XRW2G Modbus Register Map

revised 2011-04-18 by JJJ

Notes:
Addresses are actual addresses as sent "over the wire". For PDU address, add 1.
All registers on this page are read only. Some status register reads trigger events.

Counter Channels			Value Range		Notes
Address	**Channel**	**Description**	**Low**	**High**	
0	0	pulse count	0	65535	rolls over
1		pulse time	0	65535	
2		pulse min time	0	65535	
3		standard deviation	?	?	not implemented
4		pulse sum, low word	0	4294967296	must read low word first
5		pulse sum, high word			
6	1	pulse count	0	65535	rolls over
7		pulse time	0	65535	
8		pulse min time	0	65535	
9		standard deviation	?	?	not implemented
10		pulse sum, low word	0	4294967296	must read low word first
11		pulse sum, high word			
12	2	pulse count	0	65535	rolls over
13		pulse time	0	65535	
14		pulse min time	0	65535	
15		standard deviation	?	?	not implemented
16		pulse sum, low word	0	4294967296	must read low word first
17		pulse sum, high word			

Analog Channels			Value Range		Notes
Address	**Channel**	**Description**	**Low**	**High**	
18	0	current value	0	4095	
19		averaged value	0	4095	
20		standard deviation	?	?	not implemented
21	1	current value	0	4095	
22		averaged value	0	4095	
23		standard deviation	?	?	not implemented
24	2	current value	0	4095	
25		averaged value	0	4095	
26		standard deviation	?	?	not implemented
27	3	current value	0	4095	
28		averaged value	0	4095	
29		standard deviation	?	?	not implemented
30	4	current value	0	4095	
31		averaged value	0	4095	
32		standard deviation	?	?	not implemented
33	5	current value	0	4095	
34		averaged value	0	4095	
35		standard deviation	?	?	not implemented
36	6	current value	0	4095	
37		averaged value	0	4095	
38		standard deviation	?	?	not implemented
39	7	current value	0	4095	
40		averaged value	0	4095	
41		standard deviation	?	?	not implemented

Status and Sample Control		Value Range		Notes
Address	**Description**	**Low**	**High**	
42	sequence number (increments when read)	0	65535	rolls over
43	ticks, 10 millisecond since last measurement	0	65535	stops counting at 65535
44	uptime minutes	0	65535	stops counting at 65535
45	read to trigger new measurement	0	0	
46	read to trigger reset of pulse sum	0	0	
47	Modbus packets for us	0	65535	
48	Modbus packets for others	0	65535	
49	Modbus last error	0	3	0=NO ERROR 1=ILLEGAL FUNCTION 2=ILLEGAL DATA ADDRESS 3=ILLEGAL DATA VALUE ALL OTHERS UNDEFINED
50	read to clear Modbus counters and last error	0	0	
51	XBEE_SLEEP	0	1	Only defined when USE FOR I/O is select. 0=input or output low, 1=input or output high
52	XBEE_RTS			
53	XBEE_CTS			

State of line if in I/O mode

Can be read from or written to

XRW2G Modbus Register Map

revised 2011-04-18 by JJJ

Notes:
Addresses are actual addresses as sent "over the wire". For PDU address, add 1.

Read	Configuration			Value Range		Notes
Write	Address	Channel	Description	Low	High	
R/(FW)	1000		Serial number prefix	'A'	'Z'	Must Write EEPROM to save
R/(FW)	1001		Serial number	0	65535	
R	1002		Hardware Model			
R	1003		Hardware Version			
R	1004		Software Model			
R	1005		Software Version			
R/W	1006		Modbus Address	0	127	Default is 24
R/W	1007		Modbus Speed	0	1	0=9600, 1=19200 Immediate change. Only applied in Modbus mode.
R/W	1008		Modbus Mode	0	1	0=RTU, 1=TCP-RTU
R/W	1009		Transmit WorldData every n seconds	1	65535	Will transmit WorldData only if JP3 jumpered during boot.
R/W	1010		Serial number prefix to trigger transmit	'A'	Z'	Set to 0 to disable
R/W	1011		Serial number to trigger transmit	0	65535	
R/W	1012		Discrete I/O on status lines	0	1	0=STATUS LINES NORMAL, 1=USE FOR I/O
R/W	1013	XBEE_SLEEP	Status line input or output select	0	1	0=OUTPUT, 1=INPUT (when USE FOR I/O selected)
R/W	1014	XBEE_RTS	Status line input or output select	0	1	
R/W	1015	XBEE_CTS	Status line input or output select	0	1	
R/W	1100	AN0	Averaging mode			0=Normal averaging
R/W	1101	AN1	Averaging mode			1=Vector average
R/W	1102	AN2	Averaging mode			
R/W	1103	AN3	Averaging mode			
R/W	1104	AN4	Averaging mode			
R/W	1105	AN5	Averaging mode			
R/W	1106	AN6	Averaging mode			
R/W	1107	AN7	Averaging mode			
R/W	1108		Sample analog every n*10 milliseconds	1	65535	Filtered in 16 element per channel FIR
W	1999		Write EEPROM	1	1	1 causes settings write
W	19999		Passcode for factory programming			Write only

Read / Write Legend	
R	Readable
W	Write
(FW)	Factory Writeable
R/W	Read and writeable
R/(FW)	Read and factory writeable