KHTP SKILLS CENTRE
DIURUSKAN OLEH KULIM ADVANCED TECHNOLOGIES SDN BHD

MALAYSIA
KULIM HI-TECH PARK
Leading Global Science City

CERTIFIED
SIEMENS
Training Program

SIEMENS

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REGISTERED HRD CORP TRAINING PROVIDER

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KHTP SKILLS CENTRE
DIURUSKAN OLEH KULIM ADVANCED TECHNOLOGIES SDN BHD

LIST OF CERTIFIED TRAINING

REGISTERED HRD CORP TRAINING PROVIDER

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HRD CORP CLAIMABLE

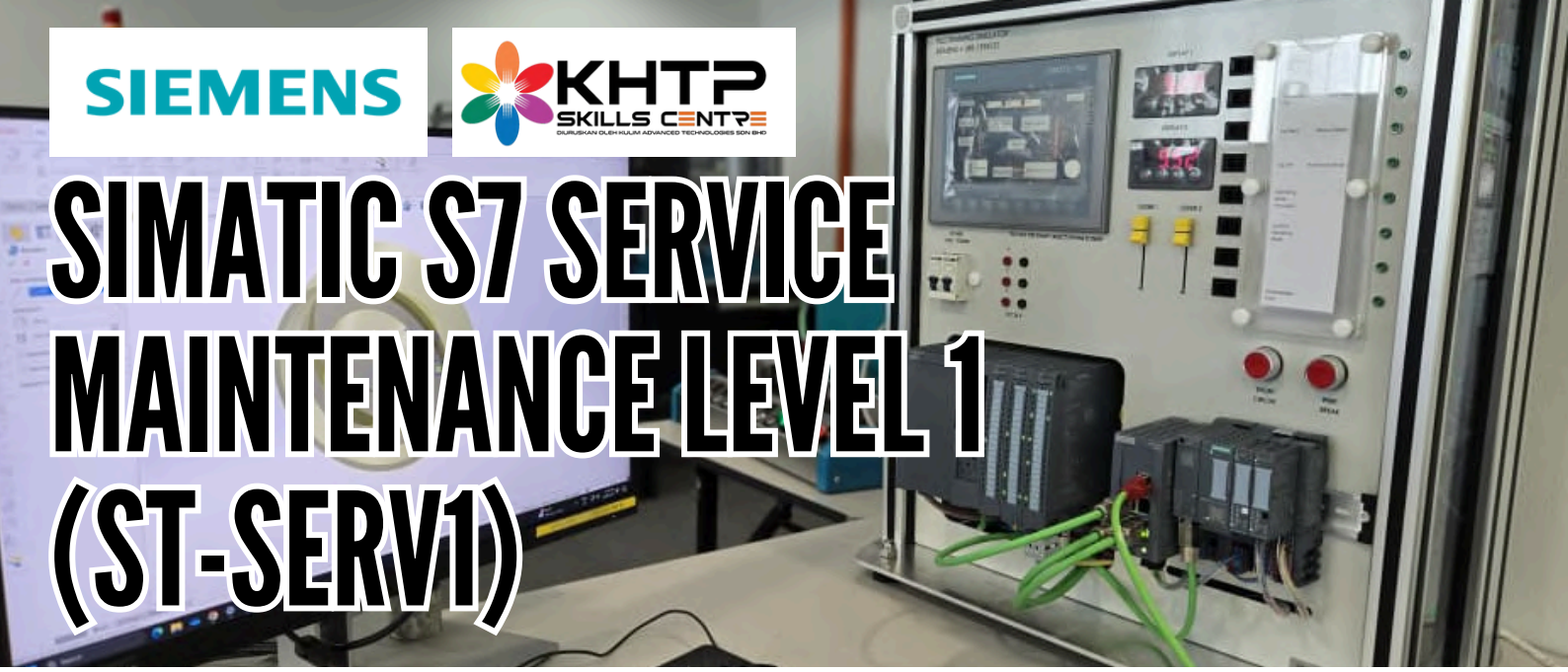
INTRODUCTION

The Siemens Certified Training Programs are designed to equip participants with globally recognized skills in advanced manufacturing, automation, and digitalization, aligning with the latest demands of Industry 4.0.

Delivered in collaboration with Siemens-certified trainers and using industry-standard equipment and software, these programs offer a structured pathway from foundational knowledge to professional expertise. Participants will gain hands-on experience with Siemens technologies such as TIA Portal PLC programming, HMI design, and industrial IoT solutions, ensuring they are job-ready and competitive in both local and international markets.

LIST OF CERTIFIED TRAINING

NO	COURSE	DAYS	RM
1	Simatic S7 Service Maintenance Level 1 (ST-Serv1)	5	8,514.00
2	Simatic S7 Service Maintenance Level 2 (ST-Serv2)	5	8,514.00
3	Simatic S7 Programming Level 1 (ST-Pro1)	5	8,514.00
4	Simatic S7 Programming Level 2 (ST-Pro2)	5	8,514.00
5	Tia Portal Programming Level 1 (Tia-Pro1)	5	7,453.00
6	Tia Portal Programming Level 2 (Tia-Pro2)	5	7,453.00
7	Tia Portal Service Maintenance Level 1 (Tia-Serv1)	5	7,453.00



SIMATIC S7 SERVICE MAINTENANCE LEVEL 1 (ST-SERV1)

COURSE DESCRIPTION

This first component of the SIMATIC service course teaches the basic knowledge of the design of automation systems, the configuration and parameterization of the hardware, handling with the STEP 7 Basis Software and the fundamentals of programming. You also get an overview of human machine interfacing, PROFIBUS DP and the integration of drives. What you learn about the integrated factory automation will teach you to take a holistic view of your plant and to understand the relationships between components. On completion of the course, you will thus be able to diagnose simple hardware faults or replace modules, to coordinate components optimally, carry our safe fault diagnostics and thus reduce downtimes.

COURSE CONTENT

- System overview and essential performance features of the SIMATIC S7 system family
- The components of the STEP 7 Basic Package
- Program execution in the automation system
- Binary and digital operations
- Configuring and assembling an automation system
- Addressing and wiring of the signal modules
- Hardware and software startup of the automation system
- Hardware configuration and parameterization in the case of S7-300
- Reinforcement of the content through exercises on the device
- Introducing the TP177B Touch Panel
- Introducing the MM420 Drive
- Configuration and parameterization of PROFIBUS DP
- Backing up and documenting executed program changes
- Deeper understanding of contents through practical exercises on the SIMATIC
- S7-300 system model

REQUIREMENTS

- Basic knowledge of automation

SIMATIC S7 SERVICE MAINTENANCE LEVEL 1 (ST-SERV1)

THE AGENDA

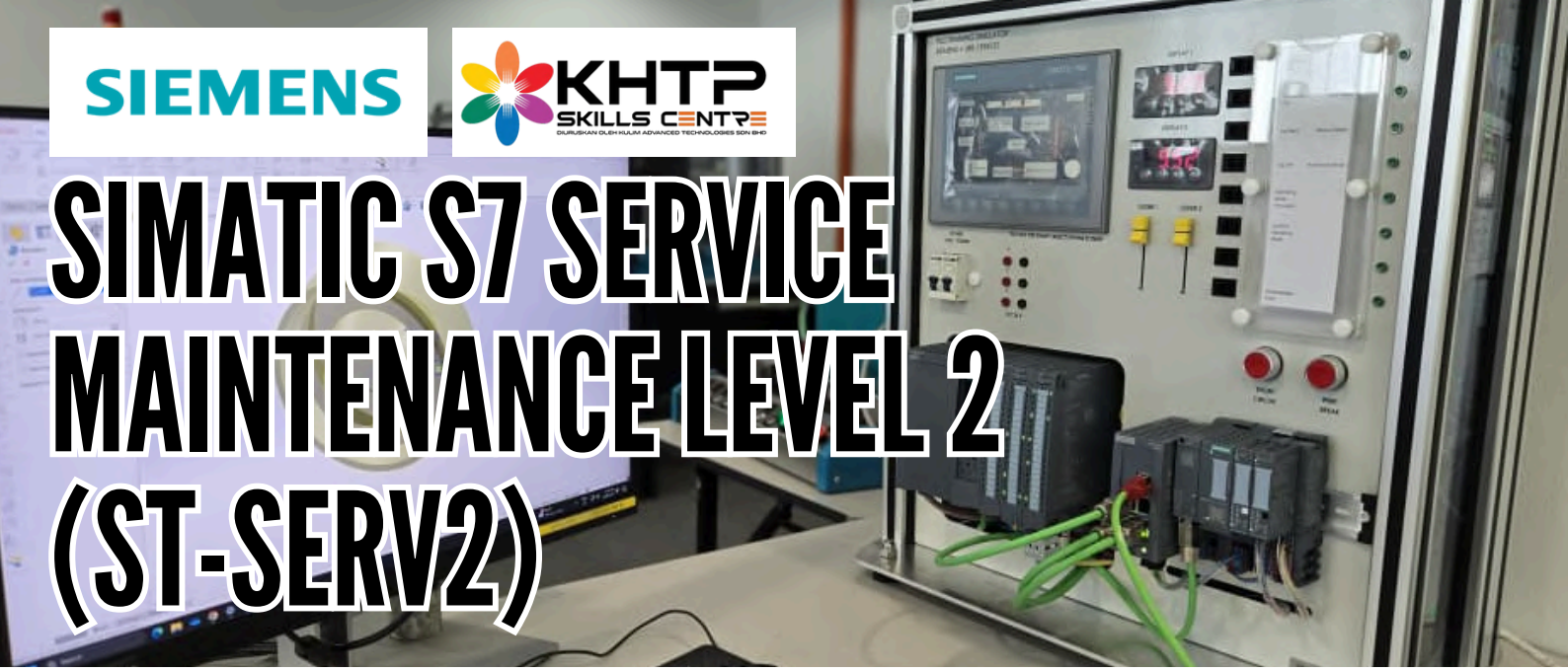
Day 1	• SIMATIC S7 System Family overview • Training units and addressing • Installation/maintenance of PLC • Practical on the above
Day 2	• SIMATIC Manager • Symbols • Hardware configuration • Practical on the above
Day 3	• Hardware commissioning • Block architecture and block editor • Binary operations • Practical on the above
Day 4	• Digital operations • Introduction to HMI • Rewiring a user program • Practical on the above
Day 5	• Documentation • Practical on the above • Feedback & valedictory session

RM8,514.00/ PAX

HRDCORP Claimable

TRAINER

Amiruddin bin Zahamail is with Siemens Malaysia and brings over seven years of experience in industrial automation, specializing in PLC, Drive, HMI, SCADA, and DCS systems. Having worked with Siemens products since 1998, he has delivered more than 150 in-house trainings, 50 on-site trainings, and over 50 customized programs, focusing on S7 300/400 PLCs, WinCC Flex for HMI panels, WinCC SCADA, and networking. His expertise spans product and system training, consultancy in training needs and facility setup, occasional emergency plant support, and the promotion of training and technical concepts.



SIMATIC S7 SERVICE MAINTENANCE LEVEL 2 (ST-SERV2)

COURSE DESCRIPTION

The second component of the SIMATIC Service course is linked to the first basic course with regards to STEP7, human machine interfacing, drive components and PROFIBUS DP, and it expands this in the direction of troubleshooting. The course focuses on fault correction, software troubleshooting and program adaptations. What you learn about the integrated factory automation will teach you to take a holistic view of your plant and to understand the relationship between the individual components. This will enable you on completion of the course to pinpoint faults and correct them systematically and quickly. This will increase the productivity of the machine since standstill times are thus reduced. You will be able to adapt your system to new conditions through small program changes and expansions.

COURSE CONTENT

- Detecting and correcting basic hardware faults
- Possible applications of different block types (FC, FB, OB, DB)
- Principles of analog value processing
- Detecting and correcting software errors
- Connecting distribute IO with PROFIBUS DP
- Modifying the TP177B configuration
- Modifying parameters of the MM420
- Sequential Control System
- Deeper understanding of contents through practical exercises on the SIMATIC S7-300 system model

REQUIREMENTS

- SIMATIC S7 knowledge according to ST-SERV1 and practical experience in using the knowledge.

SIMATIC S7 SERVICE MAINTENANCE LEVEL 2 (ST-SERV2)

THE AGENDA

Day 1	• SIMATIC S7 System Family overview • Training units and addressing • Hardware commissioning • Software commissioning • Practical on the above
Day 2	• SIMATIC S7 System Family overview • Training units and addressing • Hardware commissioning • Software commissioning • Practical on the above
Day 3	• Analog processing and programming • Troubleshooting • Practical on the above
Day 4	• Diagnostics with Stacks (I, B, L) • System information • Practical on the above
Day 5	• Tags in HMI • Messages in HMI • Feedback & valedictory session

RM8,514.00/ PAX

HRDCORP Claimable

TRAINER

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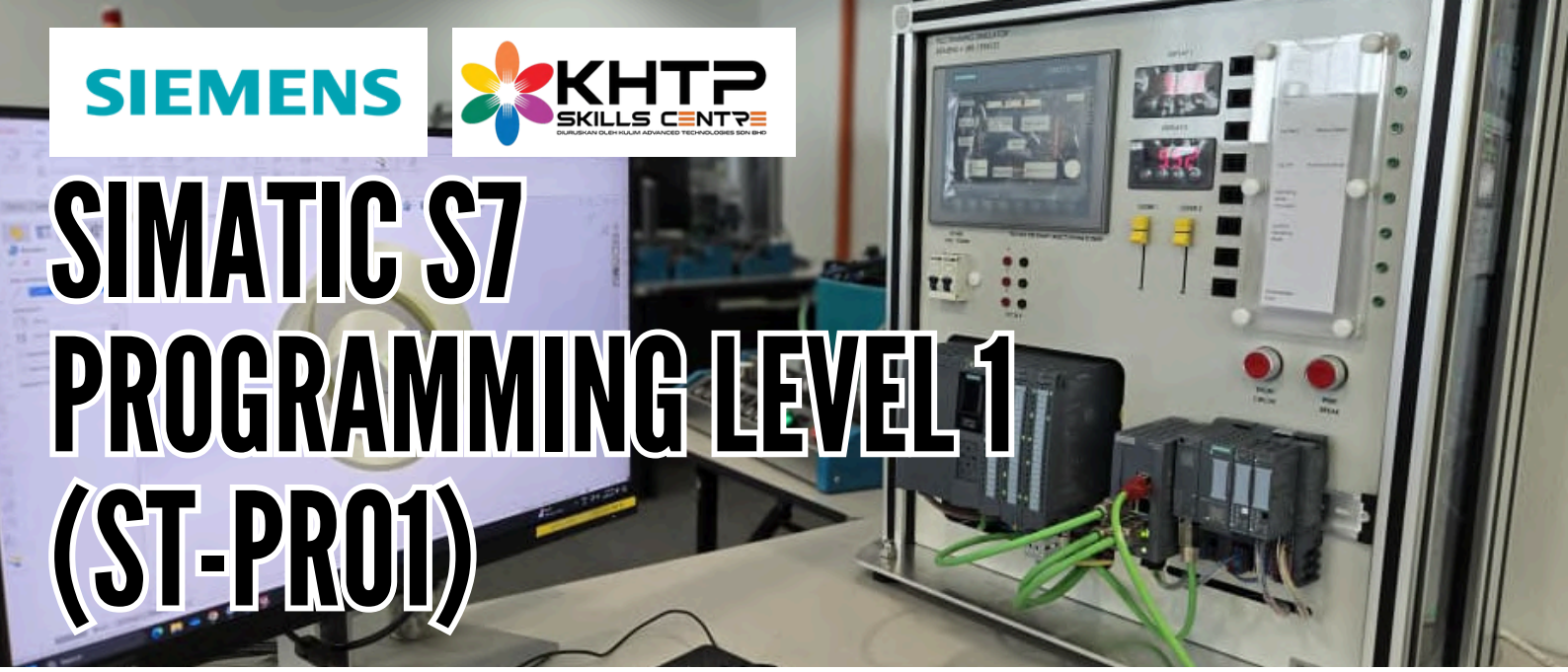

SIMATIC S7 PROGRAMMING LEVEL 1 (ST-PRO1)

COURSE DESCRIPTION

This course is the second in a three part series which builds skills with Siemens STEP7 engineering software in project management, program design and application sustaining.

This is an aggressively paced curriculum covering key programming tools, structures, libraries and editors. This course takes a systems approach addressing the S7-300 PLCs, plus basic connectivity and functionality of an HMI and PROFIBUS based remote I/O

COURSE CONTENT

- Complete a system hardware configuration.
- Build, document, test and troubleshoot a structured STEP7 program.
- Program using the multiple address types.
- Use symbolic addressing.
- Use core application instructions, functions and blocks.
- Program using the processed analog values.
- Generate data blocks.
- Establish connections to an HMI

REQUIREMENTS

- This course is for SIMATIC S7 PLC users who are involved with developing or sustaining automation systems and their application programs.
- PLEASE NOTE: If you are very new to SIEMENS PLC, it is advisable to start with the SIMATIC S7 Service Maintenance Level 1 (ST-SERV1).

TARGET GROUP

- Technical/ Maintenance Engineer, Programmers, Project Manager

SIMATIC S7 PROGRAMMING LEVEL 1 (ST-PR01)

THE AGENDA

Day 1	• SIMATIC S7 System Family overview • Training Units & SIMATIC Manager • Symbols & Hardware Configuration • Step7 Blocks • Practical on the above
Day 2	• Binary Operations • Practical on the above • Digital Operations • Practical on the above
Day 3	• Introduction to Profibus DP and HMI • Data Blocks • Data Blocks (cont) • Practical on the above
Day 4	• Functions and Function Blocks • Organization Blocks • Analog Value Processing • Troubleshooting
Day 5	• Tags in HMI • Messages in HMI • Feedback & valedictory session

RM8,514.00/ PAX

HRDCORP Claimable

TRAINER

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SIMATIC S7 PROGRAMMING LEVEL 2 (ST-PRO2)

COURSE DESCRIPTION

This course is the last in two part series which builds skills with Siemens STEP7 engineering software. Advanced programming tools, techniques, functions, data management and diagnostics are the focus of this course. This course takes a systems approach addressing the S7300 PLCs, plus basic connectivity and functionality of an HMI.

This programming course designed to help the participant understand the techniques and benefits of structured programming. Participants will also learn to leverage the efficiencies and power of Siemens program editors (LAD, STL, FBD), block and function libraries. Managing and manipulating data is a key focus in this course.

COURSE CONTENT

- Understand the concepts of structured program creation.
- Leverage the power of Block and Function libraries.
- Use STL for advanced program development.
- Incorporate System Function (SFC) in a program.
- Integrate an HMI and Drive system with the PLC.
- Use Instance and Multi - Instance data Blocks.
- Use interrupt - driven and error processiong program execution blocks.
- Leverage STEP7 advanced diagnostics.

REQUIREMENTS

- This course is for SIMATOC S7300 PLC users with basic engineering experience in the design and sustaining of SIMATIC automation systems and their application programs.
- PLEASE NOTE: Attending ST-PRO 1 or ST-SERV2 course is a prerequisite for this course.

TARGET GROUP

- Technical/ Maintenance Engineer, Programmers, Project Manager

SIMATIC S7 PROGRAMMING LEVEL 2 (ST-PRO2)

THE AGENDA

Day 1	• Training units and addressing • Hardware & Software Commissioning • Practical on the above • Methods for program design
Day 2	• Analog value processiong • Jump and accumulators functions • Functions & function blocks • Practical on the above
Day 3	• Indirect addressing • Practical on the above • System Blocks • Practical on the above
Day 4	• Organization Blocks • Blocks • Analyzing Diagnostic Data • Practical on the above
Day 5	• Tags in HMI • Messages in HMI • Feedback & valedictory session

RM8,514.00/ PAX

HRDCORP Claimable

TRAINER

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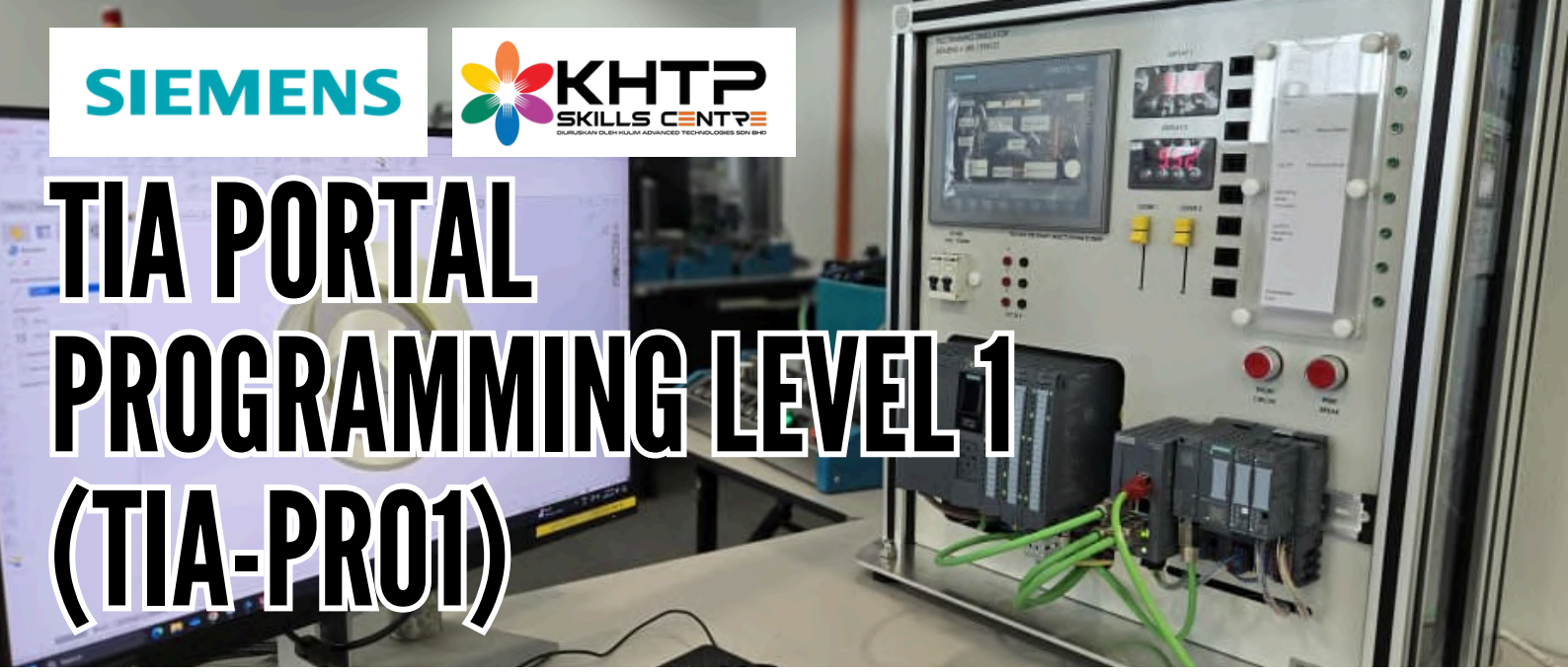

TIA PORTAL PROGRAMMING LEVEL 1 (TIA-PRO1)

COURSE DESCRIPTION

The Totally Integrated Automation Portal (TIA Portal) forms the work environment for integrated engineering with SIMATIC STEP 7 and SIMATIC WinCC. in this first part of the SIMATIC TIA Portal programming training, we teach you the handling of the TIA Portal , basic knowledge about the structure of the SIMATIC S7 automation system, configuration and parameterization of hardware, and the basics of standard PLC programming.

You also receive an overview of HMI, PROGINET IO and connecting drives. You can deepen your theoretical knowledge with numerous practical exercises on a TIA system model.

COURSE CONTENT

- Understand the fundamentals of interaction of the TIA components
- The components of the TIA Portal: STEP S7, WinCC, communocation
- Program execution in automation systems
- STEP 7 block types and program structuring
- Binary and digital operations
- Programming of parameterisable blocks
- Data management with data blocks
- Programming organisational blocks
- Program documentation and saving

REQUIREMENTS

- Prerequisite: Basic knowledge of automation technology

TARGET GROUP

- Technical/ Maintenance Engineer, Programmers, Project Manager

TIA PORTAL PROGRAMMING LEVEL 1 (TIA-PR01)

THE AGENDA

Day 1	• Training units and addressing • System overview • Engineering software TIA Portal • Devices and Networks
Day 2	• PLC tags • Binary Operations 1 • Program Blocks • Binary Operations 2
Day 3	• Functions and Function Blocks • Digital Operations • Data Blocks • Practical on the above
Day 4	• Connecting an HMI Device • Oranization Blocks • Distributed I/O PROFINET and Profibus • Practical on the above
Day 5	• Troubleshooting • Training and Support • Q&A Feedback

RM7,453.00/ PAX

HRDCORP Claimable

TRAINER

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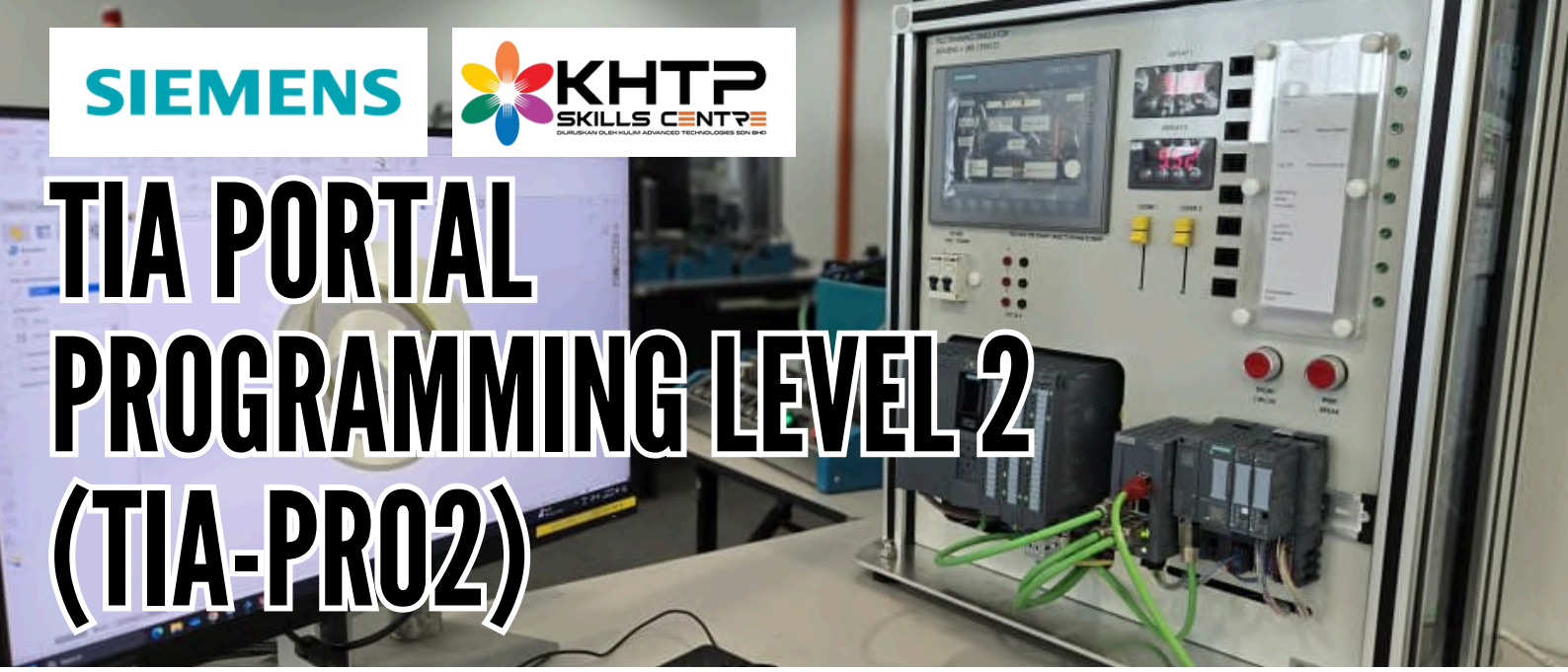

TIA PORTAL PROGRAMMING LEVEL 2 (TIA-PRO2)

COURSE DESCRIPTION

You will expand your knowledge of complex operations in statement lists (STL) and in Structured Control Language (SCL). Along with analog value processing and data administration with complex data types, the evaluation and handling of program-related errors are also considered.

Building on this, you will learn how to display messages on the operator control and monitoring system (HMI). Thanks to the knowledge imparted, you will gain new impetus and ideas for efficient PLC programming.

COURSE CONTENT

- Understand the interaction of the TIA components
- Apply classical program development methods
- Solve comprehensive programming tasks
- Program advanced functions such as indirect addressing in Structured Control Language (SCL)
- Implement data administration with the SIMATIC S7 automation system
- Apply system blocks along with blocks from the standard STEP 7 library
- Understand the fundamental differences between optimised access and non-optimised block access
- Program software error handling and evaluation
- Configure alarms of the operator control and monitoring system (HMI)

REQUIREMENTS

- The TIA Portal forms the work environment for integrated engineering with SIMATIC STEP 7 and SIMATIC WinCC.
- The second part of the SIMATIC TIA Portal programming training is based on the knowledge of the TIA Portal gained in the SIMATIC S7 TIA Portal programming 1 course (TIA - PRO 1), including STEP 7, HMI and PROFINET IO. Recommended to attend TIA - PRO1

TARGET GROUP

- Technical/ Maintenance Engineer, Programmers, Project Manager

TIA PORTAL PROGRAMMING LEVEL 2 (TIA-PRO2)

THE AGENDA

Day 1	• System family overview • Tools for program creation • Analogue value processing • Function, function blocks • Practical on the above
Day 2	• Jump commands • Indirect addressing • Classical software error handling and evaluation with blocks (OBs)
Day 3	• Evaluation of diagnostic data • Troubleshooting • Alarms with a HMI device • Practical on the above
Day 4	• Structured Control Language (SCL) • S7 - GRAPH • Statement lists (STL) • Practical on the above
Day 5	• Configure TIA Components • Practical on the abve • Q&A / feedback

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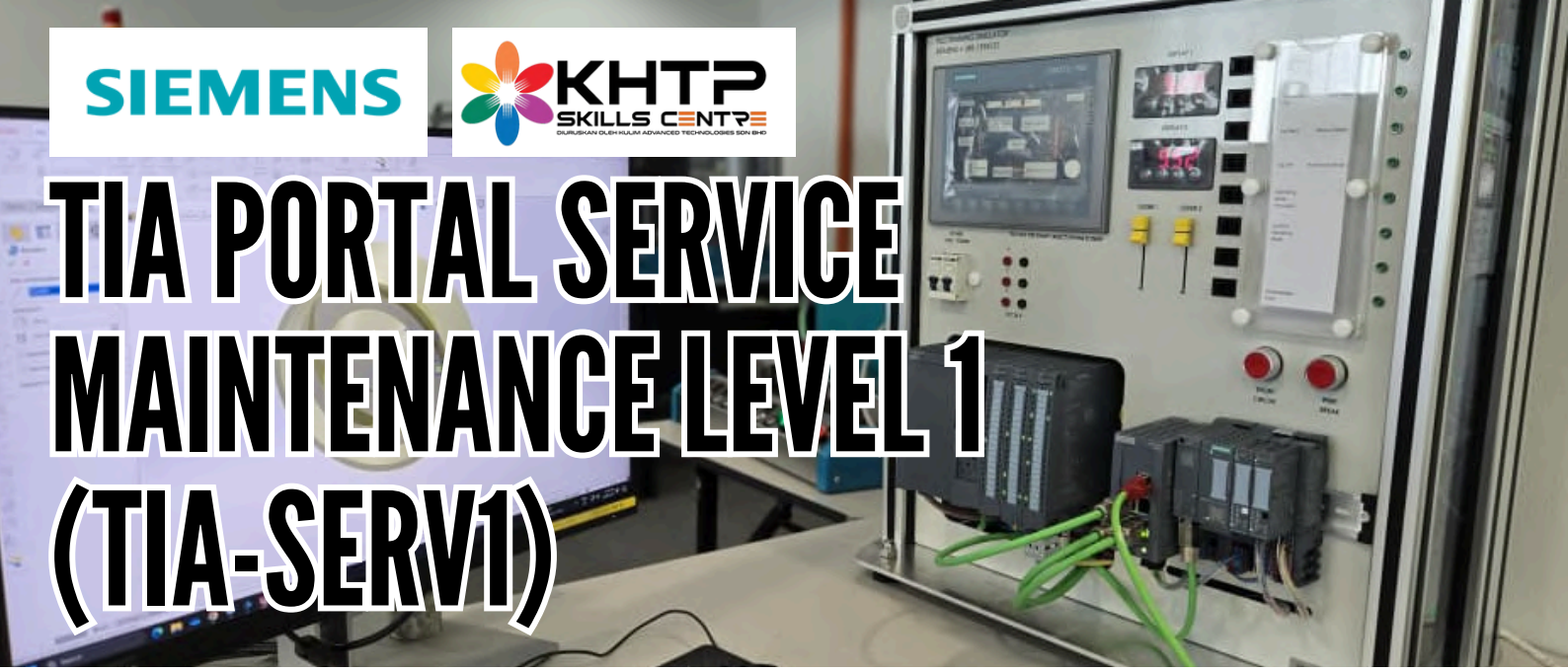

TIA PORTAL SERVICE MAINTENANCE LEVEL 1 (TIA-SERV1)

COURSE DESCRIPTION

The Totally Integrated Automation Portal (TIA Portal) forms the work environment for integrated engineering with SIMATIC STEP 7 and SIMATIC WinCC.

In this first part of the SIMATIC TIA Portal service training, we teach you the handling of the TIA Portal, basic knowledge about the structure of the SIMATIC S7 automation system, configuration and parameterization of hardware, and the basics of programming. You also receive an overview of HMI, PROFINET IO, and connecting drives. You will learn to diagnose and clear simple hardware faults and software errors. You will thus be capable of reducing downtimes in your plant.

COURSE CONTENT

- Understand the interaction of the TIA components
- Apply classical program development methods
- Solve comprehensive programming tasks
- Program advanced functions such as indirect addressing in Structured Control Language (SCL)
- Implement data administration with the SIMATIC S7 automation system
- Apply system blocks along with blocks from the standard STEP 7 library
- Understand the fundamental differences between optimised access and non-optimised block access
- Program software error handling and evaluation
- Configure alarms of the operator control and monitoring system (HMI)

REQUIREMENTS

- This first step to realize learning system of Industry 4.0 course teaches the basic Siemens PLC system concept, hardware configuration and parameterization, S7 software (SIMATIC TIA Portal) basics, and an overview of programming fundamentals. Human Machine Interface (HMI) and PROFINET IO basics are also included.

TARGET GROUP

- Technical/ Maintenance Engineer, Programmers, Project Manager

TIA PORTAL SERVICE MAINTENANCE LEVEL 1 (TIA-SERV1)

THE AGENDA

Day 1	• System family overview • Engineering Software “TIA Portal” • Installation/Maintenance of PLC • Devised and Network
Day 2	• Training Devices and addressing • Networks and configuration • PLC Tags • Practical on the above
Day 3	• Hardware Commissioning • Program Blocks • Binary Operations • Practical on the above
Day 4	• Digital Operations • Introduction to HMI • Adapting to HMI by Rewiring • Practical on the above
Day 5	• Introduction to Distributed I/O PROFINET • Practical on the above • Feedback & Valedictory session

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DIURUSKAN OLEH KULIM ADVANCED TECHNOLOGIES SDN BHD

SIEMENS FACILITIES

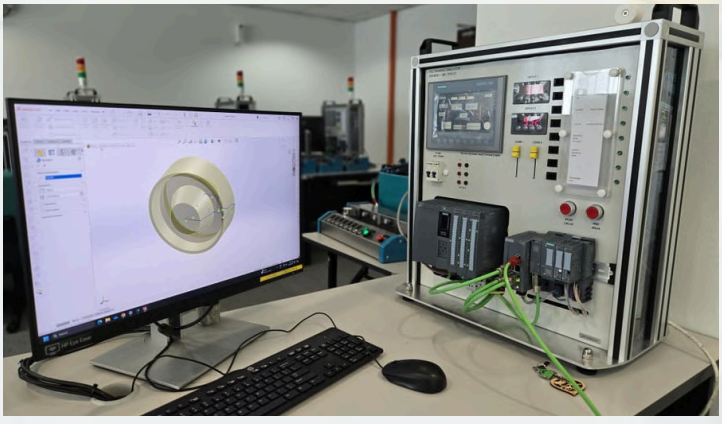
THE FACILITIES - PLC TRAINING KIT

SIEMENS S71500 PLC TRAINER - JE94152

Specifications:

No.	Components	Details
1	Programmable Logic Controller (PLC)	• SIMATIC PM1507 24V/8A Regulated Power Supply • SIMATIC S7-1500 CPU1513-1 PN • Digital Input Module DI 32 x 24V DC • Digital Output Module DQ 32 x 24V DC • Analog Input/ Output Module AI4/AQ2 • Memory Card, 24Mbyte
2	Human Machine Interface (HMI)	• KTP700 Basic, Basic Panel, Key/Touch Operation 7" TFT Display, 65536 Colours, PROFINET Interface, configurable with Window Control Centre (WinCC).
3	Distributed I/O	• SIMATIC ET 200SP, PROFINET for 2-ports, Interface Module IM • Digital Input Module DI8 x 24V DC • Digital Output Module DO8 x 24V DC • Bus Adapter 2 x RJ45 • Base Unit
4	Digital Input Switches	• 8 Digital Input Switch (Rocker switch: Push Button + Selector)
5	Digital Output Indicators	• 8 Digital Output Indicator Lamp
6	Analog Input Slider	• 2 Potentiometer
7	Analog Output Display	• 2 Display Voltmeter
8	Ethernet Switch	• Unmanaged Industrial Switch for 10/100 Mbit/s, 24 V DC
9	Rail	• Mounting DIN Rail
10	Communication Connections	Industrial Ethernet (ProfiNET) RJ45
11	Connection Ports	• 37-pin Parallel port Ready to connect with Conveyor Application
12	Software	• STEP 7 Professional • WinCC • PLCSIM Advance
13	Weight	• 29KG
14	Dimension	• 550 x 300 x 650 (mm)

THE FACILITIES - SIEMENS LAB

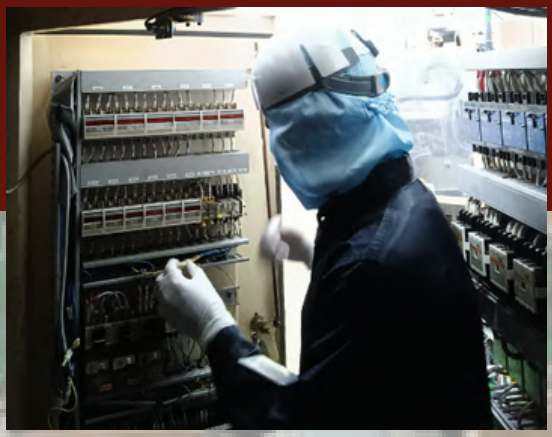


- 7 UNIT SIEMENS TRAINING KIT
- IN-HOUSE LAB AT KHTP SKILLS CENTRE, KULIM HITECH PARK

KHTP SKILLS CENTRE
DIURUSKAN OLEH KULIM ADVANCED TECHNOLOGIES SDN BHD

TARGET PARTICIPANTS

TARGET GROUP



- MAINTENANCE TECHNICIAN
- MAINTENANCE / SERVICE ENGINEER
- PROGRAMMERS
- PROJECT MANAGER

SUMMARY

INDUSTRY 4.0 SKILLS

Equips participants with globally recognized expertise in advanced manufacturing, automation, and digitalization.

HANDS-ON TRAINING

Delivered by Siemens-certified trainers using industry-standard equipment and software, covering PLC programming, HMI design, and industrial IoT manufacturing, automation, and digitalization.

CERTIFIED COMPETENCY

Provides additional Siemens certification to strengthen engineers' competency, making them job-ready and competitive in local, global, and hi-tech industries.

THANK YOU

FOR MORE DETAILS, KINDLY CONTACT:-

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017-4802400

Rohaida binti Salleh
rohaida@ktechno.com.my
013-4209753

Kulim Advanced Technologies Sdn Bhd

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