To connect a **MIPI DSI display** to the **i.MX8M Nano EVK (Evaluation Kit)**, follow these steps:

**1. Verify the Hardware Requirements**

Before proceeding, ensure you have:

* **i.MX8M Nano EVK board**
* **MIPI DSI display module** (compatible with the i.MX8M Nano's MIPI DSI interface)
* **MIPI DSI connector** (typically a 30-pin FPC connector)
* **Power supply** for the display (some displays require external power)

**2. Identify the MIPI DSI Connector on the i.MX8M Nano EVK**

* The **MIPI DSI interface** on the i.MX8M Nano EVK is exposed via a **30-pin FPC connector (J901)**.
* Check the board's **schematics and reference manual** to confirm pin assignments.

**3. Connect the Display**

* Carefully insert the display's **flex cable** into the **MIPI DSI connector (J901)** on the EVK.
* Secure the connector's latch to ensure a stable connection.
* If required, connect an **external power source** (e.g., 5V or 3.3V) to the display.

**4. Enable MIPI DSI Support in the Device Tree**

* Modify the **Device Tree (DTS) file** to enable the MIPI DSI interface.

**Example Change in the Device Tree (imx8mn-evk.dts):**

&ldb {

status = "disabled";

};

&mipi\_dsi {

status = "okay";

panel@0 {

compatible = "your\_panel\_compatible\_string";

reg = <0>;

backlight = <&backlight>;

prepare-delay-ms = <10>;

enable-delay-ms = <50>;

reset-delay-ms = <120>;

power-supply = <&reg\_3p3v>;

};

};

* Update the "compatible" field with the correct display driver name.

**5. Recompile and Flash the Updated Device Tree**

* Recompile the **DTS** file into a **DTB**:
* dtc -I dts -O dtb -o imx8mn-evk.dtb imx8mn-evk.dts
* Copy the updated **DTB** to the boot partition:
* sudo cp imx8mn-evk.dtb /boot/dtbs/

**6. Update the Kernel and Enable MIPI DSI Driver**

* Check if your Linux kernel supports **MIPI DSI panel drivers**.
* If needed, enable the **MIPI DSI panel driver** in the kernel (make menuconfig):
* Device Drivers → Graphics support → Display Panels → MIPI DSI panels
* Recompile the kernel and flash it to the board.

**7. Test the Display**

After rebooting the board, check if the display is detected:

dmesg | grep mipi

If everything is configured correctly, the display should work.

**8. Troubleshooting**

* If the display remains blank:
  + Check **power connections**.
  + Verify the **device tree settings**.
  + Run dmesg and check for **MIPI DSI errors**.
  + Try loading a test image:
  + cat /dev/urandom > /dev/fb0

Would you like help debugging any specific issue? 🚀