


|        |   |               |     |    |         |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |        |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |
|--------|---|---------------|-----|----|---------|---|-------------|----|---|--------|--|---|---------------|----|---|--|--------|---|---------------|----|---|---------|--|---|--------------|----|----|--|--|---|-----|-----|----|--|--|---|-----|-----|----|--|--------|---|-------------|----|---|--------|--|---|---------------|----|---|--|--------|---|---------------|----|---|---------|--|---|--------------|----|----|--|--|---|-----|-----|----|--|--|---|-----|-----|----|--|
|        | 1   | 2             | 3   | 4  |         |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |        |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |
| A      | RST_OV7670  |               |     |    |         |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |        |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |
| B      | <div></div>   |               |     |    |         |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |        |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |
| C      | <div><div>P1</div><table><tr><td>P1 1 2</td><td>1</td><td>CS/SCL1/CTS</td><td>D1</td><td>7</td><td>P1 7 8</td></tr><tr><td></td><td>2</td><td>MOSI/SCL2/RTS</td><td>D2</td><td>8</td><td></td></tr><tr><td>P1 3 4</td><td>3</td><td>MISO/SDA1/RXD</td><td>D3</td><td>9</td><td>P1 9 10</td></tr><tr><td></td><td>4</td><td>SCK/SDA2/TXD</td><td>D4</td><td>10</td><td></td></tr><tr><td></td><td>5</td><td>GND</td><td>GND</td><td>11</td><td></td></tr><tr><td></td><td>6</td><td>VCC</td><td>VCC</td><td>12</td><td></td></tr></table><div>Value</div><div>TSW-106-07-G-D</div><div>P2</div><table><tr><td>P2 1 2</td><td>1</td><td>CS/SCL1/CTS</td><td>D1</td><td>7</td><td>P2 7 8</td></tr><tr><td></td><td>2</td><td>MOSI/SCL2/RTS</td><td>D2</td><td>8</td><td></td></tr><tr><td>P2 3 4</td><td>3</td><td>MISO/SDA1/RXD</td><td>D3</td><td>9</td><td>P2 9 10</td></tr><tr><td></td><td>4</td><td>SCK/SDA2/TXD</td><td>D4</td><td>10</td><td></td></tr><tr><td></td><td>5</td><td>GND</td><td>GND</td><td>11</td><td></td></tr><tr><td></td><td>6</td><td>VCC</td><td>VCC</td><td>12</td><td></td></tr></table><div>Value</div><div>TSW-106-07-G-D</div></div> |               |     |    | P1 1 2  | 1 | CS/SCL1/CTS | D1 | 7 | P1 7 8 |  | 2 | MOSI/SCL2/RTS | D2 | 8 |  | P1 3 4 | 3 | MISO/SDA1/RXD | D3 | 9 | P1 9 10 |  | 4 | SCK/SDA2/TXD | D4 | 10 |  |  | 5 | GND | GND | 11 |  |  | 6 | VCC | VCC | 12 |  | P2 1 2 | 1 | CS/SCL1/CTS | D1 | 7 | P2 7 8 |  | 2 | MOSI/SCL2/RTS | D2 | 8 |  | P2 3 4 | 3 | MISO/SDA1/RXD | D3 | 9 | P2 9 10 |  | 4 | SCK/SDA2/TXD | D4 | 10 |  |  | 5 | GND | GND | 11 |  |  | 6 | VCC | VCC | 12 |  |
| P1 1 2 | 1   | CS/SCL1/CTS   | D1  | 7  | P1 7 8  |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |        |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |
|        | 2   | MOSI/SCL2/RTS | D2  | 8  |         |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |        |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |
| P1 3 4 | 3   | MISO/SDA1/RXD | D3  | 9  | P1 9 10 |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |        |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |
|        | 4   | SCK/SDA2/TXD  | D4  | 10 |         |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |        |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |
|        | 5   | GND           | GND | 11 |         |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |        |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |
|        | 6   | VCC           | VCC | 12 |         |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |        |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |
| P2 1 2 | 1   | CS/SCL1/CTS   | D1  | 7  | P2 7 8  |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |        |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |
|        | 2   | MOSI/SCL2/RTS | D2  | 8  |         |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |        |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |
| P2 3 4 | 3   | MISO/SDA1/RXD | D3  | 9  | P2 9 10 |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |        |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |
|        | 4   | SCK/SDA2/TXD  | D4  | 10 |         |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |        |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |
|        | 5   | GND           | GND | 11 |         |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |        |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |
|        | 6   | VCC           | VCC | 12 |         |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |        |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |
| D      | <div>Logo1</div> <div>Valent Logo 500</div>   |               |     |    |         |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |        |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |
|        | 1   | 2             | 3   | 4  |         |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |        |   |             |    |   |        |  |   |               |    |   |  |        |   |               |    |   |         |  |   |              |    |    |  |  |   |     |     |    |  |  |   |     |     |    |  |

|           |                         |           |               |  |
|-----------|-------------------------|-----------|---------------|--|
| Title     | LOGI-Bone PMOD Loopback |           |               | <div><div>ValentFX</div><div>ELECTRONICS INNOVATION</div></div> |
| Revision: | RA.1                    | Sheet     | * of *        |  |
| Date:     | 1/4/2014                | Engineer: | Michael Jones |  |