



eScada

v24.2.1  
Drivers

eScada.Drivers.KernelTcp

## eScada.Drivers.KernelTcp

### OS availability

Windows, Linux, RaspBian

### Atomic data type

16 bit Word oriented protocol.

### Hardware and documentation reference

[www.kernelgroup.it](http://www.kernelgroup.it)

### Parameters available in every section

Channel: none

Device:	Node ID	Slave ID number
	IP address	It can be IPV4
		Multiple addresses can be expressed using multiple rows or a comma. e.g. 192.168.1.10,192.168.1.11
	TCP Port	A valid TCP port number
	Reconnect timeout [ms]	Waiting time before a reconnection after COMM break-down
	Response timeout [ms]	Timeout interval used to wait for a response.

Group: none

Tag: none

### Remarks for devices

The following attributes can be expressed for each device.

Bytes order actions	None, Swap bytes order, Swap bytes order in DWords, Swap words order, Swap bytes order in DWords then words order
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String actions	None, Swap bytes in words
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## Addressing

Variable type	Type	Address type	Items
<b>Boolean</b> The number of items used declaring TAGs, must be a multiple of 16			
Single bit	Bit	DW	592
<b>Byte</b> The number of items used declaring TAGs, must be a multiple of 2			
Unsigned 8 bit	UInt8	DW	74
Signed 8 bit	Int8		
<b>16 bit</b>			
Unsigned integer 16 bit	UInt16	DW	37
Signed integer 16 bit	Int16		
<b>32 bit</b>			
Unsigned integer 32 bit	UInt32	DW	18
Signed integer 32 bit	Int32		
Single precision 32 bit - ( IEEE 754 )	Float		
<b>64 bit</b>			
Unsigned integer 64 bit	UInt64	DW	9
Signed integer 64 bit	Int64		
Double precision 64 bit - ( IEEE 754 )	Double		
<b>Strings</b> The string length used declaring TAGs, must be a multiple of 2 String bytes can be interpreted as ASCII, UTF-7, UTF-8, UTF-16 or UTF-32 encoding			
Array of bytes	String	DW	(A)
Array of bytes. (Siemens S7) Array of bytes. (AllenBradley style)	S7String ABString	DW	(B)
(A) It depends on the strings length: e.g. if you want to read strings with a length of 10 chars each string, you can set a number of items of $74 / 10 = 7$ consecutive items.			
(B) It depends on the strings length: e.g. if you want to read strings with a length of 10 chars each string, you can set a number of items of $74 / (10+2) = 6$ consecutive items.			

### S7 strings format

They have got two bytes at the beginning.

The first byte is for max allowed string length, the second one is for the real string length.

These type of strings can be declared with a length of 255 bytes max.

### AB Strings format

They have got one word (16 bit) at the beginning, it contains the string length.

### Consecutive items

The number of consecutive read/write items depends on the PLC model.

Values expressed below are referred to PLC model DMX16-D