

## 3DLevelScanner Connection via Modbus RTU to SCADA, HMI or PLC

Modbus is one of the oldest serial communication protocols for industrial applications, and because of its reliability and initial widespread application, it has gained very wide acceptance as an open standard.

Modbus protocol is defined as a master/slave protocol, meaning a device operating as a master (the host PC or PLC controller) will poll one or more devices (3DLevelScanners) operating as a slave. The master will write data to a slave device's registers, as well as read the data from the slave device's registers.

To program a PC (master) to poll network slaves requires a data logging software package (third party SCADA system). Some SCADA systems support Modbus out-of-the-box, while others may need the addition of an optional installable driver, which can be purchased separately. All PC-based options run on current hardware under 32-bit Microsoft Windows operating systems.

A Modbus master can alternatively be nearly any PLC that is Modbus compatible. Optional modules can be added if they are not compatible.

The 3DLevelScanner's Modbus implementation uses an RS-485 network to send data. Theoretically, it is possible for 64 Scanners to be polled on one network, but is dependent on the SCADA software used.

The Modbus connection is the most flexible communications methods, but does require technical expertise to set up the communication system, database, and screens to display the data.

