Hardware setup for NXP RT117X

Required Tools and Equipment

The following tools and equipment are needed to set up and run the project:

- NXP RT117X hardware board with display
- CGI Studio (Minimum version 3.15.1)
- CMake GUI
- Visual Studio Code
- Ninja Build Tool
- Required binary files (.bin)
- IAR Embedded Workbench
- Board Support Packages
- Hardware Variants

Hardware Revision	Supported Display	Supported BSP versions	Notes
Rev_a	720 × 1280 only	Up to BSP 2.16	BSP versions higher than 2.16 are not supported
Rev_b	720 × 1280 or 800 × 480 (Raspberry Pi Display)	2.16 and newer (e.g., 25_06_00)	Supports newer BSP versions

Hardware Connection Setup

1. Connect the **power cable** to the NXP RT117X board.
2. Connect the **Micro-USB port** on the board to a **USB-A port** on your laptop or PC.
3. Make sure the Micro-USB is connected to the **USB Debug port**.
4. Power on the board.
5. Check if the **power LEDs** on the board are glowing.
6. Wait for your system to detect the board. You can verify this by checking **Device Manager → Ports (COM & LPT)** — a new **COM port** should appear for the NXP RT117X board

Verification after completing the flashing

1. Confirm that the display output matches the expected layout from Scene Composer.
2. Check that images, colors, and animations render correctly.
3. Validate Bitmap Stride behavior for both aligned and unaligned images.
4. Ensure there are no visual distortions or flickering.

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