ACEIRMC T48

ACEIRMC T48 TL866-3G Universal Programmer Instruction Manual

Model: T48 | Brand: ACEIRMC

1. INTRODUCTION

The ACEIRMC T48 (TL866-3G) Universal Programmer is an advanced device designed for programming a wide range of integrated circuits. It features a 40-pin industrial high-quality ZIF (Zero Insertion Force) Socket, ensuring reliable and easy chip insertion and removal. This programmer is an enhanced version of the TL866II Plus, built with a 32-bit MCU operating at 120MHz and a 4-layer PCB design for superior performance and stability.

The T48 supports high-capacity NAND EMMC chips up to 256GB and offers significantly faster programming speeds compared to previous models. It also supports high-voltage chips with a VPP maximum of up to 25V, a capability not found in the TL866II. The device utilizes high-density SMD technology, providing a unified, user-friendly interface. Its compact size, similar to the TL866II, combined with faster code execution and multi-language menu support (English, Chinese, Russian, Polish, German, Spanish, Portuguese, Turkish, Czech, Italian), makes it a versatile tool. The software automatically identifies the operating system and runs on Windows XP, 2003, 2008, Vista, Win7, Win8, Win10, and Win11.

BACK

FRONT

Image: Front and back view of the ACEIRMC T48 TL866-3G Universal Programmer. The front features the ZIF socket, while the back shows product labeling.

2. PACKAGE CONTENTS

Verify that all items listed below are included in your package:

- 1x T48 Programmer Host
- 1x USB Cable
- 1x Warranty Card
- 1x SOIC8 ZIF Adapter (Body width 150 mil / 3.9mm-4.1mm)
- 1x SOIC8-DIP8 ZIF Adapter (Body width 200-209mil / 5-6mm)
- 1x SOIC16-SOP16 ZIF Adapter (Standard 300mil body width SOIC16)
- 1x PLCC32-DIP32 Socket Adapter
- 1x PLCC44 TO DIP40 Adapter
- 1x TSSOP8 and SOP16 Adapter
- 1x 8-16 SOIC Adapter
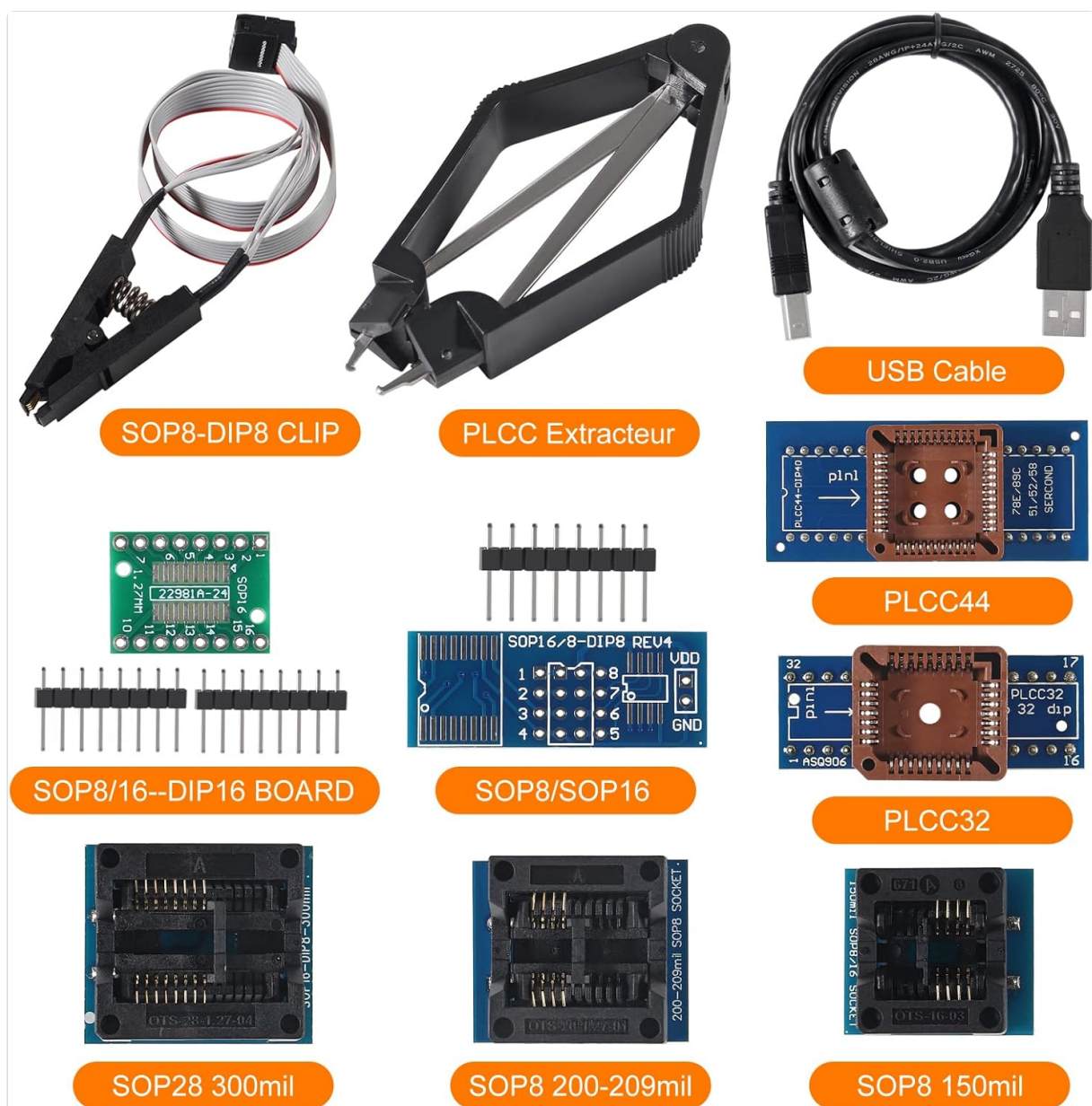- 1x PLCC IC Extractor
- 1x SOP8 Test Clip

Image: A collection of adapters, including SOIC, PLCC, and TSSOP types, along with a USB cable, PLCC extractor, and SOP8 test clip.

3. Setup Instructions

3.1. Software Installation

1. **Download Software:** The software is not included on a physical disk. Search online for "6xgecu pro t48 software download" and look for an "overseas server" option if available.

2. **Install Software:** Follow the on-screen instructions to install the application. The software is compatible with Windows XP, 2003, 2008, Vista, Win7, Win8, Win10, and Win11.

3. **Firmware Update:** After installation, connect the T48 programmer to your computer via the USB cable. Launch the software and check for any available firmware updates for the programmer. It is crucial to update the firmware to ensure full functionality and support for the latest ICs.

3.2. Connecting the Programmer

1. Connect the provided USB cable to the USB port on the T48 programmer and to an available USB port on your computer.

2. The programmer will be powered via the USB connection.

Image: Close-up view of the T48 programmer showing the USB port for connection to a computer and the 16-pin ISP header for in-system programming.

3.3. Using Adapters and ZIF Socket

1. Identify the correct adapter for your target IC based on its package type (e.g., SOIC, PLCC, TSSOP).

2. Insert the adapter into the 40-pin ZIF socket on the T48 programmer. Ensure proper orientation.

3. Lift the lever on the ZIF socket to open the pins. Carefully insert the IC into the adapter or directly into the ZIF socket if no adapter is needed.

4. Lower the lever to secure the IC in place. Ensure the IC is seated correctly and all pins make contact.
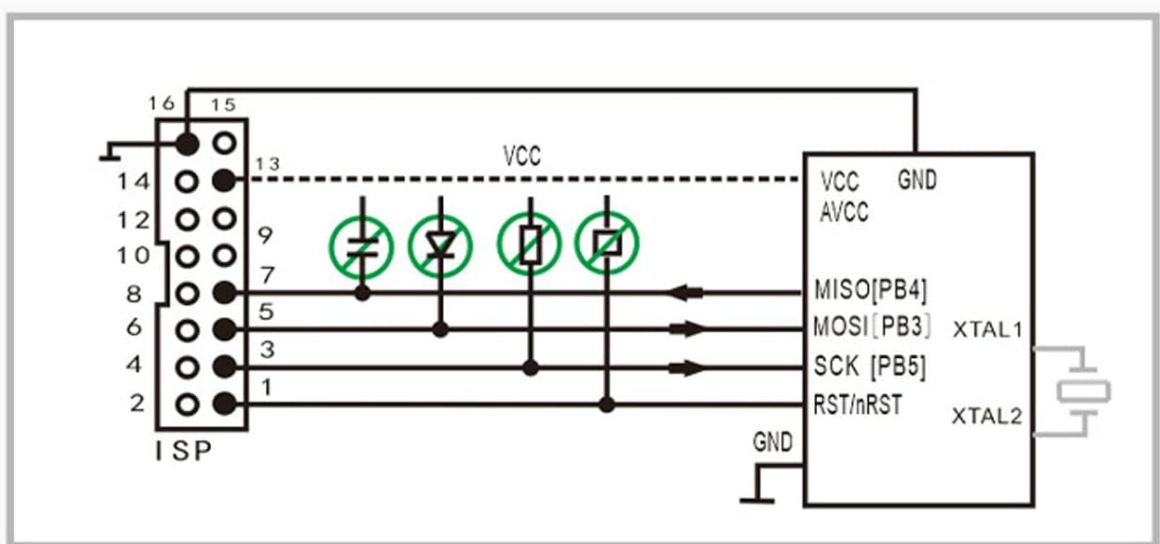
Image: Top view of the T48 programmer highlighting the ZIF socket. Below it is a diagram illustrating the pinout for the 16-pin ISP interface, including VCC, GND, MISO, MOSI, SCK, and RST signals.

4. OPERATING INSTRUCTIONS

4.1. Supported IC Types and Features

The T48 programmer supports over 31,000 integrated circuits, including:

- **Memory:** EMMC/EMCP, P-NAND, SPI NAND FLASH, EPROM (27/28/29/39/49/50 series), NOR FLASH (24/25/45/93/95 series)
- **Microcontrollers (MCU):** 51 series, PIC series, AVR series
- **Logic Devices:** GAL PLD, 74 Series Logic IC Visual Test

The programmer offers high-speed operations. For example, programming and verification times are:

- W25Q80: 3.5s (Program) + 0.3s (Verify) at 30MHz
- SPI NOR FLASH 25Q128: 30s (Program) + 5.4s (Verify) at 30MHz

- P_NAND 29F1G08AB: 27s (Program) + 17s (Verify)

- P_NOR FLASH EN29LV320 TSOP48: 24s (Program) + 1.9s (Verify)

Image: The T48 programmer shown with magnified views of its key interfaces: the ZIF socket for IC insertion, the USB port for computer connection, and the ISP header for in-system programming.

4.2. Basic Programming Workflow

1. **Launch Software:** Open the T48 programming software on your computer.

2. **Select IC:** In the software interface, select the manufacturer and model of the IC you intend to program or read. The software features a comprehensive IC support list.

3. **Insert IC:** Place the IC into the ZIF socket (with the appropriate adapter if necessary) as described in the Setup section.

4. **Read IC:** To read data from an existing IC, click the "Read" button in the software. The data will be displayed and can be saved to a file.

5. **Load File:** To program an IC, load the desired data file (e.g., .hex, .bin) into the software.

6. **Program IC:** Click the "Program" or "Write" button. The software will erase the IC (if required) and then write the loaded data.

7. **Verify IC:** After programming, it is highly recommended to perform a "Verify" operation to ensure the data was written correctly and matches the source file.

8. **Remove IC:** Once programming and verification are complete, lift the ZIF socket lever and carefully remove the IC.

4.3. In-System Programming (ISP)

The T48 programmer includes a 16-channel ISP interface for programming chips directly on a circuit board without removing them. Refer to the ISP pinout diagram (see Setup section) for correct connections. Ensure the target board is powered appropriately and the ISP connections are secure before attempting to program.

Your browser does not support the video tag.

Video: An official demonstration of the T48 (TL866-3G) Programmer, showcasing its capabilities and support for various ICs like SPI and Nor Flash. This video provides a visual guide to the programmer's functions.

5. MAINTENANCE

- **Cleaning:** Keep the programmer and its adapters clean and free from dust and debris. Use a soft, dry cloth for cleaning. Avoid liquid cleaners.
- **Storage:** Store the programmer and adapters in a dry, cool environment, away from direct sunlight and extreme temperatures.
- **ZIF Socket Care:** Handle the ZIF socket lever gently. Avoid forcing ICs or adapters into the socket. If the ZIF socket becomes worn, it is pluggable/replaceable.
- **Software Updates:** Regularly check the manufacturer's website for software and firmware updates to ensure optimal performance and compatibility with new ICs.

6. TROUBLESHOOTING

6.1. Common Issues and Solutions

- **Software Not Found/Difficult to Install:**

  Solution: The software is typically downloaded from the manufacturer's website. Search for "6xgecu pro t48 software download" and look for an "overseas server" option for reliable download. Refer to online communities or videos for installation guidance if needed.

- **IC Not Detected or Programming Fails:**

  Solution:

  - Ensure the IC is correctly inserted into the ZIF socket or adapter, with proper orientation and all pins making contact.
  - Verify that the correct IC model is selected in the software.
  - Check if the IC is on the supported list for the T48 programmer.
  - Ensure the programmer's firmware is up to date.
  - For some ICs, especially older or automotive applications, programming speed might need adjustment. The software may offer options to modify write speed.
  - If programming an AT28C256 EEPROM, ensure any write protection has been removed (e.g., by programming it once with the manufacturer's software).

- **Programmer Not Recognized by Computer:**

  Solution: Ensure the USB cable is securely connected. Try a different USB port or cable. Reinstall the software and drivers if necessary.

7. TECHNICAL SPECIFICATIONS

Brand	ACEIRMC
Model Number	T48 (TL866-3G)
Controller	32-bit MCU with 120MHz
PCB Design	4-layer
Interface	USB 2.0 HS 480MHz
ZIF Socket	40-pin Industrial Quality (Pluggable/Replaceable)
ISP Channels	16-channel
Dedicated I/O	56-channel high-speed high-voltage isolation
VCC Voltage	1.8V - 6.5V (64 levels adjustable)
VPP Voltage	9V - 25V (64 levels adjustable)
Power Consumption	5V < 500mA
Dimensions (LxWxH)	10 cm x 6.5 cm x 2.8 cm (3.94 x 2.56 x 1.10 inches)
Item Weight	13.1 ounces (0.37 Kilograms)
Operating System Support	Windows XP, 2003, 2008, Vista, Win7, Win8, Win10, Win11

Image: The T48 programmer with its dimensions labeled: 10cm (3.93in) length, 6.5cm (2.55in) width, and 2.8cm (1.10in) height.

8. WARRANTY INFORMATION

A warranty card is included in the package. Please refer to this card for specific details regarding the product warranty, including coverage period and terms and conditions. Keep your proof of purchase for warranty claims.

9. SUPPORT

For technical assistance, software downloads, or further information, please visit the official website of the manufacturer, XGECU. Online resources and community forums may also provide helpful tips and solutions.

Note: The manufacturer's website is typically referenced as XGECU, as seen in product images and user reviews.