



What is required to implement communication with the appliance controller (PCB)?

To minimize test time and avoid wasted steps, Microplan can communicate directly with their customers' appliance controllers. We customize our software to automatically drive the appliance to required test conditions (minimum or maximum input rate, for example). In addition, the bench can read and record information (sensor measurements and/or error codes) directly from the appliance controller.

To implement this communication Microplan's customers must provide either of the following items:

1. Comprehensive documentation which explains rules for communication between the PC and the appliance controller, including kind of protocol (ex. Modbus), application layer, slave address, registers details etc.
 - In this case, Microplan develops the communication protocol for low-level LabVIEW functions to read and write data between the test bench and the appliance controller.
 - This solution avoids software conflicts between Microplan's software application and external code but may take longer to implement.
2. Software such as DLL files, LabVIEW VI's, executable files or other format that can be "incorporated" into our software application.
 - In this case, the basic communication functions are already available. The customer or their controller supplier provides detailed documentation about how to interact with their software.
 - Microplan then develops functions to interact with the customer supplied software that control the appliance.

In both cases, the following is required:

1. **Comprehensive specifications of protocol** architecture, including kind of protocol (ex. Modbus), application layer, slave address, registers details etc.
2. **List of operations** that the customer wants to perform with the board (ex.: read, write, etc.)
3. **Complete hardware** (appliance + interface) that can be easily used to test what is requested
4. **Contact information** for a technician who can help us understand documentation or to assist with troubleshooting
5. **Simple software application** to help Microplan engineers ensure that the hardware is working properly and the appliance controller communicates correctly

We rely on your collaboration in order to give you a better and better service.