



Centre of Excellence (CoE), a MeitY and U.P. Government sponsored project implemented by CDAC Noida and India Cellular & Electronics Association (ICEA)

## Grand Challenge Contest 2021

### PCB Layout

#### General Information:

|                        |                                       |
|------------------------|---------------------------------------|
| Team Name              | Minute Wave                           |
| Registered Mail ID     | blessoabraham@gmail.com               |
| Problem Statement Code | P-003                                 |
| Problem Statement      | To design a low-cost Wireless Charger |

#### Team Details:

|                             | Team Lead                           | Team Member 1                       | Team Member 2                       |
|-----------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Name                        | Blesso Abraham. J                   | Charlton Christ. W                  | Haresh. R                           |
| College/Industry Name       | St. Joseph's College of Engineering | St. Joseph's College of Engineering | St. Joseph's College of Engineering |
| Address of College/Industry | OMR, Chennai 600 119                | OMR, Chennai 600 119                | OMR, Chennai 600 119                |
| State                       | Tamil Nadu                          | Tamil Nadu                          | Tamil Nadu                          |
| Email ID                    | blessoabraham@gmail.com             | charltonchrist123@gmail.com         | r.harish20003@gmail.com             |
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#### BoM List:

| S.No | Name of the Component | Description          | Manufacturer Part Number | Manufacturer             | Quantity | Unit Cost | Total Cost |
|------|-----------------------|----------------------|--------------------------|--------------------------|----------|-----------|------------|
| 1.   | TR1                   | 0-12V, 5A            | EC-3449                  | Generic                  | 1        | 647.82    | 647.82     |
| 2.   | D1,D2, D3,D4          | IN4007               | EC-0144                  | Generic                  | 5        | 1.18      | 5.90       |
| 3.   | C1                    | 1000 $\mu$ F, 16V    | EC-0786                  | Generic                  | 1        | 22.42     | 22.42      |
| 4.   | C2                    | 0.1 $\mu$ F          | EC-0018                  | Generic                  | 1        | 3.54      | 3.54       |
| 5.   | C3                    | 1 $\mu$ F            | EC-1210                  | Generic                  | 1        | 9.44      | 9.44       |
| 6.   | R1                    | 5000 $\Omega$        | RSF/MO5WS5KJBU           | Jameco Valuepro          | 1        | 11.20     | 11.20      |
| 7.   | R2                    | 220                  | EC-1060                  | Generic                  | 1        | 7.80      | 7.80       |
| 8.   | IC1                   | LM317LZ              | EC-0206                  | Generic                  | 1        | 16.52     | 16.52      |
| 9.   | Arduino UNO           | R3 ATMEGA328P EVAL   | 1050-1024-ND             | Arduino                  | 1        | 1000.00   | 1000.00    |
| 10.  | HC-05                 | 9600bps              | TECH1537                 | Techtonics               | 1        | 365.00    | 365.00     |
| 11.  | Relay                 | 1 Channel 12V        | EC-6574                  | Generic                  | 1        | 135.70    | 135.70     |
| 12.  | Pump Laser Diode      | 980nm Laser Diode    | HTRM-48                  | Zhongshan He Tong Optics | 1        | 300.21    | 300.21     |
| 13.  | Gain Medium           | ND YAG Laser Crystal | 8456110090               | Wuhan TA Laser Machinery | 1        | 1050.74   | 1050.74    |
| 14.  | Retroreflectors       | 5x5x5 cm             | FZ79014506               | Felzon                   | 1        | 1361.01   | 1361.01    |
| 15.  | Auxiliary Mirror      | 19.05mm Diameter     | 15D935AE3J7Y1J           | Jing'ao                  | 1        | 1801.27   | 1801.27    |
| 16.  | Wave Guide            |                      |                          |                          |          |           |            |
| 17.  | Photo-Voltaic Cell    | 70x70mm              | ELEC100MA-12V            | Hello Creators           | 1        | 77.00     | 77.00      |