



Open Systems Communication

SIXNET “I/O for Windows” products provide an open communications interface to ensure that our users have true freedom of choice in their selection of hardware and software components. Our commitment to open systems communication extends to interoperability testing and support for standardization initiatives. To best serve the needs of our Windows-oriented clients, we provide support for two open-communications protocols. All SIXNET “I/O for Windows” products simultaneously support both protocols described in this document. The following will aid our users in selecting the appropriate communications for any situation.

“I/O FOR WINDOWS” PROTOCOL

This advanced communications protocol supports use of Tag Names as well as classical I/O addresses, and generally is the best choice for communications into Windows-based systems and peer-to-peer links between SIXNET field devices. The Control Room software supplied with SIXNET systems provides lightning fast DLL interfacing into Citect, Intellution, Wonderware, C++, Visual Basic, etc. etc. It also provides DDE and OPC access to all Windows applications by direct tag name reference. This advanced Windows-oriented communications is built around SIXNET’s “shared resource database” and allows multiple programs to share a com port. (For example, you can reconfigure or calibrate SIXNET I/O without shutting down your SCADA system’s I/O polling.) “I/O for Windows” supports redundant computer access, multi-mastering, and advanced message packeting that is essential for reliable telephone and radio communications. “I/O for Windows” ports may simultaneously act as both a master and a slave, allowing a master to poll the I/O and for the slave to still report on exception.

“I/O for Windows” communications eliminates the need for application specific I/O drivers.

MODBUS PROTOCOL

Modbus protocol is supported by virtually every DCS, most major PLCs, and countless field instruments and software packages. Modbus is especially recommended for integrating SIXNET equipment into existing plant installations, especially when legacy software is in use or when the SIXNET I/O will share a RS485 party-line with other Modbus devices. Please be aware that Modbus a simple master / slave protocol that does not support tag name references or multiple master access.

SIXNET supports all of these Modbus features and capabilities in our VersaTRAK RTUs, SIXNET gateways, RemoteTRAK I/O and EtherTRAK I/O:

1. VersaTRAK RTUs and SIXTRAK gateways may be both a Modbus master and a Modbus slave.
2. All applicable SIXNET devices support both Modbus ASCII and RTU formats.
3. All SIXNET devices that contain floating point registers support Daniels extensions.
4. EtherTRAK I/O supports the Ethernet Modbus (Modbus Open) standard using TCP/IP.
5. EtherTRAK I/O supports “pass-thru”, enabling RS485 devices to be connected through the Ethernet port on EtherTRAK I/O modules.

OPEN PROTOCOL CHOICES

All SIXNET devices simultaneously support both of these protocols. The Ethernet port on EtherTRAK I/O will simultaneously accept both “I/O for Windows” and Modbus messaging (within TCP/IP packets). Each serial port (RS232 or RS485) on SIXNET devices may be user selected to be any of the protocol modes described above.