

3 Hardware and Software Requirements

3.1 Hardware

The hardware requirements will depend on a few factors, is the application IS or non-IS? Is the application a 2-wire or 4-wire application? This Note covers Non _IS applications only and the detailed hardware requirements for 2 or 4 wire applications are shown in section 5

The key elements of the MTL HART Multiplexer system for this application are the MTL4841, (HART Communication Module), and the MTL4842, (HART Interface Module). Both of these modules offer a compact plug-in style thus providing quick and easy installation onto the HMU16 backplanes.

Between one and sixteen ESD Valves can be connected via the HMU16 backplane to the MTL4841 HART Communication Module Node. A further 15 HMU's can also be daisy chained to the MTL4841 to give expansion of the system. However due to the speed of HART communications and the number of variables that can be scanned from the positioner it is advisable to restrict the number of connections to less than 64 devices per MTL4841.

With the HMU16 backplane, the MTL4841 Communications Module and MTL4842 Interface Module provide the HART data interface between smart devices in the field and the HART Instrument Management Software.

Also required is a HART capable Control Valve or ESD Valve such as the Fisher DVC6000 Series. These can be controlled by either a DCS Analogue Output Card or via a Logic Solver or ESD DO Module with a 24Vdc output.

A Line Conditioner, may also be required in the circuit, this is used to boost the impedance in the loop to facilitate HART Communications. However this is not always necessary if a backplane with the necessary impedance is included.