UniPi Neuron XS50

Registers

Register Number	R/W	DataType	Content	Bit Nr.
0	R	MixedBits	Digital inputs	
			Digital input 1	0
			Digital input 2	1
			Digital input 3	2
			Digital input 4	3
			Digital input 5	4
			Digital input 6	5
1	RW	MixedBits	Relay outputs	
			Relay output 1	0
			Relay output 2	1
			Relay output 3	2
			Relay output 4	3
			Relay output 5	4
2	RW	Word	Analog output 1	
3	RW	Word	Analog output 2	
4	RW	Word	Analog output 3	
5	RW	Word	Analog output 4	
6 – 7	R	Real	Analog input 1	
8 – 9	R	Real	Analog input 2	
10 – 11	R	Real	Analog input 3	
12 – 13	R	Real	Analog input 4	
14	RW	MixedBits	MasterWatchDog (MWD) status	
			MWD enable	0
			MWD reboot detected	1
15 – 16	RW	DWord	Counter of Digital input 1	
17 – 18	RW	DWord	Counter of Digital input 2	
19 – 20	RW	DWord	Counter of Digital input 3	
21 – 22	RW	DWord	Counter of Digital input 4	
23 – 24	RW	DWord	Counter of Digital input 5	
25 – 26	RW	DWord	Counter of Digital input 6	
1000	R		Firmware version	
1001	R		Number of DI/Dos	
			Number of Dos	0 – 7
			Number of Dis	8 – 15
1002	R	MixedBits	Number of AI/Ao/Serials	
			Number of serial lines	0 – 3
			Number of AOs	4 – 7
			Number of AIs	8 – 15
1003			HW Version	
1004	R	Word	Board HW version	
1005 – 1006	R	DWord	Board serial number	
1007	R	MixedBits	Interrupt mask	
			Serial line RX queue not empty	0
			Sending on serial line finished	1
			Receiving Modbus RTU frame finished	2
			Digital input changed state	3
1008	RW	Word	MWD timeout	
1009	R	Word	Vref	

1010	RW	Word	Debounce time of DI1 [100µs]	
1011	RW	Word	Debounce time of DI2 [100µs]	
1012	RW	Word	Debounce time of DI3 [100µs]	
1013	RW	Word	Debounce time of DI4 [100µs]	
1014	RW	Word	Debounce time of DI5 [100µs]	
1015	RW	Word	Debounce time of DI6 [100µs]	
1016	RW	MixedBits	Direct Switch function	
			Enable DS on DI1	0
			Enable DS on DI2	1
			Enable DS on DI3	2
			Enable DS on DI4	3
			Enable DS on DI5	4
1017	RW	MixedBits	Enable DS polarity function	
			Enable DS polarity on DI1	0
			Enable DS polarity on DI2	1
			Enable DS polarity on DI3	2
			Enable DS polarity on DI4	3
			Enable DS polarity on DI5	4
1018	RW	MixedBits	Enable DS toggle function	
			Enable DS toggle on DI1	0
			Enable DS toggle on DI2	1
			Enable DS toggle on DI3	2
			Enable DS toggle on DI4	3
			Enable DS toggle on DI5	4
1119	RW	Word	AI Mode 2.1	
1120	RW	Word	AI Mode 2.2	
1121	RW	Word	AI Mode 2.3	
1122	RW	Word	AI Mode 2.4	
1023	RW	MixedBits	Configuration of RS485 serial line	
			Baud rate	0 – 12
			Parity enable (0 = None, 1 = Even/Odd)	13
			Parity – 0=Even, 1=Odd	14
1024	RW	Word	Modbus Address (1 – 254)	

Baud rate configuration

Value	Speed [bps]
11	2 400
12	4 800
13	9 600
14	19 200
15	38 400
4097	57 600
4098	115 200

Ai Mode configuration

Value	Type of measurement
0	Off
1	Voltage 0 – 10 V
2	Voltage 0 – 2.5 V
3	Current 0 – 20 mA
4	Resistance (three conductors) 0 – 1 960 Ω
5	Resistance (two conductors) 0 – 100 kΩ

Coils

Coil	R/W	Content
0	RW	Digital (Relay) output 1
1	RW	Digital (Relay) output 2
2	RW	Digital (Relay) output 3
3	RW	Digital (Relay) output 4
4	RW	Digital (Relay) output 5
5	RW	Digital Input 1
6	RW	Digital Input 2
7	RW	Digital Input 3
8	RW	Digital Input 4
9	RW	Digital Input 5
10	RW	Digital Input 6
1000	RW	MWD reset indication/reset
1002	RW	Reset CPU
1003	RW	Save current configuration as default to NV RAM
1016	RW	Enable DS on DI 1
1017	RW	Enable DS on DI 2
1018	RW	Enable DS on DI 3
1019	RW	Enable DS on DI 4
1020	RW	Enable DS on DI 5
1024	RW	Enable DS polarity on DI 1
1025	RW	Enable DS polarity on DI 2
1026	RW	Enable DS polarity on DI 3
1027	RW	Enable DS polarity on DI 4
1028	RW	Enable DS polarity on DI 5
1032	RW	Enable DS toggle on DI 1
1033	RW	Enable DS toggle on DI 2
1034	RW	Enable DS toggle on DI 3
1035	RW	Enable DS toggle on DI 4
1036	RW	Enable DS toggle on DI 5