how to do it in rootfs overlay

To integrate your precompiled `Jotter` application and its `.so` dependencies into a Buildroot image using **rootfs overlay**, follow this streamlined approach:

Implementation Steps

1. **Create Overlay Directory Structure**
   Organize your files to mirror the target filesystem layout:

   ```
   board/&lt;company&gt;/&lt;boardname&gt;/rootfs-overlay/
   ├── usr/bin/jotter              # Precompiled Jotter binary
   ├── usr/lib/                    # .so dependencies
   │   ├── libdependency1.so
   │   └── libdependency2.so
   └── etc/init.d/S99jotter        # Startup script
   ```

2. **Configure Buildroot to Use the Overlay**
   In `make menuconfig`:

   - Navigate to **System configuration** → **Root filesystem overlay directories**

   - Set the path to your overlay (e.g., `board/<company>/<boardname>/rootfs-overlay`) [1] [2].

   - For multiple overlays, use space-separated paths [2] [3].

3. **Add Startup Script**
   Create `S99jotter` in the overlay's `etc/init.d/`:

   ```
   #!/bin/sh
   export LD_LIBRARY_PATH="/usr/lib"
   /usr/bin/jotter &amp;
   exit 0
   ```

   Ensure it is executable (`chmod +x`) [4] [2].

4. **Build the Image**
   Run `make` after configuring. The overlay files will automatically merge into the rootfs during image creation [1] [2].

Key Considerations

- **Library Paths**: Place `.so` files in `/usr/lib` or `/lib` (ensure paths match `LD_LIBRARY_PATH` in the init script) [2] [3] .

- **File Permissions**: Use `BR2_ROOTFS_DEVICE_TABLE` if special permissions/ownership are required [2] .

- **Debugging**: Verify file placement in `output/target/` after building [1] [2] .

This method avoids package creation complexity and directly injects your files into the final image. For multi-project setups, layer overlays as described in the Buildroot manual [5] [2] .

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1. https://blog.crysys.hu/2018/06/using-buildroot-to-create-custom-linux-system-images/

2. https://buildroot.org/downloads/manual/customize-rootfs.txt

3. https://stackoverflow.com/questions/76216509/how-to-overlay-a-directory-tree-on-filesystem-in-buildroot

4. https://microchip.my.site.com/s/article/Step-by-step-guide-in-preconfiguring-a-buildroot-based-embedded-Linux-image-with-startup-scripts--using--etc-init-d---and-other-config-files--such-as-PTP-profile?nocache=https%3A%2F%2Fmicrochip.my.site.com%2Fs%2Farticle%2FStep-by-step-guide-in-preconfiguring-a-buildroot-based-embedded-Linux-image-with-startup-scripts--using--etc-init-d---and-other-config-files--such-as-PTP-profile

5. https://stackoverflow.com/questions/32619467/creating-a-clean-root-filesystem-with-overlay-without-rebuilding-all-the-packa