



Mazak MTConnect FAQs

What is MTConnect?

MTConnect is a protocol. Similar to a language like English or Japanese, it has vocabulary, or a data dictionary. When you have multiple devices that all speak MTConnect, you know their similar data tags mean the same thing.

Is MTConnect a Mazak technology?

No. It is an open, royalty free protocol governed by the MTConnect Institute (a non-profit organization) that Mazak supports across its product line to bring our customers an easy way to increase their productivity. Most machine tool builders now support it as well. But we support it so good that many think we started it. (We can't help that.)

Are MTConnect Adapters Hardware or software?

They can be either. An Adapter converts native data in the CNC (or device) into MTConnect vocabulary. So on newer Windows based CNC's, it's a software adapter. On Legacy machines, it needs to be a hardware adapter.

Who should I contact at Mazak for assistance with getting started?

Send an email request to mtconnect@mazakcorp.com. Someone will get in touch with you.

Do Mazak machines ship MTConnect compliant?

As of today, No. They ship MTConnect Prepped. This means they will support a Mazak MTConnect software Adapter. You can purchase Adapters for your Mazak CNC directly from Mazak Parts dept or when you purchase a new machine. Either way, it needs to be installed by a Mazak service tech.

How do I make legacy / non-windows based CNCs MTConnect Compliant.

Any CNC that has an Ethernet port can likely be made compliant using a software 'Adapter'. If not, the use of a hardware 'Adapter' to get the signals is required. The hardware 'Adapter' is networkable and should speak MTConnect. All Mazak Tplus, Mplus, T32, M32 controls require some sort of 3rd party Hardware adapter due to their age.

Do all CNCs output the same DATA TAGs?

No. Although the standard may support many tag names, each CNC may be limited by constraints due to its legacy, or the ability to extract the data tags. Ask each builder for their list of data tags available on your machine.



Do I need to have hardware installed in order to get MTConnect data from my machine?

Only on legacy machines. All Fusion and Matrix CNCs use software to make them MTConnect compliant. Your machine should be connected directly to your factory network so multiple systems can glean information from the CNC.

Why am I being told I need a special black box or hardware Adapter on my brand new Mazak machine in order to monitor with MTConnect?

Unless the client software you plan to use is providing some feature or data tag that is not output by the Mazak MTConnect Adapter, you do not need any additional hardware. Any true MTConnect client software can get MTConnect data directly from the 'Agent' once it is compliant.

What kind of data can I get out of my new Mazak machine once it is compliant?

Depending on the CNC, things like Program, CNC status, axis loads, spindle RPM and temperature, axis position, Overrides, etc. Typically enough information to allow you to calculate Overall Equipment Effectiveness (O.E.E.)

Can I use MTConnect to monitor something other than CNC machines?

Yes. You can monitor ANYTHING that you are able to get signals out of. It would still require some sort of Adapter (hardware or software) that makes it output the data in MTConnect language.

Is there some place I can learn about MTConnect?

Besides the MTConnect Institute website (www.mtconnect.org), and the MTConnect Users group (www.mtcup.org) Mazak is offering 2 day training sessions (Boot Camps) on MTConnect. You can sign up for this class online (<http://www.mazakusa.com>). Follow the links to progressive learning. There are prerecorded webinars available there as well.

What kind of ROI can I expect from monitoring my equipment using MTConnect?

Many of our customers are seeing anywhere from 3 to 15% increase in utilization due to monitoring. Automated systems already have a high utilization and will see less improvement than perhaps a stand-alone machine. But collecting data does nothing for you by itself. Acting on that data to make improvements does.

Can I try MTConnect before investing a lot of money?

Many client software vendors offer 30 day trial periods of their software. Just buy an adapter for your machine and get it networked.



Is there a place I can see who is providing products and services for MTConnect?

Yes. The MTConnect Institute web site. www.mtconnect.org

What if I have a mix of Mazak and other brand machines?

This is exactly one of the issues MTConnect was made to overcome. When each builder has their own proprietary protocol and apps to monitor their equipment, it makes a solution difficult. MTConnect allows you to use any MTConnect compliant APP to monitor any brand machine tool if it's compliant. Ask your machine builder if they can make the machine compliant. If they say no, a hardware adapter will always do the trick.

Does Mazak use MTConnect in their factory?

Yes we do. We currently have over 40 machines connected. Some use hardware adapters and some software adapters. We even have manual grinders and press brakes being monitored. You can read more about it at www.Mazakusa.com.

Are my Mazak machines Network ready?

All Matrix and newer are ready to plug into your existing Ethernet network. Fusion CNCs require you to purchase a Network Interface Card (16 bit PCMCIA). These are available from Mazak Parts Department. Legacy Mazak controls like MPlus, Tplus, M32, T32, M1, M2, T1, and T2 are not network capable.