TESSOLVE SEMICONDUCTOR TEST ENGINEERING LAB FOR STE-SDC COURSE

Training Partner Agreement

Between
Tessolve Semiconductor Pvt Ltd
&
Sri Vasavi Engineering College, Andhra Pradesh

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About Liquid Instruments

Liquid Instruments, an innovator in precision software-defined instrumentation, launched Moku:Go, a complete, portable platform designed to bring the engineering lab anywhere and usher in a new era of scientific and engineering education at universities around the world.

Moku:Go offers a complete set of instruments and features designed to help science and engineering students push past the traditional boundaries of teaching labs and classrooms.

It starts with 8 proven, powerful instruments including an oscilloscope, PID controller, logic analyzer, arbitrary waveform generator, data logger, spectrum analyzer, Power supply, Waveform Generator. It also features full connectivity with a Wi-Fi hotspot and USB-C, robust hardware features and electrical protection. The platform supports Python and MATLAB APIs.

About Tessolve Semiconductor

Tessolve, an ISO 9001:2015 certified company, is one of the world's leading Semiconductor Engineering solutions provider. Tessolve offers engineering expertise in the areas of Semiconductor IC Design, Test & Product Engineering, PCB Design, Failure Analysis and Systems Design under one roof. Tessolve's goal is to be an extended arm of Semiconductor product companies and enable them to ensure good quality productization of their chips in a cost effective manner.

Since its inception in 2004, Tessolve has grown from strength to strength. Tessolve currently has over 2800 employees with offices in Bangalore, Coimbatore, Bhubaneswar, Vizag, Chennai, Philippines, Germany , Singapore, Malaysia, USA (Santa Clara & Austin). Tessolve engineers have executed complex projects for several leading semiconductor companies.

Background

Semiconductor devices today integrate a wide range of components of an electronic system (computation engine, memory, logic, power management, mixed signal blocks etc commonly referred to as System on Chip SOC) into a single multifunctional device. There is incredible convergence between handheld, automotive, and home electronics technologies. The semiconductor Industry is also levered strongly to the growth prospects of Internet of Things and Big Data. The global semiconductor market was valued at $555.9 billion in 2021, and is projected to reach $1,033.5 billion by 2031.

Testing a chip is a critical step in the Manufacturing cycle for semiconductor IC companies. Today's chip testing involves high cost equipment and experienced engineers. The Indian market is also now moving towards manufacturing our own physical chip, which will require testing, characterization and qualification in India. Not only the big chip makers but also Indian origin design houses and IP providers will need testing of their devices to contribute to the upcoming chip manufacturing in India.

Semiconductor Automated Test Equipment (ATEs) are used for testing memory, digital, mixed signal, power management and SoC components, both at the wafer level and package level stages.

Engineering graduates, who comprise two-thirds of the entire workforce, form a major part of the Semiconductor testing industry. **The industry goes through six months to a year for the Engineering graduates from college to become deployable and industry ready.** There is a continuous shortage and high demand for qualified test engineers every year. Meanwhile, university and engineering institutions lack the specialized ATE training skills, as they cannot afford the financial outlay for high cost Semiconductor Test Equipment required for such training.

Tessolve & Liquid Instruments have overcome this academia problem by providing a novel concept of owning a low cost Test Training Kit– **Moku:Go** by the Institution (referred as Training Partner). To understand the electronics and device test theory, Moku : Go is the ideal training vehicle to learn and develop the talent and skillset for the Semiconductor Engineering industry.

Tessolve Semiconductor is offering **Semiconductor Test Engineering - Skill Development Course [STE-SDC] a certification course**. The rationale behind this STE-SDC Certification approach is to introduce the students as soon as possible to real world test program development so that they can bridge the gap between academic learning and job-oriented skill set required in the industry in a shorter duration.

Tessolve & Liquid Instruments will continue to work with academia to support skill-oriented training in field of semiconductor test and measurement.

Training Partner Agreement

This Agreement, effective <u>November, 2023</u> , is between Tessolve Semiconductor Pvt Ltd, having an office at Plot No. 31 (P2), Electronic City Phase II, Bangalore 560100 and Sri Vasavi Engineering College, Padatadepalli, Andhra Pradesh,534101.

The **Sri Vasavi Engineering College**, henceforth known as the "**Training Partner**" hereby agrees to offer the STE-SDC course for engineering graduates, subject to the following guidelines.

1. **OBJECTIVE**

   The objective of TSTE Lab (Tessolve Semiconductor Test Engineering) is to offer **STE-SDC** Course to ECE/EEE/IE undergraduate students.

2. **TERM**

   The term of this Agreement shall be for 3 Years commencing on 6th November,2023 renewable by the parties with mutual consent.

3. **TERMS & CONDITIONS FOR SETTING UP THE TSTE LAB AND CONDUCTING THE STE-SDC COURSE**

   a) Tessolve selects the Training Partner based on factors like (but not limited to) College placement records at core semiconductor companies, location and accessibility to handle the training.

   b) Tessolve will train the Selected Candidates (min 10 candidates) once the qualified college/institutes signs the Training Partner Agreement.

   c) Tessolve will conduct a selection process at Training Partners college to identify the eligible candidate for the training. The training must begin, post-selection process, and once the LOI (Letter of Indent) is issued.

   d) Tessolve recommends the training to commence at the college premises or such other location as decided by Tessolve from time to time for min 150hrs after the 7th semester exams and a min batch size of 10 as the total number of candidates selected for the year.

   e) The Training Partner will be responsible for promoting awareness about the STE program and ensuring a considerable number of candidates participate in the selection process. The Training Partner should ensure that once the candidate accepts the LOI from Tessolve, they don't appear for another interview with other organization. It's also the Training Partner's responsibility to prepare the candidates for the selection process.

   f) Training Partner will be responsible for workstations (Laptops/Desktops) given to candidates at college campus or such other location as identified by Tessolve form time to time during Training and internship period in the event the candidates are not traceable.

g) The STE-SDC Certification course will be offered full time or part time at college campus or such other location as identified by Tessolve form time to time.

h) The Tessolve will conduct STE-SDC examination at the end of the course and share to Tessolve Partners the list of successful candidates.

i) All candidates, upon successfully qualifying Tessolve's examination, will be provided STE-SDC Certification.

j) Tessolve shall participate in delivering Technical Lectures on Semiconductor Test Engineering Topics by delegates from the industry.

k) Students hired by other organizations will not be eligible for STE-SDC Training.

l) Based on Tessolve's hiring requirement from time-to-time, Tessolve should be given the highest priority to hire the required number of students who have qualified from the Tessolve's selection process.

m) Tessolve Semiconductor Test Engineering Lab training includes STE-SDC courseware and hands on access to Liquid Instruments's Moku: Go kit. After successfully obtaining the STE-SDC Certification by Tessolve, the student may be able to demonstrate Proficiency in Test Methodologies like test program development and troubleshooting skills for ICs.

n) Tessolve holds the right to withdraw the permission to setup/operate the TSTE Lab at any time if the Training Partner fails to comply with the above guidelines and meet the spirit of the purpose.

o) Tessolve reserves the right to withdraw or alter the training, in the event the number of students for the said training are less than 10 (ten) or such other reasons as thought deemed fit by Tessolve.

p) All the requirements of the students towards this training shall be provided by the Training Partner, except as agreed to be provided by Tessolve.

q) The Parties agree that the usage of terms such as course, certificate, Certification course, etc, shall mean a type of training as provided to the students by Tessolve which\ was previously being mutually discussed and approved by the Training Partner. Tessolve do not guarantee any job placement in other companies or increasing the marketability of the student who are part of the course under this Agreement. Further, Tessolve is not a registered or authorized entity to conduct any form of professional course and impart any form of professional, academic, career certification course.

r) During the presence and stay of the students at Tessolve's premises if any, the students will be provided a copy of Code of Conduct and a Handbook encompassing the terms and conditions governing their presence and stay at Tessolve's premises. The Training Partner shall instruct the students to strictly adhere the same. The failure of which, the Training Partner shall indemnify Tessolve towards any loss due to acts of the students.

4. OTHER ENGAGEMENTS

The Training Partner agrees that during the validity of this Partner Agreement and even after the validity is over, in case the Training Partner intends to associate with any other organization for conducting a similar training, they should first seek a written permission from Tessolve.

5. TERMINATION

Either party, upon giving not less than thirty (30) days written notice, may terminate this Agreement. The thirty (30) day termination period shall not begin until the other party has received or is deemed to have received the notice of termination. However, the liability incurred against the Training Partner, in this Agreement shall survive such termination by the Training Partner.

6. ENTIRE AGREEMENT

This agreement constitutes the entire agreement and final understanding of the parties with respect to the subject matter hereof and supersedes and terminates all prior and/or contemporaneous understandings and/or discussions between the parties, whether written or verbal, express or implied, relating in any way to the subject matter hereof. This Agreement may not be altered, amended, modified or otherwise changed in any way except by a written agreement, signed by both parties.

7. CONFIDENTIALITY

Training Partner agrees either for itself and on behalf of the students. at all times during the term this Agreement and after the termination of this Agreement to hold in strictest confidence, and not to use, or to disclose, transfer or reveal, directly or indirectly to any person or entity any Confidential information without the prior written authorization of the other party. Confidential Information includes, but not limited to, Training Material, Manuals, Circuit diagrams, Presentation PPTs, names of investors, buyers, sellers, borrowers, client lists, financial information and trade secrets about the products and information or other proprietary information relating to designs, formulas, developmental or experimental work, know how, products processes, computer programs, source codes, databases, designs, schematics, or other original works of authorship.

Each party hereby agrees that all information provided by the other party and will be treated as confidential and the receiving party shall not make any use of such information other than with respect to this Agreement. If the Agreement shall be terminated, each party shall return to the other all such confidential information in their possession, or will certify to the other party that all of such confidential information that has not been returned has been destroyed.

8. ASSIGNMENT

This Agreement is valid only for the Training Partner who have signed with Tessolve, and is not transferable or sub-contractible to any other third person or entity.

IN WITNESS WHEREOF TESSOLVE SEMICONDUCTOR PVT. LTD. AND THE TRAINING PARTNER HAVE ENTERED INTO THIS AGREEMENT AND AGREE TO THE ABOVE TERMS IN THEIR ENTIRETY.

FOR TESSOLVE SEMICONDUCTOR PVT. LTD.

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Mr. Rajakumar D
Vice President – Operations

FOR SRI VASAVI ENGINEERING COLLEGE

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Name: Dr. Guduru VNSR Ratnakara Rao
Designation: Principal

PRINCIPAL
SRI VASAVI ENGINEERING COLLEGE
PEDATADEPALLI
TADEPALLIGUDEM - 534 101

☎08818-284577, 284355 Ext: 321; Fax: 08818-284577   Visit us at: www.srivasaviengg.ac.in

SRI VASAVI ENGINEERING COLLEGE (AUTONOMOUS)

(Sponsored by Sri Vasavi Educational Society)
(Approved by **AICTE**, New Delhi & Recognized by **UGC** under section **2(f) & 12(B)**)
(Permanently affiliated to JNTUK, Kakinada, Accredited by **NBA** and **NAAC** with 'A' Grade)
Pedatadepalli, **TADEPALLIGUDEM – 534 101.**W.G.Dist**. (A.P)**

Department of Electronics and Communication Engineering

Report on

A Two Day Training on Moku:Go Kits

A Two Day Training program on Moku:Go kits was held in ECE Department on 01ˢᵗ & 02ⁿᵈ of December 2023. In this training program 10 of ECE faculty were presented and got trained. Mr. Mahaveer S, a technical person from Liquid Instruments was trained the faculty and he explained how to use the Moku:Go Kits. He explained how to verify the output of Analog and Digital Circuits and how to test the digital and analog ICs by using Moku:Go kits.

He also explained about Moku:Go, that combines a compact hardware design with intuitive software to provide test essentials and tools for complex applications — all in a single device. From audio and power electronics to analog and digital design, use Moku:Go to explore and test concepts with flexibility and ease. With seamless access to 13+ instruments, from an Oscilloscope to a PID Controller, Moku:Go has the right equipment for all applications. The easy-to-use GUI for Windows, macOS and iPadOS helps simplify design, debug, and data collection. Tackle more advanced applications with the ability to implement custom FPGA code, API support, and specialized instruments like the Lock-in Amplifier and Laser Lock Box, previously unavailable in this device class.

All the faculty were actively participated in the training and felt very happy to learn about Moku:Go kits by the trainer. This kit is very useful for the students to learn and they will get opportunity to work on this kit in industries also.