MGC3140

Emerald EVK Hardware References

Overview

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# Overview

The Emerald development kit is a complete MGC3140 reference system consisting of three individual PCBs:

* MGC3140 controller
* I²C to USB bridge
* 4-layer reference Hillstar sensor

The development kit can be connected to a PC via a USB cable and used for evaluation of the MGC3140 IC and GestIC technology. During the customer’s design-in process the individual boards can be combined according to the customer need.

The MGC3140 Hardware References package contains reference PCB layouts for the MGC3140 controller, a collection of Electrode reference designs, I²C to USB bridge and Hillstar sensor.

## Organization Of The Package

The MGC3140 Hardware Reference package contains three folders:

**01\_MGC3140 EVK 80900-A0:** MGC3140 PCB Schematics, Layout Gerber files and BoM

**02\_I2C to USB Bridge V2.0:** I2C to USB bridgeSchematics, Layout Gerber files and BoM

**03\_Reference Electrodes:** Reference electrodeLayout Gerber files and BoM

Each folder is organized as follows:

**PCB\_Assembly\_Data:** BOM, Assembly drawing

**PCB\_Production\_Data:** Gerber files of the PCB

## Reference Electrodes

|  |  |  |  |
| --- | --- | --- | --- |
| **PCB Name** | **Folder** | **# Layer** | **Outlines (mm)** |
| Electrode 30x30 2Layer | 30x30 2Layer V1.0 | 2 | 49x49 |
| Electrode 30x30 4Layer | 30x30 4Layer V1.0 | 4 | 49x49 |
| Electrode 50x30 2Layer | 50x30 2Layer V1.0 | 2 | 63x47 |
| Electrode 80x80 2Layer | 80x80 2Layer V1.0 | 2 | 104x104 |
| Electrode 95x60 2Layer | 95x60 2Layer V1.0 | 2 | 120x85 |
| Electrode 95x60 4Layer (Hillstar) | 95x60 4Layer V1.0.2 | 4 | 120x85 |
| Electrode 100x50 2Layer | 100x50 2Layer V1.0 | 2 | 128x72 |
| Electrode 100x50 4Layer | 100x50 4Layer V1.0 | 4 | 128x72 |
| Electrode 140x90 2Layer | 140x90 2Layer V1.0 | 2 | 168x119 |
| MGC3140 Controller | MGC3140 EVK PCB 80900-A0 | 2 | - |
| I2C to USB Bridge | I2C to USB Bridge V2.0 | 2 | - |

