

# That CAD Girl

## Frequently Asked Questions

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### What can I do with point clouds in IntelliCAD 15?

More than you might think!

Many of the surveyors and engineers I talk to have no idea that **IntelliCAD** can work with point clouds right out of the box. You don't need a separate program just to look at a scan, slice through it or snap your linework to it.

*As of October 8, 2026, the current release is IntelliCAD 15.0 (released August 4, 2026). Everything below comes from the official IntelliCAD release notes for 15.0 and earlier versions.*

One quick heads-up: IntelliCAD is the engine that many companies build their own CAD programs on. So the features, menus and ribbon tabs you actually see depend on your IntelliCAD-based product and edition. If something below doesn't show up in yours, check with the IntelliCAD-based product's vendor.

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## Which point cloud files can I attach?

IntelliCAD attaches point clouds to your drawing as underlays, the same idea as attaching an image or a PDF. It supports:

- **.pcg files**
- **.rcp and .rcs files** (added in IntelliCAD 9.0)

You have two ways to bring one in:

- **Point Cloud Underlay** – pick the file and set your options for attaching it.
- **Drag and drop** – drag a point cloud file straight into the drawing window (IntelliCAD 10.1 and newer).

The typed command name and where it lives on the menu or ribbon can vary a bit from one IntelliCAD-based product to the next, so look for **Point Cloud Underlay** in yours or search your Help for “point cloud.”

## How do I view and slice through a point cloud?

Once the cloud is in, the 3D viewing tools that came along in IntelliCAD 11 do the heavy lifting:

- **Section planes** – dynamically visualize cross-sections of 2D and 3D entities *and* point clouds. This one requires the OpenGL ES graphics device.
- **View cube** – check which way you’re looking and jump between preset views and custom viewing directions.
- **View and visual style controls** – the controls in the upper left corner of the viewport let you quickly change the view and visual style.
- **3D Walk and Fly** – move through the model as though you’re walking or flying through it.

In the standard IntelliCAD interface these tools are grouped on the **Visualize** ribbon tab. Your product’s ribbon may be organized differently.

Two system variables control how point clouds display: **POINTCLOUDPOINTMAX** and **POINTCLOUDPOINTSIZ**. Starting with IntelliCAD

13.0, POINTCLOUDPOINTMAX defaults to 10,000,000.

## Can I snap to a point cloud?

Yes! Entity snaps work with point clouds, so you can pick points right off the scan while you draw. IntelliCAD 9.2 improved snapping performance with point clouds, and IntelliCAD 15.0 refactored entity snapping and entity snap tracking for better stability and performance across the board.

The **LIST** command also works with point cloud entities if you need to check what's attached.

## What should I NOT expect?

In other words, IntelliCAD itself gives you the basics: attach, look, slice and snap.

You won't find anything in the IntelliCAD release notes (15.0 or earlier) about classifying points, building surfaces from a cloud or extracting features like curbs, poles or trees. Some IntelliCAD-based products add their own point cloud tools on top of IntelliCAD and some don't. If you need that kind of processing, ask the IntelliCAD-based product's vendor what's included in your product and edition before you buy.

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