

TECHNICAL DATA PACKAGE

Electronic/Microelectronic Maintainer Training

CLEARED
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By kempr on Dec 18, 2025

Department of Defense
OFFICE OF PREPUBLICATION AND SECURITY REVIEW



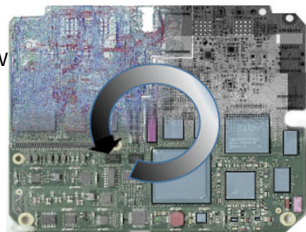
DEFENSE MICROELECTRONICS ACTIVITY



TECHNICAL DATA PACKAGE (TDP) CREATION AND REVERSE ENGINEERING TRAINING

CURRICULUM

Maintainers learn reverse engineering processes on state-of-the-art tools as part of generating the necessary technical data package.



- Assembly Diagram
- Parts Research
- BOM Creation
- CCA Disassembly
- Electrical Probing
- Electrical Test
- Netlist Creation
- Schematic Creation
- Failure Analysis
- Fault Localization
- Automated Prober
- Laser Decapsulator
- Advanced rework tools
- Altium Design Environment
- LCR meter
- Network Analyzer
- Vector Signal Generator

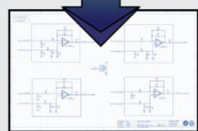
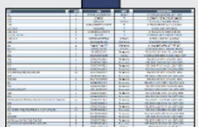
CONTENTS

A microelectronics TDP consisting of Assembly Diagram, Bill of Materials, and Schematic makes cost-effective organic repairs possible.

This program is a hands-on approach to generating the TDP through reverse engineering and teaches how to troubleshoot broken electronics at any facility using the TDP.

BENEFITS

Training benefits are very accessible, as the program requires only a basic familiarity with electronics



- Maintainer gains the knowledge on how to fix any broken electronic circuit cards
- Maintainer gain the tools they need to do their job (the technical data package)
- Maintainers work with skilled engineers to learn how to perform reverse engineering at their home location

COSTS

Training is free to DOD services and partners, excepting two elements:

- TDY/TAD to DMEA**
~\$250/person per day
- Code-F Microelectronics**
Optional, but helpful to learn-by-doing by engaging the process from start to finish on otherwise useless circuit cards

Note: Circuit Card sent will be disassembled and used to create the TDP data

SCHEDULE

Between 2 and 4 weeks at a time, recommend between 2 and 4 rotations at DMEA for the maintainer to become a super tech

ABOUT US


DMEA is under the Secretary of Defense for Acquisition and Sustainment, located in Sacramento California



TDP/SKILLBRIDGE

Training Plan

DEFENSE MICROELECTRONICS ACTIVITY			
Title: TDP Skillbridge Development			
Number: Developmental	Revision: 3	Effective: 20240720	Page 1 of 5

 DMEA Defense MicroElectronics Activity		Type: Instruction Manual Title: TDP Skillbridge Development gB#: Developmental		
Rev	Change Description	DCN	Date	Author
1	Initial Creation		20240713	Comer

SKILLBRIDGE TRAINING PLAN

INTRODUCTION

The purpose of this training plan is to provide Skillbridge personnel located at DMEA with an overview of the processes, tools, and software elements they will be learning and working with.

PURPOSE

The DMEA Technical Data Package (TDP) team uses tools and processes to do reverse engineering, failure analysis, and creation of manufacturing files to produce data and hardware for DOD customers. Requirements for this plan are effective for servicemen who have a background or prior training in 2M.

ROLES AND RESPONSIBILITIES

Skillbridge Personnel Responsibilities

- Commitment and initiative
- Receive and incorporate team feedbacks
- Participate with the TDP in working for customers toward delivery of items in a timely fashion.

Level Supervisor Responsibilities

- Administrative/Personnel matters
- Initial orientation to discuss expectations/responsibilities with partner as applicable
- Arrange for workload assignments that provide a varied training experience designed to enhance the trainee's growth and broaden functional experience base

ON THE JOB TRAINING ELEMENTS

Note: the trainee will not be equally proficient in all areas, but will have at least some time with the tools, and will have exposure to all of them

TOOLS

- Secia Pilot V8 Flying pin prober
- Control Laser decapsulation device
- Trion Plasma etcher
- 3D printer
- Xantex programmer
- SEGGER Flasher
- HCT-910 thermal jet
- METCAL solder station
- IR preheater

SOFTWARE

- Altium Designer
- Solidworks
- PCB-DR
- Vivia
- ELGRIS
- MS-OFFICE - EXCEL (macros and advanced functions)
- MS-OFFICE – VISIO
- MS-OFFICE - PROJECT

DMEA PROCESSES

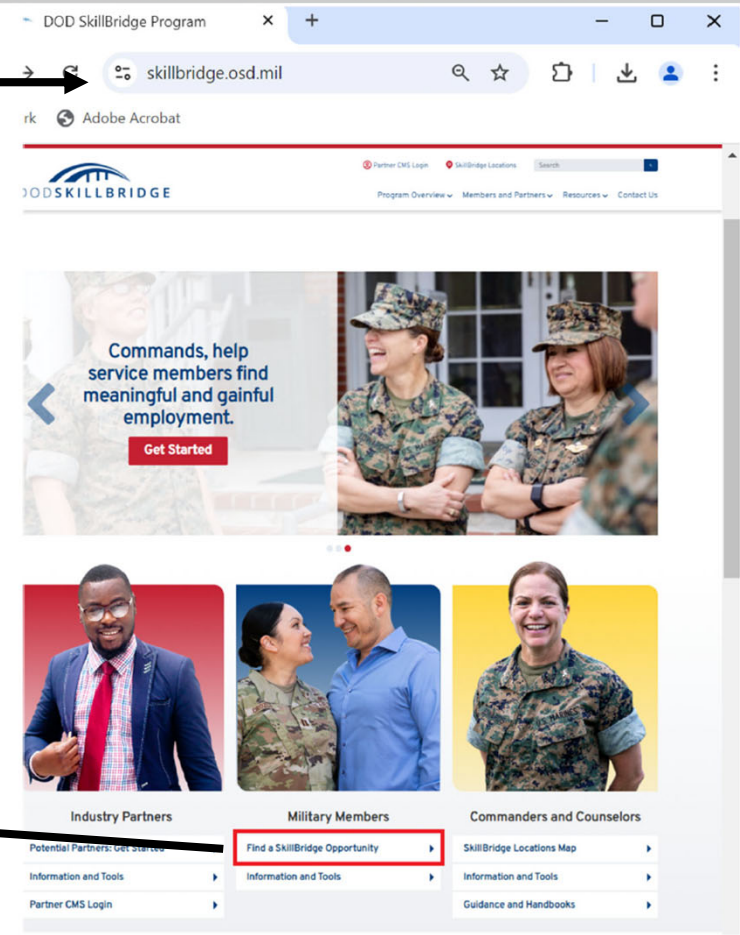
- SOW/Proposal Creation
- Engineering Funds management
 - MIPR acceptance
 - MIPR Spend plan
- Blanket Purchase Agreements (BPA)
 - BPA call orders
 - BPA coordination
- GPC purchases
- Material Shipping and receiving
- TDP Specific Processes
 - Reverse Engineering
 - Schematic creation
- Part identification
- Failure Analysis

SKILLBRIDGE

Electronic/Microelectronic Maintainers

DMEA selection

- Navigate to <https://skillbridge.osd.mil/>
- Click on "Find a Skillbridge Opportunity"
- Follow the steps to select DMEA



An official website of the United States Government [Here's how you know](#)

DODSKILLBRIDGE

Partner CMS Login SkillBridge Locations Search

Program Overview Members and Partners Resources Contact Us

Find a SkillBridge Opportunity

Locate DOD SkillBridge Industry Partners participating in the United States.

Looking for opportunities in trending career paths such as medical, truck driving, and information technology? Enter terms like "healthcare," "transportation," or "data processing" to find a DOD SkillBridge industry partner in your career field of interest.

Note: SkillBridge Opportunities on this list only reflect those where the Industry Partner has an approved "Organization", "Program", AND "Opportunity" registered in the Partner CMS.

DMEA OR City and State (city, state) or Zip Code Search

FILTER BY: Partner All Services Delivery Method Location of Prospective Jobs Job Families Total Positions: 10,013

Reset All Icon Key

Actions	Partner/Program/Agency	Service	City	State	Duration of Training	Employer POC	POC Email	Delivery Method
	Defense Microelectronics Activity							
	Human Capital Office		FL		151 - 180 days	Audrey-Lyn Capps	audrey-lyn.capps.civ@mail.mil	In-Person

Showing 1 to 1 of 1 entries

Previous 1 Next

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