eWon drivers - Driver Details
Aurora PowerOne

Summary

1. Aurora PowerOne Driver Details

1.1. TAG list

Postfix eWon TagName	Description	eWon Type
_Vout	Grid Voltage [V]	Floating point
_Iout	Grid Currrent [A]	Floating point
_Pout	Grid Power [W]	Floating point
_Fout	Frequency [Hz]	Floating point
_Vin1	Input 1 Voltage [V]	Floating point
_Iin1	Input 1 Current [A]	Floating point
_Pin1	Input 1 Power [W]	Floating point
_Vin2	Input 2 Voltage [V]	Floating point
_Iin2	Input 2 Current [A]	Floating point
_Pin2	Input 2 Power [W]	Floating point
_Vbulk	Vbulk [V]	Floating point
_IleakDC	Ileak (Dc/Dc) [mA]	Floating point
_IleakINV	Ileak (Inverter) [mA]	Floating point
_Riso	Isolation Resistance [mOhm]	Floating point
_Tinv	Inverter Temperature [°C]	Floating point
_Tboster	Booster Temperature [°C]	Floating point
_Fan1	Fan 1 Speed [%]	Floating point
_Fan2	Fan 2 Speed [%]	Floating point
_Fan3	Fan 3 Speed [%]	Floating point
_Fan4	Fan 4 Speed [%]	Floating point
_Fan5	Fan 5 Speed [%]	Floating point
_GridVoltage	Grid Voltage (Dc/Dc)	Floating point
_GridFrequency	Grid Frequency (Dc/Dc)	Floating point
_VbulkDc	Vbulk (Dc/Dc)	Floating point
_VgridAvg	Average Grid Voltage	Floating point
_VbulkMid	Vbulk Mid	Floating point
_VBulkMin	Vbulk -	Floating point
_VBulkPlus	Vbulk +	Floating point
_Ppeak	Power Peak	Floating point
_PpeakToday	Power Peak Today	Floating point
_GridVneutral	Grid Voltage neutral	Floating point
_WindGF	Wind Generator Frequency	Floating point
_GridVPneutral	Grid Voltage neutral-phase	Floating point
_IoutR	Grid Current phase R [A]	Floating point
_IoutS	Grid Current phase S [A]	Floating point
_IoutT	Grid Current phase T [A]	Floating point
_FoutR	Frequency phase R [Hz]	Floating point
_FoutS	Frequency phase S [Hz]	Floating point
_FoutT	Frequency phase T [Hz]	Floating point
_VoutR	Grid Voltage phase R [V]	Floating point
_VoutS	Grid Voltage phase S [V]	Floating point
_VoutT	Grid Voltage phase T [V]	Floating point
_Tsupervision	Supervisor Temperature [°C]	Floating point
_Talim	Alim Temperature [°C]	Floating point
_TheatSink	Heat Sink Temperature [°C]	Floating point
_Temp1	Temperature 1 [°C]	Floating point
_Temp2	Temperature 2 [°C]	Floating point
_Temp3	Temperature 3 [°C]	Floating point
_Psaturation	Power Saturation limit (Der.)	Floating point
_BringRef	Bulk Ring Reference	Floating point
_Vpanel	Vpanel micro	Floating point
_TodayEnergy	Daily Energy	DWord

Postfix eWon TagName	Description	eWon Type
_WeekEnergy	Weekly Energy	DWord
_MonthEnergy	Monthly Energy	DWord
_YearEnergy	Yearly Energy	DWord
_TotalEnergy	Total Energy (total lifetime)	DWord
_PartialEnergy	Partial Energy (cumulated since reset)	DWord
_GlobalState	Global State	Integer
_InputState1	DC/DC Channel 1 State	Integer
_InputState2	DC/DC Channel 2 State	Integer
_OutputState	Inverter State	Integer
_Alarm	Alarm State	Integer

1.2. Slave configuration

For each device (inverter) must be defined a tag named INVn (e.g. : INV1) where n is the number of device starting from 1.

Description of INVn tag is used by the driver to read some parameters, as described below :
*commname**address**timeoutMs*

Example : COM0**10**2000**1
commname = COM0 ; eWon serial port
address = 10 ; bus address
timeoutMS = 2000 ; 2s timeout for serial read

1.3. Default serial port configuration

19200 8-N-1

Serial port configuration tag description

```
AuroraPort**Serial**comm:com0;baudrate=19200;blocking=off;halfduplex=on;bitspercha
r=8;stopbits=1;parity=none
```

1.4. Decoding of the status codes and alarm state

1.4.1. GlobalState TAG

Value	Global State	Value	Global State
0	Sending Parameters	21	Internal Error E030
1	Wait Sun/Grid	22	Sending Wind Table
2	Checking Grid	23	Failed Sending table
3	Measuring Riso	24	UTH Fault
4	DcDc Start	25	Remote OFF
5	Inverter Start	26	Interlock Fail
6	Run	27	Executing Autotest
7	Recovery	30	Waiting Sun
8	Pause	31	Temperature Fault
9	Ground Fault	32	Fan Staucked
10	OTH Fault	33	Int. Com. Fault
11	Address Setting	34	Slave Insertion
12	Self Test	35	DC Switch Open
13	Self Test Fail	36	TRAS Switch Open
14	Sensor Test + Meas.Riso	37	MASTER Exclusion
15	Leak Fault	38	Auto Exclusion
16	Waiting for manual reset		
17	Internal Error E026	98	Erasing Internal EEprom
18	Internal Error E027	99	Erasing External EEprom
19	Internal Error E028	100	Counting EEprom
20	Internal Error E029	101	Freeze

1.4.2. InputState TAG

Value	Input State	Value	Input State
0	DcDc OFF	10	Communication Error
1	Ramp Start	11	Ramp Fail
2	MPPT	12	Internal Error
3	Not Used	13	Input mode Error
4	Input OC	14	Ground Fault
5	Input UV	15	Inverter Fail
6	Input OV	16	DcDc IGBT Sat
7	Input Low	17	DcDc ILEAK Fail
8	No Parameters	18	DcDc Grid Fail
9	Bulk OV	19	DcDc Comm. Error

1.4.3. OutputState TAG

Value	Output State	Value	Output State
0	Stand By	21	SelfTest: relay inverter fail
1	Checking Grid	22	SelfTest timeout fail
2	Run	23	SelfTest: relay DcDc fail
3	Bulk OV	24	Self Test 1
4	Out OC	25	Waiting self test start
5	IGBT Sat	26	Dc Injection
6	Bulk UV	27	Self Test 2
7	Degauss Error	28	Self Test 3
8	No Parameters	29	Self Test 4
9	Bulk Low	30	Internal Error
10	Grid OV	31	Internal Error
11	Communication Error		
12	Degaussing		
13	Starting	40	Forbidden State
14	Bulk Cap Fail	41	Input UC
15	Leak Fail	42	Zero Power
16	DcDc Fail	43	Grid Not Present
17	Ileak Sensor Fail	44	Waiting Start
18	SelfTest: relay inverter	45	MPPT
19	SelfTest: wait for sensor test	46	Grid Fail
20	SelfTest: test relay DcDc + sensor	47	Input OC

1.4.4. Alarm TAG

Value	Global State	Code		Value	Global State	Code
0	No Alarm			33	Grid UV	W005
1	Sun Low	W001		34	Grid OF	W006
2	Input OC	E001		35	Grid UF	W007
3	Input UV	W002		36	Z grid Hi	W008
4	Input OV	E002		37	Internal error	E024
5	Sun Low	W001		38	Riso Low	E025
6	No Parameters	E003		39	Vref Error	E026
7	Bulk OV	E004		40	Error Meas V	E027
8	Comm.Error	E005		41	Error Meas F	E028
9	Output OC	E006		42	Error Meas Z	E029
10	IGBT Sat	E007		43	Error Meas Ileak	E030
11	Bulk UV	W011		44	Error Read V	E031
12	Internal error	E009		45	Error Read I	E032
13	Grid Fail	W003		46	Table fail	W009
14	Bulk Low	E010		47	Fan Fail	W010
15	Ramp Fail	E011		48	UTH	E033
16	Dc/Dc Fail	E012		49	Interlock fail	E034
17	Wrong Mode	E013		50	Remote Off	E035
18	Ground Fault	--		51	Vout Avg errror	E036
19	Over Temp.	E014		52	Battery low	W012
20	Bulk Cap Fail	E015		53	Clk fail	W013
21	Inverter Fail	E016		54	Input UC	E037
22	Start Timeout	E017		55	Zero Power	W014
23	Ground Fault	E018		56	Fan Stucked	E038
24	Degauss error	--		57	DC Switch Open	E039
25	Ileak sens.fail	E019		58	Tras Switch Open	E040
26	DcDc Fail	E012		59	AC Switch Open	E041
27	Self Test Error 1	E020		60	Bulk UV E	E042
28	Self Test Error 2	E021		61	Autoexclusion	E043
29	Self Test Error 3	E019		62	Grid df/dt	W015

30	Self Test Error 4	E022		63	Den switch Open	W016
31	DC inj error	E023		64	Jbox fail	W017
32	Grid OV	W004				

1.5. Tested devices

- Aurora PowerOne PVI 4.2 OUTD
- Aurora PowerOne PVI 12.5 OUTD