KEY POWER SUPPLIES LIMITED
+44 (0)1404 45169
Unit F Reme Drive
EX14 1SE

HiTRON

UNIVERSAL AC INPUT HARMONIC CORRECTION AC-DC HOT-SWAP CompactPCI SERIAL SINGLE OUTPUT WITH STANDBY 312 WATTS ACTIVE CURRENT SHARING SWITCHING POWER SUPPLIES HAC300S SERIES

FEATURES:

- **312W 3U X 8HP EUROCARD PACKAGE**
- **WIDE OPERATING TEMPERATURE RANGE OF -40°C TO +70 °C**
- **MEET IEC 61000-3-2 HARMONIC CORRECTION**
- **N+1 REDUNDANCY/HOT-SWAPPABLE**
- **80 Plus GOLD EFFICIENCY**
- **ACTIVE CURRENT SHARING**
- **PMBus COMMUNICATION**
- **FULLY COMPLIANT WITH PICMG**

SPECIFICATION

INPUT SPECIFICATION

Input Voltage: Typ. 90-264Vac.
Power Factor Correction: Meet Harmonic Correction IEC 61000-3-2.Power Factor typ. 0.98-0.99.
Input Connector: FCI 51939-667LF.
Input Frequency: 47-63Hz.
Inrush Current: 5.3Arms at 230Vac.
Input Current: 3A at 115Vac/1.5A at 230Vac.
Dielectric Withstand: Meet IEC 60950-1 regulation.
EMI: Meet EN 55022 / FCC Class B.
Hold-up Time: 18mS at 115 & 230Vac.
Leakage Current: Less than 0.7mA at 230Vac.
Power Fail Signal: Available at [FAL#] pin.
Remote ON/OFF: Available.
Status LED: <Green> means valid input voltage.
<Red> means a critical fault.
<Green> means DC OK.
Thermal Protection (OTP): Installed NTC and thermostat for thermal sensor at [DEG#] pin.

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart.
Output Current: See Ratings Chart.
Output Wattage: Typ. 312W continuous.
Output Connector: FCI 51939-667LF.
Line Regulation: Typ. 1%.
Load Regulation: VO1 Typ. ±1%./ Standby Typ. ±5%
Noise & Ripple: Typ. 1% peak to peak.
OVP: Built-in at all outputs.
Adjustability: Available for VO1.
Remote Sensing: Available for VO1.
DC OK: Available for VO1 & +5Vsb.
Hot-Swap: Available.
N+1 Redundancy: Installed with internal OR-ing diodes at all outputs for N+1 redundancy operation.
Current Sharing: Active current sharing at VO1.
Overload Protection (OLP): Fully protected against output overload or short circuit. OLP set at 120-130% peak current at 115Vac. Consult the factory for special OLP setting.

GENERAL SPECIFICATION

Efficiency: Typ. 90% at 230Vac.
Switching Frequency: 85-100K Hz.
Circuit Topology: LLC circuit.
Transient Response: Peak transient less than 134mV and recovers within 0.5mS after 25% load-change.
Safety Standard: IEC 60950-1 Class I.
Construction: 3U X 8HP CompactPCI format. Front Panel with Extractor handle.

Operating Temperature: -40 °C to +70 °C (see note 3), derate linearly from 100% power at +50 °C to 60% power at +70 °C (Refer to derating curve).
Storage Temperature: -45 to +85 °C.
Cooling: At least 200 LFM moving air is required to achieve full rating power 312W in a confined area.
Power Density: 5.7 Watts/ Cubic Inch.

NOTE: (1)All measurement are at nominal input, full load and +25℃ unless otherwise specifications.
(2)Due to requests in market and advances in technology, specifications subject to change without notification.
(3)A warm-up time 10 minutes is required after cold start at temperature from -40 °C to +0°C.
(4)Tantalum capacitors connected to system is suggested for bettering Ripple & Noise against operating temperature from -40°C to +0°C.
(5)125 degree C OS-CON Long-life Solid capacitors are installed in secondary y circuits.

QUAD OUTPUT

MODEL NO.	MAIN VO1★@≡⊙					STANDBY VO2★⊙				
	Min.	Typ.	**Volt.**	Max.	Peak	Min.	Typ.	**Volt.**	Max.	Peak
HAC300S-D120E	0A	25.0A	**12V**	25.0A	28.0A	0A	2.5A	**5V**	2.5A	3.0A

Symbol: "★" OVP built-in. "@" Adjustable. "#" Remote sensing. "≡" Active Load Sharing. ."⊙" Installed with Or-ing diode.

Remark: 1.Peak load less than 60sec. with duty cycle <10%.

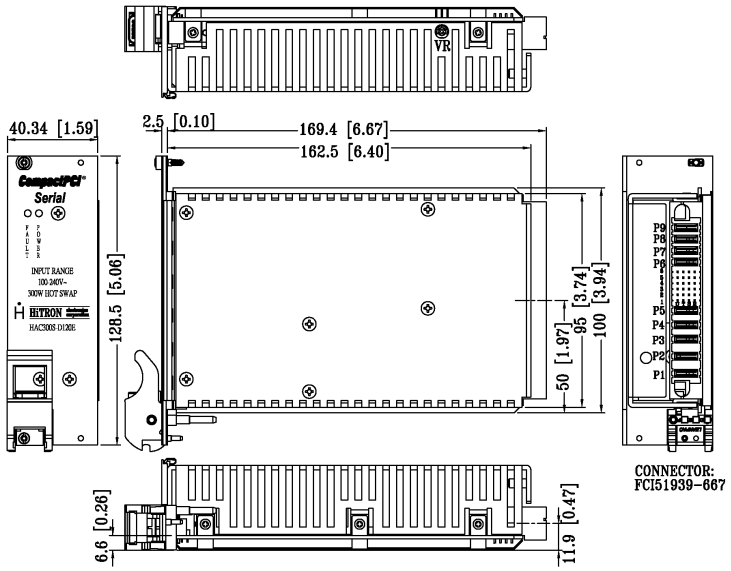
2.Max. load is the continuous operating load of each rail. But the max. load of each rail can't be drawn from all outputs at the same time.

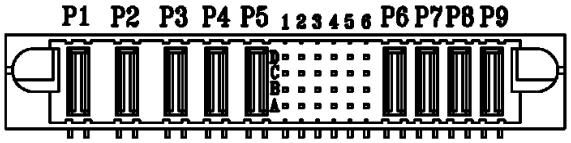
3.Please consult the factory if you have the special min load request of VO1.

OUTPUT VOLTAGE / CURRENT RATINGS CHART

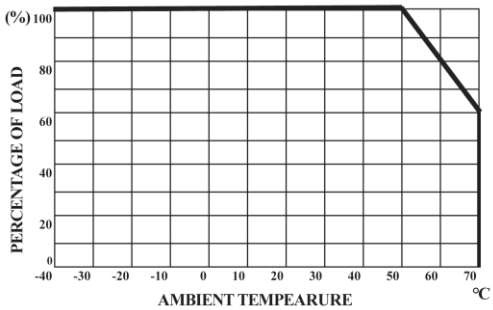
MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 710 g (25.1 Oz.)





DERATING CURVE



INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

P1	P2	P3	P4	P5	D1	D2	D3	D4	D5	D6	P6	P7	P8	P9
LINE	NEUTRAL	GND	N/A	N.A	N/A	FAL	PS_P	COM	DEG	5Vsb	COM	COM	VO1 +12V	VO1 +12V
					C1	**C2**	**C3**	**C4**	**C5**	**C6**				
					N/A	N/A	COM	A0	ALERT	5Vsb				
					B1	**B2**	**B3**	**B4**	**B5**	**B6**				
					N/A	12VCS	PSON	A1	SCL	COM				
					A1	**A2**	**A3**	**A4**	**A5**	**A6**				
					N/A	-VS	+VS	A2	SDA	EN				

Remark: mating connector FCI 51940-350LF

PMBus Specification

Device identification

A2	*A1*	*A0*	PMBus Bits 7-1	Alert Response Bits 7-1	EEPROM Bits 7-1
0	0	0	0011 000	0001 100	1010 000
0	0	1	0011 001	0001 100	1010 001
0	1	0	0011 010	0001 100	1010 010
0	1	1	0011 011	0001 100	1010 011
1	0	0	0011 100	0001 100	1010 100
1	0	1	0011 101	0001 100	1010 101
1	1	0	0011 110	0001 100	1010 110
1	1	1	0011 111	0001 100	1010 111

Alert Response

當裝置偵測到異常時，會將 SMBALERT#訊號腳拉為低電位來通知系統，
而系統須以 Receive byte protocol (slave address with R/W bit = 0x19)來詢問裝置位址(不含 R/W 位元)，
當完成詢問動作後，裝置會釋放 SMBALERT#訊號，
取得裝置位址後，系統再查詢各分頁的 STATUS_BYTE 的內容，從中取得發生問題的模組，
再依 STATUS_BYTE/STATUS_WORD 的指示，索引出對應的狀態暫存器，即可獲得發生的原因，
若同時有二個以上裝置發出 SMBALERT#訊號時，
在詢問位址的過程中，裝置會自行仲裁，位址最低的將最先獲得回應，所以必須再次進行詢問直到 SMBALERT#釋放為止
當狀態暫存器未被清除時，再發生相同的原因是不會引發 SMBALERT#，
下達 CLEAR_FAULTS 去清除狀態值，或改變 PS_EN_OUT 訊號準位亦可清除狀態

PMBus Protocol

1	7	1	1	8	1	1
S	SLAVE ADDRESS	W	A	DATA	A	P

Send byte protocol

1	7	1	1	8	1	8	1	1
S	SLAVE ADDRESS	W	A	DATA	A	PEC	A	P

Send byte protocol with PEC

1	7	1	1	8	1	1
S	SLAVE ADDRESS	R	A	DATA	NA	P

Receive byte protocol

1	7	1	1	8	1	8	1	1
S	SLAVE ADDRESS	R	A	DATA	A	PEC	NA	P

Receive byte protocol with PEC

1	7	1	1	8	1	8	1	1
S	SLAVE ADDRESS	W	A	COMMAND CODE	A	DATA	A	P

Write byte protocol

1	7	1	1	8	1	8	1	8	1	1
S	SLAVE ADDRESS	W	A	COMMAND CODE	A	DATA	A	PEC	A	P

Write byte protocol with PEC

PMBus Protocol

1	7	1	1	8	1	1	7	1	1	8	1	1
S	SLAVE ADDRESS	W	A	COMMAND CODE	A	Sr	SLAVE ADDRESS	R	A	DATA	NA	P

Read byte protocol

1	7	1	1	8	1	1	7	1	1	8	1	8	1	1
S	SLAVE ADDRESS	W	A	COMMAND CODE	A	Sr	SLAVE ADDRESS	R	A	DATA	A	PEC	NA	P

Read byte protocol with PEC

1	7	1	1	8	1	8	1	8	1	1
S	SLAVE ADDRESS	W	A	COMMAND CODE	A	DATA LOW	A	DATA HIGH	A	P

Write word protocol

1	7	1	1	8	1	8	1	8	1	8	1	1
S	SLAVE ADDRESS	W	A	COMMAND CODE	A	DATA LOW	A	DATA HIGH	A	PEC	A	P

Write word protocol with PEC

1	7	1	1	8	1	1	7	1	1	8	1	8	1	1
S	SLAVE ADDRESS	W	A	COMMAND CODE	A	Sr	SLAVE ADDRESS	R	A	DATA LOW	A	DATA HIGH	NA	P

Read word protocol

1	7	1	1	8	1	1	7	1	1	8	1	8	1	8	1	1
S	SLAVE ADDRESS	W	A	COMMAND CODE	A	Sr	SLAVE ADDRESS	R	A	DATA LOW	A	DATA HIGH	A	PEC	NA	P

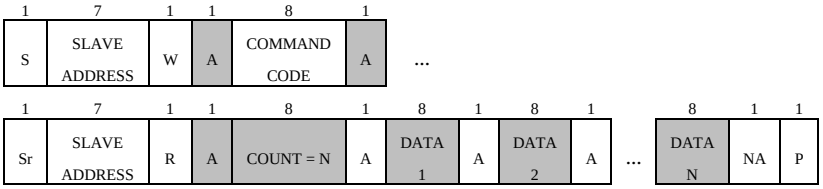
Read word protocol with PEC

1	7	1	1	8	1	8	1	8	1	8	1		8	1	1
S	SLAVE ADDRESS	W	A	COMMAND CODE	A	COUNT = N	A	DATA 1	A	DATA 2	A	…	DATA N	A	P

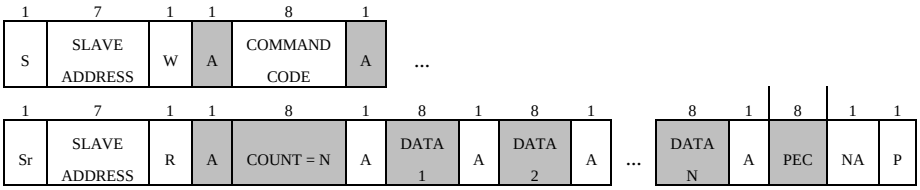
Write block protocol

1	7	1	1	8	1	8	1	8	1	8	1		8	1	8	1	1
S	SLAVE ADDRESS	W	A	COMMAND CODE	A	COUNT = N	A	DATA 1	A	DATA 2	A	…	DATA N	A	PEC	A	P

Write block protocol with PEC



Read block protocol



Read block protocol with PEC

PMBus Command					
Code	***Name***	***Protocol***	***Data Format***	***Scope***	
00h	*PAGE*	*Read/Write Byte*	*Byte*	*Common*[*1]	
03h	*CLEAR_FAULTS*	*Send Byte*	*n/a*	*Common*	
19h	*CAPABILITY*	*Read Byte*	*Byte*	*Common*	
42h	*VOUT_OV_WARN_LIMIT*	*Read Word*	*Linear*[*3]	*Page*[*2]	
43h	*VOUT_UV_WARN_LIMIT*	*Read Word*	*Linear*	*Page*	
4Ah	*IOUT_OC_WARN_LIMIT*	*Read Word*	*Linear*	*Page*	
4Fh	*OT_FAULT_LIMIT*	*Read Word*	*Linear*	*Page*	
51h	*OT_WARN_LIMIT*	*Read Word*	*Linear*	*Page*	
52h	*UT_WARN_LIMIT*	*Read Word*	*Linear*	*Page*	
6Ah	*POUT_OP_WARN_LIMIT*	*Read Word*	*Linear*	*Page*	
78h	*STATUS_BYTE*	*Read Byte*	*Byte*	*Page*	
79h	*STATUS_WORD*	*Read Word*	*Word*	*Page*	
7Ah	*STATUS_VOUT*	*Read Byte*	*Byte*	*Page*	
7Bh	*STATUS_IOUT*	*Read Byte*	*Byte*	*Page*	
7Dh	*STATUS_TEMPERATURE*	*Read Byte*	*Byte*	*Page*	
7Eh	*STATUS_CML*	*Read Byte*	*Byte*	*Common*	
81h	*STATUS_FANS_1_2*	*Read Byte*	*Byte*	*Common*	
8Bh	*READ_VOUT*	*Read Word*	*Linear*	*Page*	
8Ch	*READ_IOUT*	*Read Word*	*Linear*	*Page*	
8Dh	*READ_TEMPERATURE_1*	*Read Word*	*Linear*	*Common*	
8Eh	*READ_TEMPERATURE_2*	*Read Word*	*Linear*	*Common*	
~~*90h*~~	~~*READ_FAN_SPEED_1*~~	~~*Read Word*~~	~~*Linear*~~	~~*Common*~~	
96h	*READ_POUT*	*Read Word*	*Linear*	*Page*	
98h	*PMBUS_REVISION*	*Read Byte*	*Byte*	*Common*	
9Ah	*MFR_MODEL*	*Read Block*	*String*	*Common*	
9Bh	*MFR_REVISION*	*Read Block*	*String*	*Common*	
9Ch	*MFR_LOCATION*	*Read Block*	*String*	*Common*	
9Dh	*MFR_DATE*	*Read Block*	*String*	*Common*	
9Eh	*MFR_SERIAL*	*Read Block*	*String*	*Common*	
A0h	*MFR_VIN_MIN*	*Read Word*	*Linear*	*Common*	
A1h	*MFR_VIN_MAX*	*Read Word*	*Linear*	*Common*	
A2h	*MFR_IIN_MAX*	*Read Word*	*Linear*	*Common*	
A3h	*MFR_PIN_MAX*	*Read Word*	*Linear*	*Common*	
A4h	*MFR_VOUT_MIN*	*Read Word*	*Linear*	*Page*	
A5h	*MFR_VOUT_MAX*	*Read Word*	*Linear*	*Page*	

A6h	*MFR_IOUT_MAX*	*Read Word*	*Linear*	*Page*	
A7h	*MFR_POUT_MAX*	*Read Word*	*Linear*	*Page*	
A8h	*MFR_TAMBIENT_MAX*	*Read Word*	*Linear*	*Common*	
A9h	*MFR_TAMBIENT_MIN*	*Read Word*	*Linear*	*Common*	

**1 Common – 共通，不分頁*

**2 Page – 分頁視為裝置內的一組電源模組，有些命令需要搭配 PAGE 才能取得該電源模組的數值*

**3 Linear – 長度為 2 bytes,*

其中較低的 11 bits 用來表示尾數(Mantissa)，以 2 補數來表示其範圍(+1023 ~ -1024)

另外較高的 5 bits 為指數(Exponent)，以 2 補數來表示其範圍(+15 ~ -16)

*所代表的數值的關係式為 Y = 2^Exponent * Mantissa*

15	11	10	0
2's Exponent		2's Mantissa	

00h	***PAGE***			***Read/Write Byte***	***Byte***	***Common***
取得或切換目前工作頁						
	HVP450	*HVP600*				
PAGE0	*12V Module*	*12V Module*				
PAGE6	*5Vsb Module*	*5Vsb Module*				

03h	***CLEAR_FAULTS***	***Send Byte***	***n/a***	***Common***
清除目前所有在 STATUS 暫存器的 Warning 及 Fault 位元. 當電源因 Fault 條件成立而造無輸出的情況下，下達 CLEAR_FAULTS 會令電源會重新啟動. 若 Fault/Warn 的條年仍然存在時，則 STATUS 暫存器仍會被再一次設定，並將 SMBALERT#準位設定為 LOW 若改變 PS_EN 的準位也會執行 CLEAR_FAULTS				

19h	***CAPABILITY***	***Read Byte***	***Byte***	***Common***
確認 PMBus 裝置支援的功能				

BIT	DESCRIPTION	MEANING
7	Packet Error Checking	1： 支援 Packet Error Checking
6:5	Maximum Bus Speed	01：最大傳輸速度 400kHz
4	SMBALERT#	1：支援 SMBus Alert Response 協定
3:0	Reserve	0

42h	***VOUT_OV_WARN_LIMIT***	***Read Word***	***Linear [V]***	***Page***
此設定值，為輸出過電壓(Warning)的條件，當電源輸出電壓大於此設定值時，將影響以下內容 1. STATUS_BYTE.NONE_OF_THE_ABOVE = 1 2. STATUS_WORD.VOUT = 1 3. STATUS_VOUT. OV_WARNING = 1 4. SMBALERT# = LOW_LEVEL				

	12V Module (PAGE0)		5Vsb Module (PAGE6)
HAC300	13.2V (0xd34d)		5.5V (0xcac0)

43h	***VOUT_UV_WARN_LIMIT***	***Read Word***	***Linear [V]***	***Page***

此設定值，為輸出低電壓(Warning)的條件，當電源輸出電壓小於此設定值時，將影響以下內容 1. STATUS_BYTE.NONE_OF_THE_ABOVE = 1 2. STATUS_WORD.VOUT = 1 3. STATUS_VOUT. UV_WARNING = 1 4. SMBALERT# = LOW_LEVEL			
	12V Module (PAGE0)		5Vsb Module (PAGE6)
HAC300	10.8V(0xd2b4)		4.5V (0xca40)

4Ah	***IOUT_OC_WARN_LIMIT***	***Read Word***	***Linear [A]***	***Page***
此設定值，為輸出過電流(Warning)的條件，當電流輸出電壓大於此設定值時，將影響以下內容 1. STATUS_BYTE.NONE_OF_THE_ABOVE = 1 2. STATUS_WORD.IOUT = 1 3. STATUS_IOUT. OC_WARNING = 1 4. SMBALERT# = LOW_LEVEL				
	12V Module (PAGE0)		5Vsb Module (PAGE6)	
HAC300	27.5A (0xdB70)		n/a	

4Fh	***OT_FAULT_LIMIT***	***Read Word***	***Linear [℃]***	***Page***
此設定值，為 Oring-FET 過溫度(Fault)的條件，當 Oring-FET 溫度大於此設定值時，將影響以下內容 1. STATUS_BYTE.TEMPERATURE = 1 2. STATUS_TEMPERATURE .OT_FAULT = 1 3. SMBALERT# = LOW_LEVEL 4. STATUS_BYTE. OFF = 1 (電源將停止輸出) 5. 若溫度冷却至 OT_WARN_LIMIT 時，電源將自動開啟且 STATUS_BYTE.UINT_IS_OFF = 0;				
	12V Module (PAGE0)		5Vsb Module (PAGE6)	
HAC300	105℃ (0x0069)		n/a	

51h	***OT_WARN_LIMIT***	***Read Word***	***Linear [℃]***	***Page***
此設定值，為 Oring-FET 過溫度(Warn)的條件，當 Oring-FET 溫度大於此設定值時，將影響以下內容 1. STATUS_BYTE.TEMPERATURE = 1 2. STATUS_TEMPERATURE .OT_WARNING = 1 3. SMBALERT# = LOW_LEVEL				
	12V Module (PAGE0)	53V Module (PAGE1)	5Vsb Module (PAGE6)	
HAC300	95℃ (0x005f)	95℃ (0x005f)	n/a	

6Ah	***POUT_OP_WARN_LIMIT***	***Read Word***	***Linear***	***Page***
此設定值，為輸出過負載(Fault)的條件，當電源輸出功率大於此設定值時，將影響以下內容 4. STATUS_BYTE.IOUT_OC = 1 5. STATUS_WORD.IOUT = 1 6. STATUS_IOUT. OP_WARN = 1 7. SMBALERT# = LOW_LEVEL				
	12V Module (PAGE0)		5Vsb Module (PAGE6)	
HAC300	330W (0xfa94)		n/a	

78h	***STATUS_BYTE***	***Read Byte***	***Byte***	***Page***

狀態暫存器，為 STATUS_WORD 的低位組		
BIT	NAME	MEANING
~~7~~	~~BUSY~~	~~0~~
6	OFF	指示輸出禁止
5	VOUT_OV	曾發生輸出端過電壓
4	IOUT_OV	曾發生輸出端過電流
3	VIN_UV	曾發生輸入端低電壓
2	TEMPERATURE	曾發生溫度異常，詳見 STATUS_TEMPERATURE
1	CML	曾發生通訊異常，詳見 STATUS_CML
0	NONE_OF_THE_ABOVE	非以上列舉異常發生，明確的指示需透 STATUS_WORD 獲得

79h	***STATUS_WORD***	***Read Word***	***Word***	***Page***
狀態暫存器				
BIT	NAME	MEANING		
15	VOUT	曾發生輸出電壓異常，詳見 STATUS_VOUT		
14	IOUT	曾發生輸出電流/功率異常，詳見 STATUS_IOUT		
~~13~~	~~INPUT~~	0		
~~12~~	~~MFR~~	0		
~~11~~	~~POWER_GOOD#~~	NC		
10	FAN	曾發生風扇轉速異常，詳見 STATUS_FAN		
~~9~~	~~OTHER~~	0		
~~8~~	~~UNKNOW~~	0		
~~7~~	~~BUSY~~	同 STATUS_BYTE		
6	OFF			
5	VOUT_OV			
4	IOUT_OV			
3	VIN_UV			
2	TEMPERATURE			
1	CML			
0	NONE_OF_THE_ABOVE			

7Ah	***STATUS_VOUT***	***Read Byte***	***Byte***	***Page***
BIT	NAME	MEANING		
~~7~~	~~OV_FAULT~~	0		
6	OV_WARNING	當輸出電壓曾高於 VOUT_OV_WARN_LIMIT		
5	UV_WARNING	當輸出電壓曾高於 VOUT_UV_WARN_LIMIT		
~~4~~	~~UV_FAULT~~	0		
3		0		
2		0		
1		0		
0		0		

7Bh	***STATUS_IOUT***	***Read Byte***	***Byte***	***Page***
BIT	NAME	MEANING		
~~7~~	~~OC_FAULT~~	0		
~~6~~	~~OC_LV_FAULT~~	0		
5	OC_WARNING	當輸出電流曾高於 IOUT_OC_WARN_LIMIT		
~~4~~	~~UC_FAULT~~	0		
3		0		

2		0
~~1~~	~~OP_FAULT~~	0
0	OP_WARNING	當輸出功率曾高於 POUT_OP_WARN_LIMIT

7Dh	***STATUS_TEMPERATURE***	***Read Byte***	***Byte***	***Page***

BIT	NAME	MEANING
7	OT_FAULT	Oring-FET 溫度曾高於 OT_FAULT_LIMIT
6	OT_WARNING	Oring-FET 溫度曾高於 OT_WARN_LIMIT
~~5~~	~~UT_WARNING~~	
~~4~~	~~UT_FAULT~~	
3		
2		
1		
0		

7Eh	***STATUS_CML***	***Read Byte***	***Byte***	***Common***
當滿足表格所列之通訊失敗的條件時，除了該位元被設定外，還將影響以下內容 1. STATUS_BYTE.CML = 1 2. SMBALERT# = LOW_LEVEL				

BIT	NAME	MEANING
7	UNSUPPORT_COMMAND	未實作此命令碼的讀或寫的功能
6	UNSUPPORT_DATA	在當前 PAGE 此命令碼不接受，或資料不被認知
5	PEC_FAIL	詳見 System Management Bus Specification Rev 1.1
4		
3		
2		
~~1~~	~~COMM_OTHER~~	
0		

81h	***STATUS_FANS_1_2***	***Read Byte***	***Byte***	***Common***
當滿足表格所列之風扇異常的條件時，除了該位元被設定外，還將影響以下內容 3. STATUS_BYTE.NONE_OF_THE_ABOVE = 1 4. STATUS_WORD.FAN= 1 5. SMBALERT# = LOW_LEVEL				

BIT	NAME	MEANING
7	FAN1_FAULT	當目前風扇設定為全速且所偵測的轉速，低於設計值的 80%時
6		
5	FAN1_WARNING	當目前風扇設定值與所偵測的轉速，低於設計值的 80%時
4		
~~3~~	~~FAN1_OVERRIDDEN~~	
2		
1		
0		

8Bh	***READ_VOUT***	***Read Word***	***Linear***	***Page***
讀取目前 PAGE 的電壓值				

8Ch	***READ_IOUT***	***Read Word***	***Linear***	***Page***
讀取目前 PAGE 的電流值				

8Dh	***READ_TEMPERATURE_1***	***Read Word***	***Linear***	***Page***
讀取目前 PAGE 的 Oring-FET 溫度值				

8Eh	***READ_TEMPERATURE_2***	***Read Word***	***Linear***	***Common***
讀取目前內部環境溫度(℃)				

90h	READ_FAN_SPEED_1	Read Word	Linear	Common
讀取目前風扇轉速				

96h	READ_POUT	Read Word	Linear	Page
讀取目前 PAGE 的功率值				

98h	PMBUS_REVISION	Read Byte	Byte	Common
相容於 PMBus Specification Part I Revision 1.1 / Part II Revision 1.1				
HAC300	0x11			

9Ah	MFR_MODEL	Read Block	String	Common
機種名				
HAC300	HAC300S-D120E			

9Bh	MFR_REVISION	Read Block	String	Common
硬體版本.韌體版本				
HAC300	0A.0A			

9Ch	MFR_LOCATION	Read Block	String	Common
生產地				
HAC300	Kaohsiung, TW			

9Dh	MFR_DATE	Read Block	String	Common
生產日期 ####$$%% #### - 年, $$ - 月, %% - 日				
HAC300	20120130			

9Eh	MFR_SERIAL	Read Block	String	Common
產品序號 ##$$%%%% ## - 年, $$ - 週別, %%%% - 流水號				
HAC300	12050001			

A0h	MFR_VIN_MIN	Read Word	Linear	Common
最小輸入額定電壓				
HAC300	90V (0xf8b4)			

A1h	MFR_VIN_MAX	Read Word	Linear	Common
最大輸入額定電壓				
HAC300	264V (0xfa10)			

A2h	MFR_IIN_MAX	Read Word	Linear	Common
最大輸入額定電流				
HAC300	4.17A (0xd10b)			

A3h	MFR_PIN_MAX	Read Word	Linear	Common
最大輸入額定功率				
HAC300	375W (0x0232177)			

A4h	MFR_VOUT_MIN	Read Word	Linear	Page
最小輸出額定電壓				
	12V Module (PAGE0)		5Vsb Module (PAGE6)	
HAC300	11.16V (0xd2ca)		4.84V (0xca6c)	

A5h	MFR_VOUT_MAX	Read Word	Linear	Page
最大輸出額定電壓				
	12V Module (PAGE0)		5Vsb Module (PAGE6)	
HAC300	12.83V (0xd335)		5.34V (0xcaac)	

A6h	MFR_IOUT_MAX	Read Word	Linear	Page
最大輸出額定電流				
	12V Module (PAGE0)		5Vsb Module (PAGE6)	
HAC300	25A (0xdb20)		2.5A (0xc940)	

A7h	MFR_POUT_MAX	Read Word	Linear	Page
最大輸出額定功率				
	12V Module (PAGE0)		5Vsb Module (PAGE6)	
HAC300	300W (0xfa58)		12.5W (0xf819)	

A8h	MFR_TAMBIENT_MAX	Read Word	Linear	Common
最大工作環境額定溫度				
HAC300	50℃(0x0032)			

A9h	*MFR_TAMBIENT_MIN*	*Read Word*	*Linear*	*Common*
最小工作環境額定溫度				
HAC300	-5℃ (0x07fb)			