

## CELIA Engineering Kit Quick Start Guide

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### **Kit Contents**





### Hardware Setup

- 1. Check that the micro-SD card is properly inserted into the micro-SD holder on the board. If it is not fully inserted, gently push into the holder until the card clicks into place.
- 2. Plug the ethernet cable into Ethernet port on the right side of the CELIA-E board. When the device is powered, yellow LED on Ethernet port will indicate successful connection. Plug the other end of the ethernet cable into computer or router.
- 3. Plug in the UART end of UART-USB cable to the UART pins near the bottom right of the board. The three right most pins of the UART on the board should be used. From right to left, the order of UART cables is green, white, then black.
- 4. Plug in USB end of USB-UART cable to computer.
- Plug in power supply cable to the board's 4-pin power connector located on the top right corner of board. The CELIA-E board can be powered by connecting the power supply cable to a standard power supply outlet. The board can operate between 8V and 30V. Green LED will flash to indicate device is being powered successfully.



#### Software Setup

Micro-IDE is a Windows-based Integrated Development Environment for micro-controller application development. Micro-IDE has a built-in terminal window to interact with CELIA-E boards through a PC COM port. This software is free to download.

Follow this link to download and install Micro-IDE:

https://www.bipom.com/microide.php

Click the link at the top of the page to access the installation software for Micro-IDE:



Open the downloaded file once it is finished:



This window may appear. If it does, click "Run Anyway"







 $\times$ 

This window will appear. Click "Yes":



#### This window will appear. Click "Next":

(i) Micro-IDE Setup Welcome to Micro-IDE Setup computer. Click Next to continue.

# Setup will guide you through the installation of Micro-IDE. It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your Cancel Next > 6



This window will appear. Select a destination for install or use the default location and click "Next":

🗑 Micro-IDE Setup	_		×
Choose Install Location Choose the folder in which to install Micro-IDE.			
Setup will install Micro-IDE in the following folder. To install in a differe and select another folder. Click Next to continue.	nt folder	, click Bro	wse
Destination Folder C:\bipom\devtools	Br	owse	
Space required: 2.1 MB Space available: 126.1 GB			
Micro-IDE	ext >	Ca	ncel

Choose a folder for creating Micro-IDE shortcuts. The default folder "Micro-IDE" can be used. Click "Install" when the folder has been selected:

🌍 Micro-IDE Setup		-	-	×
Choose Start Menu Folder Choose a Start Menu folder for the Micro-IDE	shortcuts.			
Select the Start Menu folder in which you wou can also enter a name to create a new folder.	ld like to create the	e program's	shortcut:	s. You
Micro-IDE				
Accessibility Accessories Administrative Tools BiPOM Connection Manager Bitvise SSH Client Chrome Apps Dell Digi D-Link GNU Tools for ARM Embedded Processors 5.4 GNUARM	ŧ 2016			<
Do not create shortcuts				
Micro-IDE			_	
	< Back	Install		Cancel







**BiPOM Electronics**,

Open Micro-IDE. A window will appear in the middle of the screen, click the "X" at the top right corner to remove this window:

Welcome to Micro-IDE program Development Environment	×
What do you want to start with:	
C Create a new project	
Open an existing project	
C Open an example project	
Micro C 8051-8052	3
Project Description	^
VargeVclockVtc VargeVdaevItc1663 VargeVdaemo51 VargeVepromVeprom VargeVepromVeprom VargeVepromVeprom VargeVenelo VargeVinelo VargeVinelo VargeVinelo VargeVinelo VargeVinelo VargeVinelo	*
✓ Show this dialog at startup. OK Cancel	

Click on "Tools" button at the top left of the window, then click "Options". Next, click on the "Terminal" tab:

Micro-IDE	
File Edit View Build Project Debug	Tools Window Help
D 😅 🖬 🕼 👗 🖬 🖷 🕰 🕰 🌾	Options
	Terminal 🔸 🖓 🛛 🔩 🐜 😓 🐜 🔛 🖉 💻 🛛 🎘
Workspace A	ASCII Chart
Project Files	<u>C</u> alculator
	Add Tool

This will open a window with several settings options. Select the correct COM port depending on where the USB-UART cable is connected to the computer. Make sure to select the correct serial port settings as detailed below:

- a. Baud Rate: 115200
- b. Data Bits: 8 Bits
- c. Parity: None
- d. Stop Bits: 1 Bit
- e. Flow Control/Echo: None/Off



Options	×
General Editor Terminal Loader	
Communication Com Port ■ ■ Codd 115200 ▼ Parity Data Bits ○ 7 ○ 8 ○ 0dd ○ Even Echo ⓒ Off ○ On	
Logging Log to file Log file name: Browse	
Font Selection Sample AaBbCcXxYyZz	
OK Cancel Apply Help	

Once all correct settings have been selected, click "OK."

Click the "Connect" button.



This will establish the connection between Micro-IDE and the CELIA board. When terminal is connected, the buttons will appear as shown:







If all cables are properly connected and the Terminal application is running correctly, Linux system will boot, and output should begin to appear in the terminal window of Micro-IDE application (located on the right side of the main window):



Once the Linux system finishes booting, press Enter key. The login prompt should appear. Type user "debian" then press enter:



Next, the password prompt will appear. Type password "tmppwd" then press Enter:

Password:

Command prompt should now appear. User is now logged in and can access the CELIA-E's Linux:

```
[?20041
[?2004hdebian@localhost:~$|
```