

# GlassCode — Glassmorphism for VS Code

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A custom VS Code extension that applies **glassmorphism** (frosted glass transparency) effects to different sections of the editor. Keep your focus while working in a beautiful, modern interface.

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## Features

- **Per-section control** — Enable/disable glass effects independently for:
    - Editor (code editing space)
    - Panel (Terminal, Debug Console, Output, Ports)
    - Sidebar (Explorer, Search, Extensions)
    - Activity Bar (left icon bar)
    - Status Bar (bottom bar)
    - Title Bar
    - Tab Bar
  - **Adjustable opacity** — Fine-tune transparency from fully transparent (0.0) to fully opaque (1.0) for each section.
  - **Glassmorphism blur** — Toggle the frosted-glass `backdrop-filter: blur()` effect globally, with configurable blur intensity per section (0–50px).
  - **Optional background wallpaper** — Set a background image URL or file path that shows through the transparent layers.
  - **Light & dark theme support** — Automatically adjusts glass tinting for both dark and light VS Code themes.
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## Installation

From source (development)

```
cd scripts/extension_vs_code_glass

# Install dependencies
npm install

# Compile TypeScript
npm run compile

# Package into a .vsix file
npm run package
```

Then install the `.vsix` file:

1. Open VS Code
2. Press **Ctrl+Shift+P** → **Extensions: Install from VSIX...**
3. Select the generated **.vsix** file

## Quick install (without packaging)

```
cd scripts/extension_vs_code_glass
npm install
npm run compile
```

Then create a symlink to your VS Code extensions directory:

```
# Linux / WSL
ln -s "$(pwd)" ~/.vscode/extensions/glasscode

# Windows (PowerShell, as Administrator)
New-Item -ItemType SymbolicLink -Path
"$env:USERPROFILE\.vscode\extensions\glasscode" -Target "$(Get-Location)"
```

Reload VS Code after linking.

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## Usage

### Commands

Open the Command Palette (**Ctrl+Shift+P**) and search for:

Command	Description
GlassCode: Enable Glass Effect	Apply the glass effect to VS Code
GlassCode: Disable Glass Effect	Remove the glass effect and restore defaults
GlassCode: Reload Glass Effect	Re-apply with current settings
GlassCode: Configure Section Transparency	Interactive picker to configure individual sections

### Settings

All settings are under the **glassCode.\*** namespace in VS Code settings (**Ctrl+,**):

#### Global

Setting	Type	Default	Description
glassCode.glassmorphism	boolean	true	Enable/disable the blur effect globally

Setting	Type	Default	Description
<code>glassCode.backgroundImage</code>	string	""	Background wallpaper URL or file path
<code>glassCode.backgroundOpacity</code>	number	0.15	Wallpaper opacity (0.0–1.0)

**Per Section (replace {section} with: `editor`, `panel`, `sidebar`, `activityBar`, `statusBar`, `titleBar`, `tabBar`)**

Setting	Type	Default	Description
<code>glassCode.{section}.enabled</code>	boolean	varies	Enable glass for this section
<code>glassCode.{section}.opacity</code>	number	0.78–0.90	Background opacity
<code>glassCode.{section}.blur</code>	number	6–14	Blur radius in pixels

## Example Configuration

```
// settings.json
{
  "glassCode.glassmorphism": true,

  // Strong glass effect on editor
  "glassCode.editor.enabled": true,
  "glassCode.editor.opacity": 0.75,
  "glassCode.editor.blur": 16,

  // Frosted terminal panel
  "glassCode.panel.enabled": true,
  "glassCode.panel.opacity": 0.70,
  "glassCode.panel.blur": 20,

  // Subtle sidebar
  "glassCode.sidebar.enabled": true,
  "glassCode.sidebar.opacity": 0.85,
  "glassCode.sidebar.blur": 8,

  // Background wallpaper
  "glassCode.backgroundImage": "https://example.com/wallpaper.jpg",
  "glassCode.backgroundOpacity": 0.12
}
```

## How It Works

- CSS Injection** — The extension locates VS Code's internal `workbench.html` file (Electron sandbox) and injects a `<style>` block with the generated glassmorphism CSS.

2. **Backup** — On first injection, a backup of the original file is created (`.glasscode-backup`). The `Disable` command restores from this backup.
3. **Reload Required** — After enabling/disabling/reloading the glass effect, VS Code must be reloaded (the extension will prompt you).
4. **"[Unsupported]" Label** — After injection, VS Code shows `[Unsupported]` in the title bar. This is cosmetic and harmless — it simply indicates that core files have been modified.

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## Important Notes

- **Administrator/sudo may be required** — The extension modifies files in VS Code's installation directory, which may require elevated permissions.
  - **Windows:** Run VS Code as Administrator
  - **Linux/macOS:** You may need to adjust file permissions or run with `sudo`
- **VS Code updates** — Updates may overwrite the injected CSS. Simply run `GlassCode: Enable` again after updating.
- **Performance** — `backdrop-filter` with large blur values can impact rendering performance on lower-end hardware. Start with blur values around 8–12px.

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## Architecture

```
scripts/extension_vs_code_glass/
├─ package.json           # Extension manifest & configuration schema
├─ tsconfig.json          # TypeScript compiler options
├─ .vscodeignore          # Files excluded from .vsix package
├─ README.md              # This file
└─ src/
    ├─ extension.ts        # Entry point – command & lifecycle management
    ├─ injector.ts         # CSS injection engine (workbench.html modification)
    └─ styles.ts           # Glassmorphism CSS generator from user config
```

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## License

MIT