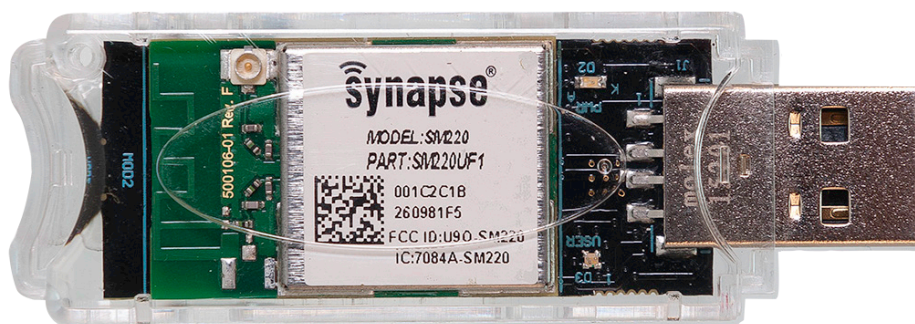
The SNAPstick 220 is an integral part of a SNAP development environment, and is the link between a SNAP network and the Synapse Portal development environment. Portal is a free, comprehensive, development and administration tool for SNAP networks that transforms your computer into a node within a SNAP wireless network, allowing it to participate as a peer or Internet gateway for connected nodes.

### Product Highlights

- Up to 2Mbps radio data rate
- Small form factor
- Powered by SNAP Network Operating System

### The SNAPstick 220 is ideal for:

- SNAP application development
- Data sniffing
- Deploying application scripts to remote nodes
- Managing and configuring SNAP nodes
- Troubleshooting SNAP networks



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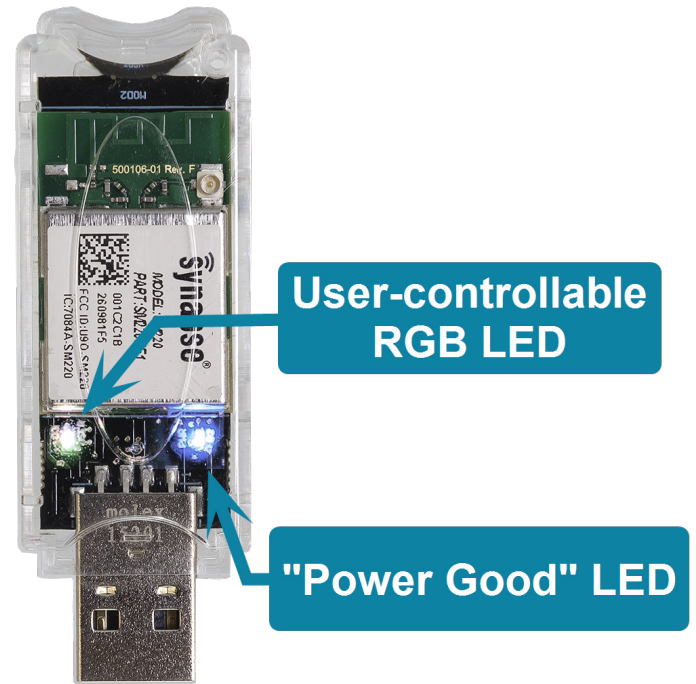
## SNAPstick 220 Specifications\*

|                         |                       |  |
|-------------------------|-----------------------|--|
| <b>Performance</b>      | SNAP module           | SM220  |
|                         | Transmit Power Output | up to +20 dBm  |
|                         | RF Data Rate          | 250Kbps, 500Kbps, 1Mbps, 2Mbps   |
|                         | Receiver Sensitivity  | -103 dBm (1% PER, 250Kbps)   |
| <b>General</b>          | Frequency             | ISM 2.4 GHz  |
|                         | Spreading Method      | Direct Sequence (DSSS)   |
|                         | Modulation            | O-QPSK   |
|                         | Dimensions            | 2.78" x 0.9" x 0.35"<br>7 cm x 2.29cm x .89cm  |
|                         | Operating Temperature | 32 - 158 deg F.<br>0 to 70 deg C.  |
|                         | Weight                | 13 grams   |
| <b>Networking</b>       | Topology              | SNAP   |
|                         | Error Handling        | Retries and acknowledgment   |
|                         | Number of Channels    | 15 channels. To avoid exceeding FCC limits, channel 15 operates in a receive only state. |
| <b>Agency Approvals</b> | FCC Part 15.247       | FCC ID: U9O-RF220UF1   |
|                         | Industry Canada (IC)  | 7084A-RF220UF1   |

\* at 23° C and 3.3V unless otherwise noted

## Orderable Part Number Information

| Part Number | Description                             |
|-------------|---|
| SN220-001   | SNAPstick 220 USB to SNAP Bridge Device |



The SNAPstick 220 was designed to primarily act as a bridge device. The only user-accessible GPIO is connected to the multi-color LED, controlled by SNAP GPIOs D1, D2, and D3.

| LED State | D1          | D2          | D3          |
|-----------|-------------|-------------|-------------|
| Off       | High (True) | High (True) | High (True) |
| Red       | Low (False) | High (True) | High (True) |
| Green     | High (True) | Low (False) | High (True) |
| Blue      | High (True) | High (True) | Low (False) |