

# CERTIFICATION

This is to certify that

Marshall G. Seaborn

has successfully completed a course

Advanced PCB Layout

Date: 07 JUN 2021 - 25 JUL 2021

Course tutor

Robert Firmanic



Software used: **Altium Designer**

Course content: 1) Placement 2) Basic Rules & Basic Stackup, Fanout under CPU, DDR3 preliminary layout 3) Board fanout, Planning Layout, Crosstalk, Impedances & Stackup 4) High Speed Design Rules & Routing, Layer ordering 5) Number of layers, Layout 6) Length matching, About memory routing, Polygons & Power Planes 7) Checking PCB, Length tuning, Finishing PCB, Generating & Checking gerber files

Certificate number: 1c653a77208c7a3f7730673f4