I/O Link for any Controller for NC/CNC Machine Tools
A quick and easy way to find and monitor signals of your machine

Monitor any signal from the machine. *"listen to the heartbeat of the machine without disruption"*
Designed to passively monitor *any* Controller's I/O

A natural complement to Memex's Ax9150 Universal Machine Interface board for OEE+DNC

Connectivity Features

Essentially a "Cable Sniffer"

Plug the controllers I/O bus 50 pin Honda connector and/or 50 IDC connector or 64 pin IDC connector compatible cable into one end of the board and connect the supplied cable back into the controller.

- Can use T-style 3 connector 50 or 64 pin IDC cable for passive signal monitoring
- Can provide power and common (0 VDC) to the Ax9150 UMI
- Connection is determined by reviewing schematic for relevant pins, and then simply plugging in the jumper.
- Simple Phoenix style quick disconnect connectors for power and I/O
- Allows one to one (pin to pin) I/O interface with the Memex Ax9150 board
- Can configure and monitor any output signals to be used with other devices
- **Easy magnetic mount (screw-less) anywhere in the metal cabinet.**


BENEFITS

- Reduce installation costs
- Can easily synthesize any signals of the machine.
- Passive listening, non-intrusive installation
- Easy to install - Saves hours of time in installing and finding signals per machine.
- No messy wires, cabling – a compact functional unit..
- Preliminary step to any OEE system – Machine Monitoring.
- One interface type for many machine types.
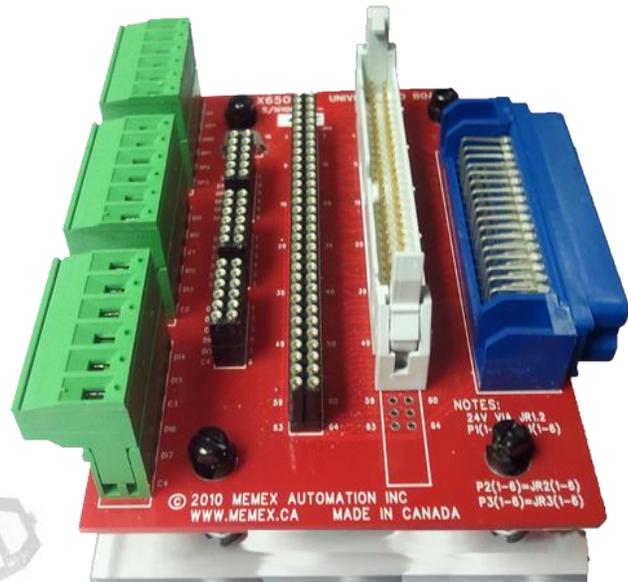
Manufacturing **E**xecution **R**eal-time **L**ean **I**nformation **N**etwork

MERLIN is a Manufacturing Operations Management System for the communication and execution of production, ***Connecting the Shop Floor to Top Floor.***

Ax650 Machine Control Interface Board
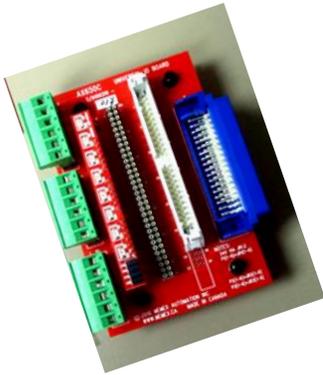
An example of the simplicity of deployment: The Memex Ax650 MCI installed in a Fanuc 11, connecting to the Fanuc connector CM3 with a 50 pin Honda connector.

Orange jumper wires on the Ax650 board allow a quick selection of any of the 50 conductors located on the Honda connector, routed to a point on one of the green supplied Phoenix connectors

The Ax650 supports up to (8) signals, commons for these points in (4) groups of (2), plus power, 0vdc

The installation of this board usually takes less than 15 minutes, including time is spent with control drawings determining the pin-out of the source Honda cable.

Kit #1, Fanuc controls (16 and below, non i series without a JD1A or JD1B connection) with a sinking I/O card. The Ax650 50pin Honda plugs into either the CM1 - CM3 connector located on the Remote I/O board.

Kit #2, installs on a Mazak A40 M/C with a Mazak M32 control. On the main cable breakout board, where connector CN7 is empty.

Typical signals available: Feedhold (pin 21), Automode (pin23), Cycle start (pin 26), Machine ready (pin30)

Kit #3, installs on a Toshiba Tosnuc 888 control. The original cable A750-CN1305 / AP704-CNCD is removed and replaced with Memex supplied 50 conductor ribbon cable with (3) 50 pin Female IDC crimp-on style connectors.

Kit #4, installs on a Siemens 840D control (non profi-bus model), X212, and X213. The original cable is removed and replaced with Memex supplied 64 conductor ribbon cable with (3) 64 pin Female IDC crimp-on style connectors. The Ax650 then has access to CMOS level signals (5VDC).

This allows the following signals to be passively taken from this new cable connected to the Ax650C

Cycle start (pin 21), Feed hold (pin 23), E-Stop (pin 1), End of Program (pin 25), Alarm (7)

For an older Fanuc with signals that are "sinked" (rather than sourced), with or without warming voltage, there is an optional Parallel Load Interface that ensures the Ax650 receives signals even when the bulb on the front of the operator pendant is missing, or blown - a frequent occurrence.