



TecIO is a library of utility functions that enables you to output binary data directly from your application. Binary format reduces the data files sizes and increases the speed and efficiency when importing and analyzing results in Tecplot 360, especially compared to ASCII files.

TecIO supports two binary file formats:

- **Tecplot Subzone (.szplt)** - The SZL format introduced in 2014 is optimized for large data sets and enables substantially improved interactive performance and a reduced memory footprint for common workflows. TecIO reads and writes SZL files.
- **Tecplot Binary (.plt)** - The legacy format written by earlier versions of Tecplot 360 is also supported by new versions of Tecplot 360. This is a write-only format.

Two versions of the TecIO library are available

- **Standard TecIO** performs serial output in .szplt or .plt format.
- **TecIO-MPI** performs parallel output from applications using the message-passing interface (MPI), outputs .szplt only.

Learn more at www.tecplot.com/tecio

- Webinar: Fast Parallel File Export with TecIO-MPI
- Download the TecIO Libraries
- TecIO Datasheet
- TecIO FAQs

Technical Support can help you implement TecIO

- Email support@tecplot.com
- Call **425-653-9393**



**Learn about
Tecplot 360:**

www.tecplot.com/360



TecIO Library FAQs

Why should I write *.szplt files from my code?

The Tecplot binary formats (*.szplt and *.plt) are faster to write and to load into Tecplot, and they are smaller than Tecplot ASCII files. The newer binary format, *.szplt, is much faster to load, uses far less memory, and is often smaller than a *.plt file containing the same data. In particular, finite-element (unstructured-grid) data is compressed in the *.szplt file. Finally, *.szplt files may be written in parallel from the MPI ranks.

What is the difference between TecIO (2013) and TecIO (2016)?

The 2013 version of TecIO outputs the older version of the Tecplot binary with a designated file extension of *.plt. The 2016 version of TecIO will also output Tecplot's new SZL binary format with a designated file extension of *.szplt.

Can versions of Tecplot 360 created before 2016 load the latest *.szplt format?

Tecplot 360 2016 (or later) will read the *.szplt format created from TecIO 2016 and older versions of both .szplt and .plt files.

What computer platforms are supported by TecIO?

All of the platforms supported by Tecplot 360 are supported by the static and dynamic TecIO libraries.

Where can I get TecIO?

Dynamic libraries for TecIO are shipped with Tecplot 360. They are found in the bin folder of the Tecplot 360 installation, header (include) files are found in the include folder and example programs are found beneath the util/tecio folder. Source code (obfuscated) and example programs may be downloaded from the TecIO Library web page www.tecplot.com/tecio.

What flavor of MPI does Tecplot use for its TecIO MPI (2016) implementation?

On Linux and Macintosh, Tecplot uses OpenMPI. On Windows, it uses Microsoft MPI. If you need Tecio-MPI for a different flavor of MPI, download the source from our website and build it on your target machine.

Where is TecIO documented?

The Tecplot 360 Data Format Guide documents the TecIO API. It can be accessed from the Tecplot 360 Welcome Screen or in our documentation at www.tecplot.com/documentation.

What programming languages are supported by TecIO?

TecIO uses a C API, so it can easily be called from C, C++, or Fortran. The Tecio/examples folder contains both C++ and Fortran examples.

Can TecIO write data in parallel?

There are two versions of TecIO: TecIO-MPI version supports parallel writing of data and is used with MPI (message passing interface) applications like large-scale CFD codes. TecIO Standard uses threading to perform preliminary calculations in parallel but writes the data sequentially.

What data types are supported by TecIO?

TecIO can write either single or double precision floating point numbers. In April 2017, a new API was introduced that enables output of 8-, 16- and 32-bit integer variables to .szplt files. Also, support for 64-bit zone sizes allow individual zones to exceed 2 billion points.

What zone types are supported by TecIO?

All zone types may be written in serial (from a single MPI rank) to .plt files. For .szplt files, see the following table. "Yes (un-partitioned)" means that the zone must be written in serial.

Zone Type	.plt	.szplt	Partitioned .szplt
I-Ordered, IJ-Ordered	Yes	Yes	Yes (unpartitioned)
IJK-Ordered	Yes	Yes	In Tecplot 360 EX 2016 Release 2
FE-LineSeg, FE-Triangle, FE-Quadrilateral	Yes	Yes	Yes (unpartitioned)
FE-Tetrahedral, FE Brick	Yes	Yes	Yes
FE-Polyhedral	Yes	No	No

