

XRVP COLLECTIVE · UNREAL ENGINE PLUGIN

BAIB

Blueprint AI Bridge

Compress Blueprint graphs for AI. Up to 97% smaller payloads.
Two modes: Advice for AI-guided editing, RT for direct round-trip reconstruction.

UE 5.2 – 5.7 · Windows and Mac · Editor only.

Engine

UE 5.2 - 5.7

Platform

Windows and Mac

Contact

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INTRODUCTION

Overview

Blueprint graphs carry a lot of hidden weight — node GUIDs, pin IDs, connection data, serialised properties — that fills your AI chat context before you've even described the problem. **BAIB strips all of that away**, compressing your Blueprint into a clean, structured format your AI can actually read.

Up to 97% smaller payloads. Faster responses. More room to work.

The compressed output goes to your AI of choice — ChatGPT, Claude, Gemini, DeepSeek, anything that takes text. **No accounts, no external services, no internet connection required** from the plugin itself.

WHAT IT IS

A tool for teams and individuals working with complex Blueprint graphs where token count, editor readability, and AI-related processing can become a practical bottleneck.

WHY IT EXISTS

To help Blueprint-based AI workflows stay manageable by improving efficiency and reducing unnecessary overhead during editor-side iteration and analysis.

CORE CONCEPT

Two Modes at a Glance

ADVICE MODE

Send your Blueprint to AI and get explanations, reviews, and suggestions back in plain text. You stay in control — the AI advises, you decide what to change.

Reliable, clear, and the natural place to start.

RT MODE — ROUND TRIP

Your Blueprint is compressed, sent to AI, edited, and reconstructed back into valid Unreal clipboard data. Paste straight back into your graph.

Powerful for focused edits. Actively improved each release.

NOT SURE WHICH TO USE?

Start with Advice Mode. Once you're comfortable with the workflow and how your AI responds to Blueprint context, try RT for targeted changes.

What Advice Mode is good for

- ✓ Understand a Blueprint you didn't write
- ✓ Get a second opinion on your logic
- ✓ Ask for refactoring or performance suggestions
- ✓ Debug unexpected behaviour with full graph context
- ✓ Advice+ mode also includes the bodies of called local functions — no more switching graphs to give the AI context

STEP-BY-STEP

How to Use — Advice Mode

The simplest path. AI advises, you decide.

- 1 Select the nodes you want to discuss in your Blueprint graph
- 2 Compress the selection into an AI-readable format and copy to clipboard
`Ctrl+Shift+C` **Panel:** Click "Copy for AI", then select Advice or Advice+ mode
- 3 Paste into your AI of choice — ChatGPT, Claude, Gemini, DeepSeek, or anything that takes text — and add your question or request
- 4 Read the AI's response — explanations, suggestions, or a review in plain text
- 5 Apply the changes yourself in Unreal. You stay in control at every step.

Open the panel with `Ctrl+Shift+B`. The panel is dockable inside the editor — no browser, no external app.

How to Use — RT Mode

Compress, AI edits, paste back. Focused changes on clean graphs work best.

- 1 Select nodes in your Blueprint graph
- 2 Compress the selection and copy to clipboard
`Ctrl+Shift+C` **Panel:** Click "Copy for AI" in the BAIB panel
- 3 Paste into your AI with the provided system prompt and your request
- 4 Copy the AI's reply
- 5 Reconstruct the edited graph
`Ctrl+Shift+V` **Panel:** Click "Paste from AI" in the BAIB panel
- 6 Ctrl+V in Unreal — paste into your graph. Done.

Open the panel with `Ctrl+Shift+B`. The panel is dockable inside the editor — no browser, no external app.

What RT Mode preserves on reconstruction

- ✓ Original node positions and GUIDs
- ✓ All pin IDs and Unreal internal references
- ✓ Timeline nodes — always restored exactly as captured, never modified
- ✓ Variable references and function bindings
- ✓ Connection integrity validated against a wire manifest before reconstruction

ENCODING

All 7 Encoding Modes

Choose the mode based on what you need — editing, review, or documentation.

MODE	WHAT IT DOES
RT2	Round-trip editing — compress, AI edits, paste back
Advice	AI-readable summary for explanations and reviews
Advice+	Same as Advice, but includes bodies of called local functions
ASCII	Exec-flow flowchart in plain text
Box	Bordered node diagram with data flow
Pseudo	Plain-English pseudocode — readable by anyone
Mermaid	Flowchart for GitHub, Obsidian, or any Mermaid renderer

BEYOND AI WORKFLOWS

ASCII · Box · Pseudo · Mermaid

These modes are useful well outside AI workflows — a fast way to understand or document any Blueprint without opening it in the editor. Paste a Mermaid diagram into GitHub or Obsidian, share a Pseudo output with a non-technical collaborator, or use ASCII and Box to quickly map out graph logic on your own.

LIMITATIONS

RT Mode — Honest Expectations

Round-trip reconstruction works well for **clean, focused edits described precisely**. It gets harder with large graphs, unusual node types, or broad requests. If a reconstruction comes back wrong, you'll see warnings — and pasting back into Unreal is always undo-able.

Known areas being worked on: improved handling of complex struct pins, expanded node type coverage, better LLM guidance in the system prompt, and reduced need for manual correction on larger graphs.

We recommend starting with Advice Mode to understand your graph, then using RT for targeted changes.

PERFORMANCE

Token Savings

97%

smaller payloads

Live token estimates shown on every conversion.
More context space means fewer interruptions, better responses, and lower API costs on pay-per-token services.

Every conversion shows a before/after estimate directly in the panel. Smaller payloads mean faster responses, lower API costs, and more room to ask complex questions without hitting context limits.

REFERENCE

Technical Specifications

SETTING	VALUE
Engine	UE 5.2 - 5 7
Platform	Windows and Mac (editor only)
Runtime cost	None — editor plugin only
Compatible AI	ChatGPT, Claude, Gemini, DeepSeek, or any text-based LLM
Copy shortcut	Ctrl+Shift+C
Paste shortcut	Ctrl+Shift+V
Panel shortcut	Ctrl+Shift+B
Account required	No
Internet required	No (plugin side)

Feedback & Roadmap

RT Mode is a living feature. Send outputs, broken reconstructions, or anything surprising — the more examples received, the faster improvements ship.

Contact: fab.xrvp@gmail.com · Send your compressed output and the AI response to help shape the next release.