



Overview

S7 Protocol is the backbone of Siemens communications. Its Ethernet implementation relies on ISO TCP (RFC1006) which, by design, is oriented to blocks. Each block is named PDU (Protocol Data Unit) and its maximum length depends on the Siemens communication processors and is negotiated during the connection. Used in the industrial environment.

S7 Protocol supports a variety of different transportation methods. For the usage of TCP/IP, only a communication unit for Ethernet connection or alternatively an onboard Ethernet interface that supports ISOonTCP (RFC1006) must be available.

EasyEdge S7 Engine allows connectivity with S7 protocol over Ethernet. The EasyEdge S7 Engine covers the full Data Type spectrum and allows Read and Write access to the Data Blocks (DB), Inputs (I), and Outputs (Q).

Features

- Supports the following Memory Types: I (Inputs), Q (Outputs) and DB (Data Block);
- Support for reading and writing data;
- Supports multiple PLC connections;
- Configuration of Maximum size of a data-packet sent to and received from the remote PLC (pdu-size);
- Capable of automatically aggregating reads/writes for contiguous data requests in order to reduce IO times;
- Supported Data Types:

○ BOOL	Bit;	○ REAL	Real;
○ BYTE	Byte;	○ LREAL	Long Real;
○ WORD	Word;	○ CHAR	Character;
○ DWORD	Double-Word;	○ WCHAR	Double byte character;
○ LWORD	Long-Word;	○ STRING	String;
○ SINT	Small int;	○ WSTRING	Double byte String;
○ USINT	Small unsigned int;	○ S5TIME	S5 Time;
○ INT	Integer;	○ TIME	Time;
○ UINT	Unsigned integer;	○ LTIME	Long Time;
○ DINT	Double integer;	○ DATE	Date;
○ UDINT	Unsigned Double Integer;	○ TIME_OF_DAY	Time of day;
○ LINT	Long integer;	○ DATE_AND_TIME	Date and Time;
○ ULINT	Unsigned long integer;		
- Adjustable pooling read interval;
- Support for rack and slot selection for connection;
- Support for bit offset when reading/writing bit strings Data Types;
- Support for Start byte when reading/writing all Data Types;
- Supports bit-level access;
- Supports arrays for all datatypes.