



Register Map

CA186BW1-6368R-SL

(Difference Map with
CA1300BW1-6068R-SL / 1.3GHz 7kW)

The address information in purple with the notation (1.3G) in the register map are the ones of the same address numbers used in the 1.3GHz SSA delivered to SLAC.

R&K Company Limited

Date	Author	Authorized	Document number	Revision
June 30, 2022	S. Makino	S. Hihara	EH-CT-2708-X-	00

Revision History

Revision	Date	Author(s)	Revision Note
00	June 30, 2022	S. Makino	Original
01	July 28, 2022	S. Makino	Added Difference Map

<Register Map>

Below is the list of Register Map. Address offset is enabled.

Note:

- When Faulted, the default state is: DC Disabled, PS Output Control Voltage 0mV and RF Disabled. The reason for the fault is listed in at Address 10, 11, 15.
Reset Operation
 1. Send the “Fault Reset” command (Address 4) to the SSA via Modbus.
 2. Send the “DC Enable” command (Address 1) to the SSA via Modbus.
 3. Send the “PS Output Control Voltage” command (Address 3) to the SSA via Modbus.
 4. Send the “RF Enable” command (Address 2) to the SSA via Modbus.
- When Warnings, the information will be listed at Address 13 and 20, 31, 165 - 173 but SSA operation continues as before the error detection. To remove these warnings: Check what causing the warning and remove or fix the error cause.
- Multiplier for the data read back.
Multiply the number on Multiplier to Modbus register value, and put the Unit next to it to get the actual status.
- Lower Threshold and Upper Threshold
Threshold values against error occasion are listed. For ones have parentheses, warning code will be generated on values in the parenthesis, and interlock function trips SSA on values out of the parenthesis.
i.e.: For Address 24, when the temperature at Main CPU on the Main PCB gets lower than +8.0 degC, warning is generated. Then, when it gets lower than +4.0 degC, SSA trips by interlock.
Also, when the temperature at Main CPU on the Main PCB gets higher than +55.0 degC, warning is generated. And, when it gets higher than +60.0 degC SSA trips by interlock.
At warning state, the error code (550 for Address 24) is indicated on the Address 13. And the error code is indicated on the Address 10 when SSA tripped by interlock.

Table 1: Register Map

Address	Description	Function	Display Range	Multiplier	Unit	Permitted Raw Value	Lower Threshold	Upper Threshold	Command / Status	Error Code	Error Type	Error Operation
1	DC Enable / Disable	0x03,06	0 or 1	n/a	n/a	0 or 1	n/a	n/a	0: Disable 1: Enable	n/a	n/a	n/a
2	RF Enable / Disable	0x03,06	0 or 1	n/a	n/a	0 or 1	n/a	n/a	0: Disable 1: Enable	n/a	n/a	n/a
3	PS Output Control Voltage	0x03,06	0 - 2080	1	n/a	0 - 2080	n/a	n/a	(Refer to: Table XX)	n/a	n/a	n/a
4	Fault Reset	0x06	0 or 1	n/a	n/a	1, 2, 4, 8	n/a	n/a	1: Internal 2: External 4: Critical Warning 8: Processor	n/a	n/a	n/a
5	LAN Reboot	0x06	0 or 1	n/a	n/a	1	n/a	n/a	1: Reboot	n/a	n/a	n/a
6	System Reboot	0x06	0 or 1	n/a	n/a	1	n/a	n/a	1: Reboot	n/a	n/a	n/a
7	SD Card Operation	0x03,06	0 or 1	n/a	n/a	0 or 1	n/a	n/a	0: Disable (Hot swap allowed) 1: Enable (Hot swap not allowed)	n/a	n/a	n/a
8	Set threshold to Factory default value	0x06	0 or 1	n/a	n/a	1	n/a	n/a	1: Set default value	n/a	n/a	n/a
9	AC Enable / Disable (480VAC Breaker Position)	0x03	0 or 1	n/a	n/a	Read Only	n/a	n/a	0: Disable 1: Enable	n/a	n/a	n/a

Address	Description	Function	Display Range	Multiplier	Unit	Permitted Raw Value	Lower Threshold	Upper Threshold	Command / Status	Error Code	Error Type	Error Operation
10	Internal Fault Error Code (This code Indicates the first Fault.)	0x03	0 or 11 - 632	1	n/a	Read Only	n/a	n/a	0: No Error 11 - 632: Error	Error code	Internal①②③	DC / RF Disable
10(1.3G)	Internal Fault Error Code (This code Indicates the first Fault.)	0x03	0 or 11 - 732	1	n/a	Read Only	n/a	n/a	0: No Error 11 - 732: Error	Error code	Internal①②③	DC / RF Disable
11	External Fault Error Code (This code Indicates the first Fault.)	0x03	0 or 511 - 518	1	n/a	Read Only	n/a	n/a	0: No Error 511 - 518: Error	External 1: 511 External 2: 512 External 3: 514 External 4: 518	External	DC / RF Disable
12	External Fault Status (bit)	0x03	0 - 0x000F	n/a	n/a	Read Only	n/a	n/a	0: No Error bit0: External 1 bit1: External 2 bit2: External 3 bit3: External 4 bit4 - bit15: 0	(511 - 518)	n/a	n/a
13	Warning Code (This code Indicates the last Warning that occurred.)	0x03	0 or 1 - 632	1	n/a	Read Only	n/a	n/a	0: No Error 1 - 632: Error	Error code	Warning	Notification Only
13(1.3G)	Warning Code (This code Indicates the last Warning that occurred.)	0x03	0 or 1 - 733	1	n/a	Read Only	n/a	n/a	0: No Error 1 - 733: Error	Error code	Warning	Notification Only
14	Critical Warning Code (This code Indicates the first Critical Warning.)	0x03	0 or 500 - 501	1	n/a	Read Only	n/a	n/a	0: No Error 500 - 501: Error	Error code	Critical Warning	RF Disable (Internal Fault LED Flashing)
15	Processor Fault Error Code (This code Indicates the first Fault.)	0x03	0 or 591 - 599	1	n/a	Read Only	n/a	n/a	0: No Error 591 - 599: Error	Main CPU: - Debug-SD CPU: 591 PS Sub CPU: 592 FA-1 DAFA Sub CPU: 593 FA-2 DAFA Sub CPU: 594 FA-3 DAFA Sub CPU: 595 FA-4 DAFA Sub CPU: 596 DA DAFA Sub CPU: 598 HE Sub CPU: 599	Processor	DC / RF Disable
15(1.3G)	Processor Fault Error Code (This code Indicates the first Fault.)	0x03	0 or 591 - 599	1	n/a	Read Only	n/a	n/a	0: No Error 591 - 599: Error	Main CPU: - Debug-SD CPU: 591 PS Sub CPU: 592 FA-1 DAFA Sub CPU: 593 FA-2 DAFA Sub CPU: 594 FA-3 DAFA Sub CPU: 595 FA-4 DAFA Sub CPU: 596 FA-5 DAFA Sub CPU: 597 DA DAFA Sub CPU: 598 HE Sub CPU: 599	Processor	DC / RF Disable
16	Processor Fault Status (bit)	0x03	0 - 0x03FE	n/a	n/a	Read Only	n/a	n/a	0: No Error bit0: 0 bit1: Debug-SD CPU bit2: PS Sub CPU bit3: FA-1 DAFA Sub CPU bit4: FA-2 DAFA Sub CPU	(591 - 599)	n/a	n/a

Address	Description	Function	Display Range	Multiplier	Unit	Permitted Raw Value	Lower Threshold	Upper Threshold	Command / Status	Error Code	Error Type	Error Operation
									bit5: FA-3 DAFA Sub CPU bit6: FA-4 DAFA Sub CPU bit7: 0 bit8: DA DAFA Sub CPU bit9: HE Sub CPU bit10 - bit15: 0			
16(1.3G)	Processor Fault Status (bit)	0x03	0 - 0x03FE	n/a	n/a	Read Only	n/a	n/a	0: No Error bit0: 0 bit1: Debug-SD CPU bit2: PS Sub CPU bit3: FA-1 DAFA Sub CPU bit4: FA-2 DAFA Sub CPU bit5: FA-3 DAFA Sub CPU bit6: FA-4 DAFA Sub CPU bit7: FA-5 DAFA Sub CPU bit8: DA DAFA Sub CPU bit9: HE Sub CPU bit10 - bit15: 0	(591 - 599)	n/a	n/a
17	480VAC Status	0x03	0 or 1	n/a	n/a	Read Only	n/a	n/a	0: No Error 1: Error	580	Internal①	DC / RF Disable
18	Thermostat Status (bit)	0x03	0 - 0xFFFF	n/a	n/a	Read Only	n/a	n/a	0: No Error bit0: Main CPU PCB bit1: PS Sub CPU PCB bit2: FA-1_DAFA Sub CPU PCB bit3: FA-1_HeatSink bit4: FA-2_DAFA Sub CPU PCB bit5: FA-2_HeatSink bit6: FA-3_DAFA Sub CPU PCB bit7: FA-3_HeatSink bit8: FA-4_DAFA Sub CPU PCB bit9: FA-4_HeatSink bit10: 0 bit11: 0 bit12: DA_DAFA Sub CPU PCB bit13: DA_HeatSink bit14: HE Sub CPU PCB bit15: HE Unit Air Inlet	560	Internal①	DC / RF Disable
18(1.3G)	Thermostat Status (bit)	0x03	0 - 0xFFFF	n/a	n/a	Read Only	n/a	n/a	0: No Error bit0: Main CPU PCB bit1: PS Sub CPU PCB bit2: FA-1_DAFA Sub CPU PCB bit3: FA-1_HeatSink bit4: FA-2_DAFA Sub	560	Internal①	DC / RF Disable

Address	Description	Function	Display Range	Multiplier	Unit	Permitted Raw Value	Lower Threshold	Upper Threshold	Command / Status	Error Code	Error Type	Error Operation
									CPU PCB bit5: FA-2_HeatSink bit6: FA-3_DAFa Sub CPU PCB bit7: FA-3_HeatSink bit8: FA-4_DAFa Sub CPU PCB bit9: FA-4_HeatSink bit10: FA-5_DAFa Sub CPU PCB bit11: FA-5_HeatSink bit12: DA_DAFa Sub CPU PCB bit13: DA_HeatSink bit14: HE Sub CPU PCB bit15: HE Unit Air Inlet			
19	Water Leak Status	0x03	0 or 1	n/a	n/a	Read Only	n/a	n/a	0: No Error 1: Error	502	Internal①	DC / RF Disable
20	microSD Status (Master, Slave) (bit)	0x03	0 - 0x0003	n/a	n/a	Read Only	n/a	n/a	0: No Error bit0: Master bit1: Slave bit2 - bit15: 0	Master: 541 Slave: 542	Warning	Notification Only
21	Input Drive Power	0x03	0 - 2000	1	n/a	Read Only	0	1550 (1335)	(Table XX)	500	Critical Warning (Warning)	RF Disable (Notification Only)
22	Forward Power	0x03	0 - 10000	1	W	Read Only	0W	6600W (6300W)	Operation Value	501	Critical Warning (Warning)	RF Disable (Notification Only)
22(1.3G)	Forward Power	0x03	0 - 10000	1	W	Read Only	0W	7700W (7350W)	Operation Value	501	Critical Warning (Warning)	RF Disable (Notification Only)
23	Reflected Power	0x03	0 - 10000	1	W	Read Only	0W	300W (200W)	Operation Value	530	Internal③ (Warning)	DC / RF Disable (Notification Only)
23(1.3G)	Reflected Power	0x03	0 - 10000	1	W	Read Only	0W	700W (350W)	Operation Value	530	Internal③ (Warning)	DC / RF Disable (Notification Only)
24	Main CPU PCB Temperature	0x03	0 - 100.0	0.1	degC	Read Only	+4.0degC (+8.0degC)	+60.0degC (+55.0degC)	Operation Value	550	Internal③ (Warning)	DC / RF Disable (Notification Only)
25	Main CPU PCB Input Voltage +12VDC	0x03	0 - 100.0	0.1	V	Read Only	+8.0V	+16.0V	Operation Value	521	Internal③	DC / RF Disable
26	Main CPU PCB Input Voltage +24VDC	0x03	0 - 100.0	0.1	V	Read Only	+20.0V	+28.0V	Operation Value	522	Warning	Notification Only

Address	Description	Function	Display Range	Multiplier	Unit	Permitted Raw Value	Lower Threshold	Upper Threshold	Command / Status	Error Code	Error Type	Error Operation
27	RF Control Unit Fan Rotation Speed	0x03	0 - 9450	1	rpm	Read Only	5000rpm	9000rpm	Operation Value	503	Warning	Notification Only
28	Ready for RF (Operates Only at DC Enable, and Only for 90 Seconds after setting DC Enable)	0x03	90 - 0	1	sec	Read Only	n/a	n/a	Countdown Timer 0: No Error (Ready) 90 - 1: Error (Not Ready)	504	Warning	Notification Only
29	-	-	-	-	-	-	-	-	-	-	-	-
30	PS Status (More than Three Faults)	0x03	0 - 4	1	n/a	Read Only	n/a	>=2 (Error)	0 - 1: No Error 2 - 4: Error	420	Internal②	DC / RF Disable
30(1.3G)	PS Status (More than Three Faults)	0x03	0 - 6	1	n/a	Read Only	n/a	>=3 (Error)	0 - 2: No Error 3 - 6: Error	420	Internal②	DC / RF Disable
31	PS Status (bit)	0x03	0 - 0x00AA	n/a	n/a	Read Only	n/a	n/a	0: No Error bit0: 0 bit1: PS 1_FAULT# bit2: 0 bit3: PS 2_FAULT# bit4: 0 bit5: PS 3_FAULT# bit6: 0 bit7: PS 4_FAULT# bit8 - bit15: 0	PS 1: 421 PS 2: 422 PS 3: 423 PS 4: 424	Warning	Notification Only
31(1.3G)	PS Status (bit)	0x03	0 - 0x0AAA	n/a	n/a	Read Only	n/a	n/a	0: No Error bit0: 0 bit1: PS 1_FAULT# bit2: 0 bit3: PS 2_FAULT# bit4: 0 bit5: PS 3_FAULT# bit6: 0 bit7: PS 4_FAULT# bit8: 0 bit9: PS 5_FAULT# bit10: 0 bit11: PS 6_FAULT# bit12 - bit15: 0	PS 1: 421 PS 2: 422 PS 3: 423 PS 4: 424 PS 5: 425 PS 6: 426	Warning	Notification Only
32	-	-	-	-	-	-	-	-	-	-	-	-
33	PS Sub CPU PCB Temperature	0x03	0 - 100.0	0.1	degC	Read Only	+4.0degC (+8.0degC)	+60.0degC (+55.0degC)	Operation Value	404	Internal③ (Warning)	DC / RF Disable (Notification Only)
34	-	-	-	-	-	-	-	-	-	-	-	-
35	PS Sub CPU PCB Input Voltage +24VDC (for MC, SSA)	0x03	0 - 100.0	0.1	V	Read Only	+20.0V	+28.0V	Operation Value	442	Warning	Notification Only
36	PS Unit Fan 1 Rotation Speed	0x03	0 - 9450	1	rpm	Read Only	5000rpm	9000rpm	Operation Value	437	Warning	Notification Only
37	PS Unit Fan 2 Rotation Speed	0x03	0 - 9450	1	rpm	Read Only	5000rpm	9000rpm	Operation Value	438	Warning	Notification Only

Address	Description	Function	Display Range	Multiplier	Unit	Permitted Raw Value	Lower Threshold	Upper Threshold	Command / Status	Error Code	Error Type	Error Operation
38	-	-	-	-	-	-	-	-	-	-	-	-
39	-	-	-	-	-	-	-	-	-	-	-	-
40	FA Unit-1 ① Final AMP Current	0x03	0 - 60.0	0.1	A	Read Only	0.0A	40.0A	Operation Value	101	Warning	Notification Only
40(1.3G)	FA Unit-1 ① Final AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.0A	20.0A	Operation Value	101	Warning	Notification Only
41	-	-	-	-	-	-	-	-	-	-	-	-
41(1.3G)	FA Unit-1 ② Final AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.0A	20.0A	Operation Value	102	Warning	Notification Only
42	FA Unit-1 ② Final AMP Current	0x03	0 - 60.0	0.1	A	Read Only	0.0A	40.0A	Operation Value	103	Warning	Notification Only
42(1.3G)	FA Unit-1 ③ Final AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.0A	20.0A	Operation Value	103	Warning	Notification Only
43	-	-	-	-	-	-	-	-	-	-	-	-
43(1.3G)	FA Unit-1 ④ Final AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.0A	20.0A	Operation Value	104	Warning	Notification Only
44	FA Unit-1 ① FWD	0x03	0 - 2000	1	W	Read Only	0W	1200W (1100W)	Operation Value	111	Internal③ (Warning)	DC / RF Disable (Notification Only)
44(1.3G)	FA Unit-1 ①② FWD	0x03	0 - 2000	1	W	Read Only	0W	1100W (1000W)	Operation Value	111	Internal③ (Warning)	DC / RF Disable (Notification Only)
45	FA Unit-1 ① REF	0x03	0 - 2000	1	W	Read Only	0W	1000W (500W)	Operation Value	115	Internal③ (Warning)	DC / RF Disable (Notification Only)
45(1.3G)	FA Unit-1 ①② REF	0x03	0 - 2000	1	W	Read Only	0W	1000W (500W)	Operation Value	115	Internal③ (Warning)	DC / RF Disable (Notification Only)
46	FA Unit-1 ② FWD	0x03	0 - 2000	1	W	Read Only	0W	1200W (1100W)	Operation Value	112	Internal③ (Warning)	DC / RF Disable (Notification Only)
46(1.3G)	FA Unit-1 ③④ FWD	0x03	0 - 2000	1	W	Read Only	0W	1100W (1000W)	Operation Value	112	Internal③ (Warning)	DC / RF Disable (Notification Only)
47	FA Unit-1 ② REF	0x03	0 - 2000	1	W	Read Only	0W	1000W (500W)	Operation Value	116	Internal③ (Warning)	DC / RF Disable (Notification Only)
47(1.3G)	FA Unit-1 ③④ REF	0x03	0 - 2000	1	W	Read Only	0W	1000W (500W)	Operation Value	116	Internal③ (Warning)	DC / RF Disable (Notification Only)
48	FA Unit-1 ① +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	121	Warning	Notification Only
49	-	-	-	-	-	-	-	-	-	-	-	-
49(1.3G)	FA Unit-1 ② +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	122	Warning	Notification Only
50	FA Unit-1 ② +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	123	Warning	Notification Only
50(1.3)	FA Unit-1 ③ +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	123	Warning	Notification Only
51	-	-	-	-	-	-	-	-	-	-	-	-
51(1.3)	FA Unit-1 ④ +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	124	Warning	Notification Only
52	FA Unit-1 +12VDC	0x03	0 - 100.0	0.1	V	Read Only	+8.0V	+16.0V	Operation Value	125	Warning	Notification Only
53	FA Unit-1 Heat Sink Temperature	0x03	0 - 100.0	0.1	degC	Read Only	+22.0degC	+60.0degC	Operation Value	131	Warning	Notification Only
54	FA-1 FADA Sub CPU PCB Temperature	0x03	0 - 100.0	0.1	degC	Read Only	+4.0degC (+8.0degC)	+60.0degC (+55.0degC)	Operation Value	132	Internal③ (Warning)	DC / RF Disable (Notification Only)
55	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-

Address	Description	Function	Display Range	Multiplier	Unit	Permitted Raw Value	Lower Threshold	Upper Threshold	Command / Status	Error Code	Error Type	Error Operation
57	FA Unit-2 ① Final AMP Current	0x03	0 - 60.0	0.1	A	Read Only	0.0A	40.0A	Operation Value	201	Warning	Notification Only
57(1.3G)	FA Unit-2 ① Final AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.0A	20.0A	Operation Value	201	Warning	Notification Only
58	-	-	-	-	-	-	-	-	-	-	-	-
58(1.3G)	FA Unit-2 ② Final AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.0A	20.0A	Operation Value	202	Warning	Notification Only
59	FA Unit-2 ② Final AMP Current	0x03	0 - 60.0	0.1	A	Read Only	0.0A	40.0A	Operation Value	203	Warning	Notification Only
59(1.3G)	FA Unit-2 ③ Final AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.0A	20.0A	Operation Value	203	Warning	Notification Only
60	-	-	-	-	-	-	-	-	-	-	-	-
60(1.3G)	FA Unit-2 ④ Final AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.0A	20.0A	Operation Value	204	Warning	Notification Only
61	FA Unit-2 ① FWD	0x03	0 - 2000	1	W	Read Only	0W	1200W (1100W)	Operation Value	211	Internal③ (Warning)	DC / RF Disable (Notification Only)
61(1.3G)	FA Unit-2 ①② FWD	0x03	0 - 2000	1	W	Read Only	0W	1100W (1000W)	Operation Value	211	Internal③ (Warning)	DC / RF Disable (Notification Only)
62	FA Unit-2 ① REF	0x03	0 - 2000	1	W	Read Only	0W	1000W (500W)	Operation Value	215	Internal③ (Warning)	DC / RF Disable (Notification Only)
62(1.3G)	FA Unit-2 ①② REF	0x03	0 - 2000	1	W	Read Only	0W	1000W (500W)	Operation Value	215	Internal③ (Warning)	DC / RF Disable (Notification Only)
63	FA Unit-2 ② FWD	0x03	0 - 2000	1	W	Read Only	0W	1200W (1100W)	Operation Value	212	Internal③ (Warning)	DC / RF Disable (Notification Only)
63(1.3G)	FA Unit-2 ③④ FWD	0x03	0 - 2000	1	W	Read Only	0W	1100W (1000W)	Operation Value	212	Internal③ (Warning)	DC / RF Disable (Notification Only)
64	FA Unit-2 ② REF	0x03	0 - 2000	1	W	Read Only	0W	1000W (500W)	Operation Value	216	Internal③ (Warning)	DC / RF Disable (Notification Only)
64(1.3G)	FA Unit-2 ③④ REF	0x03	0 - 2000	1	W	Read Only	0W	1000W (500W)	Operation Value	216	Internal③ (Warning)	DC / RF Disable (Notification Only)
65	FA Unit-2 ① +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	221	Warning	Notification Only
66	-	-	-	-	-	-	-	-	-	-	-	-
66(1.3G)	FA Unit-2 ② +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	222	Warning	Notification Only
67	FA Unit-2 ② +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	223	Warning	Notification Only
67(1.3G)	FA Unit-2 ③ +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	223	Warning	Notification Only
68	-	-	-	-	-	-	-	-	-	-	-	-
68(1.3G)	FA Unit-2 ④ +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	224	Warning	Notification Only
69	FA-2 Unit +12VDC	0x03	0 - 100.0	0.1	V	Read Only	+8.0V	+16.0V	Operation Value	225	Warning	Notification Only
70	FA Unit-2 Heat Sink Temperature	0x03	0 - 100.0	0.1	degC	Read Only	+22.0degC	+60.0degC	Operation Value	231	Warning	Notification Only
71	FA-2 FADA Sub CPU PCB Temperature	0x03	0 - 100.0	0.1	degC	Read Only	+4.0degC (+8.0degC)	+60.0degC (+55.0degC)	Operation Value	232	Internal③ (Warning)	DC / RF Disable (Notification Only)
72	-	-	-	-	-	-	-	-	-	-	-	-
73	-	-	-	-	-	-	-	-	-	-	-	-
74	FA Unit-3 ① Final AMP Current	0x03	0 - 60.0	0.1	A	Read Only	0.0A	40.0A	Operation Value	301	Warning	Notification Only

Address	Description	Function	Display Range	Multiplier	Unit	Permitted Raw Value	Lower Threshold	Upper Threshold	Command / Status	Error Code	Error Type	Error Operation
74(1.3G)	FA Unit-3 ① Final AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.0A	20.0A	Operation Value	301	Warning	Notification Only
75	-	-	-	-	-	-	-	-	-	-	-	-
75(1.3G)	FA Unit-3 ② Final AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.0A	20.0A	Operation Value	302	Warning	Notification Only
76	FA Unit-3 ② Final AMP Current	0x03	0 - 60.0	0.1	A	Read Only	0.0A	40.0A	Operation Value	303	Warning	Notification Only
76(1.3G)	FA Unit-3 ③ Final AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.0A	20.0A	Operation Value	303	Warning	Notification Only
77	-	-	-	-	-	-	-	-	-	-	-	-
77(1.3G)	FA Unit-3 ④ Final AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.0A	20.0A	Operation Value	304	Warning	Notification Only
78	FA Unit-3 ① FWD	0x03	0 - 2000	1	W	Read Only	0W	1200W (1100W)	Operation Value	311	Internal③ (Warning)	DC / RF Disable (Notification Only)
78(1.3G)	FA Unit-3 ①② FWD	0x03	0 - 2000	1	W	Read Only	0W	1100W (1000W)	Operation Value	311	Internal③ (Warning)	DC / RF Disable (Notification Only)
79	FA Unit-3 ① REF	0x03	0 - 2000	1	W	Read Only	0W	1000W (500W)	Operation Value	315	Internal③ (Warning)	DC / RF Disable (Notification Only)
79(1.3G)	FA Unit-3 ①② REF	0x03	0 - 2000	1	W	Read Only	0W	1000W (500W)	Operation Value	315	Internal③ (Warning)	DC / RF Disable (Notification Only)
80	FA Unit-3 ② FWD	0x03	0 - 2000	1	W	Read Only	0W	1200W (1100W)	Operation Value	312	Internal③ (Warning)	DC / RF Disable (Notification Only)
80(1.3G)	FA Unit-3 ③④ FWD	0x03	0 - 2000	1	W	Read Only	0W	1100W (1000W)	Operation Value	312	Internal③ (Warning)	DC / RF Disable (Notification Only)
81	FA Unit-3 ② REF	0x03	0 - 2000	1	W	Read Only	0W	1000W (500W)	Operation Value	316	Internal③ (Warning)	DC / RF Disable (Notification Only)
81(1.3G)	FA Unit-3 ③④ REF	0x03	0 - 2000	1	W	Read Only	0W	1000W (500W)	Operation Value	316	Internal③ (Warning)	DC / RF Disable (Notification Only)
82	FA Unit-3 ① +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	321	Warning	Notification Only
83	-	-	-	-	-	-	-	-	-	-	-	-
83(1.3G)	FA Unit-3 ② +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	322	Warning	Notification Only
84	FA Unit-3 ② +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	323	Warning	Notification Only
84(1.3G)	FA Unit-3 ③ +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	323	Warning	Notification Only
85	-	-	-	-	-	-	-	-	-	-	-	-
85(1.3G)	FA Unit-3 ④ +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	324	Warning	Notification Only
86	FA Unit-3 +12VDC	0x03	0 - 100.0	0.1	V	Read Only	+8.0V	+16.0V	Operation Value	325	Warning	Notification Only
87	FA Unit-3 Heat Sink Temperature	0x03	0 - 100.0	0.1	degC	Read Only	+22.0degC	+60.0degC	Operation Value	331	Warning	Notification Only
88	FA-3 FADA Sub CPU PCB Temperature	0x03	0 - 100.0	0.1	degC	Read Only	+4.0degC (+8.0degC)	+60.0degC (+55.0degC)	Operation Value	332	Internal③ (Warning)	DC / RF Disable (Notification Only)
89	-	-	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-	-	-
91	FA Unit-4 ① Final AMP Current	0x03	0 - 60.0	0.1	A	Read Only	0.0A	40.0A	Operation Value	601	Warning	Notification Only
91(1.3G)	FA Unit-4 ① Final AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.0A	20.0A	Operation Value	601	Warning	Notification Only
92	-	-	-	-	-	-	-	-	-	-	-	-

Address	Description	Function	Display Range	Multiplier	Unit	Permitted Raw Value	Lower Threshold	Upper Threshold	Command / Status	Error Code	Error Type	Error Operation
92(1.3G)	FA Unit-4 ② Final AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.0A	20.0A	Operation Value	602	Warning	Notification Only
93	FA Unit-4 ② Final AMP Current	0x03	0 - 60.0	0.1	A	Read Only	0.0A	40.0A	Operation Value	603	Warning	Notification Only
93(1.3G)	FA Unit-4 ③ Final AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.0A	20.0A	Operation Value	603	Warning	Notification Only
94	-	-	-	-	-	-	-	-	-	-	-	-
94(1.3G)	FA Unit-4 ④ Final AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.0A	20.0A	Operation Value	604	Warning	Notification Only
95	FA Unit-4 ① FWD	0x03	0 - 2000	1	W	Read Only	0W	1200W (1100W)	Operation Value	611	Internal③ (Warning)	DC / RF Disable (Notification Only)
95(1.3G)	FA Unit-4 ①② FWD	0x03	0 - 2000	1	W	Read Only	0W	1100W (1000W)	Operation Value	611	Internal③ (Warning)	DC / RF Disable (Notification Only)
96	FA Unit-4 ① REF	0x03	0 - 2000	1	W	Read Only	0W	1000W (500W)	Operation Value	615	Internal③ (Warning)	DC / RF Disable (Notification Only)
96(1.3G)	FA Unit-4 ①② REF	0x03	0 - 2000	1	W	Read Only	0W	1000W (500W)	Operation Value	615	Internal③ (Warning)	DC / RF Disable (Notification Only)
97	FA Unit-4 ② FWD	0x03	0 - 2000	1	W	Read Only	0W	1200W (1100W)	Operation Value	612	Internal③ (Warning)	DC / RF Disable (Notification Only)
97(1.3G)	FA Unit-4 ③④ FWD	0x03	0 - 2000	1	W	Read Only	0W	1100W (1000W)	Operation Value	612	Internal③ (Warning)	DC / RF Disable (Notification Only)
98	FA Unit-4 ② REF	0x03	0 - 2000	1	W	Read Only	0W	1000W (500W)	Operation Value	616	Internal③ (Warning)	DC / RF Disable (Notification Only)
98(1.3G)	FA Unit-4 ② REF	0x03	0 - 2000	1	W	Read Only	0W	1000W (500W)	Operation Value	616	Internal③ (Warning)	DC / RF Disable (Notification Only)
99	FA Unit-4 ① +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	621	Warning	Notification Only
100	-	-	-	-	-	-	-	-	-	-	-	-
100(1.3G)	FA Unit-4 ② +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	622	Warning	Notification Only
101	FA Unit-4 ② +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	623	Warning	Notification Only
101(1.3G)	FA Unit-4 ③ +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	623	Warning	Notification Only
102	-	-	-	-	-	-	-	-	-	-	-	-
102(1.3G)	FA Unit-4 ④ +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	624	Warning	Notification Only
103	FA Unit-4 +12VDC	0x03	0 - 100.0	0.1	V	Read Only	+8.0V	+16.0V	Operation Value	625	Warning	Notification Only
104	FA Unit-4 Heat Sink Temperature	0x03	0 - 100.0	0.1	degC	Read Only	+22.0degC	+60.0degC	Operation Value	631	Warning	Notification Only
105	FA-4 FADA Sub CPU PCB Temperature	0x03	0 - 100.0	0.1	degC	Read Only	+4.0degC (+8.0degC)	+60.0degC (+55.0degC)	Operation Value	632	Internal③ (Warning)	DC / RF Disable (Notification Only)
106	-	-	-	-	-	-	-	-	-	-	-	-
107	-	-	-	-	-	-	-	-	-	-	-	-
108	-	-	-	-	-	-	-	-	-	-	-	-
108(1.3G)	FA Unit-5 ① Final AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.0A	20.0A	Operation Value	701	Warning	Notification Only
109	-	-	-	-	-	-	-	-	-	-	-	-
109(1.3G)	FA Unit-5 ② Final AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.0A	20.0A	Operation Value	702	Warning	Notification Only
110	-	-	-	-	-	-	-	-	-	-	-	-
110(1.3G)	FA Unit-5 ③ Final AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.0A	20.0A	Operation Value	703	Warning	Notification Only
111	-	-	-	-	-	-	-	-	-	-	-	-
111(1.3G)	FA Unit-5 ④ Final AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.0A	20.0A	Operation Value	704	Warning	Notification Only

Address	Description	Function	Display Range	Multiplier	Unit	Permitted Raw Value	Lower Threshold	Upper Threshold	Command / Status	Error Code	Error Type	Error Operation
112	-	-	-	-	-	-	-	-	-	-	-	-
112(1.3G)	FA Unit-5 ①② FWD	0x03	0 - 2000	1	W	Read Only	0W	1100W (1000W)	Operation Value	711	Internal③ (Warning)	DC / RF Disable (Notification Only)
113	-	-	-	-	-	-	-	-	-	-	-	-
113(1.3G)	FA Unit-5 ①② REF	0x03	0 - 2000	1	W	Read Only	0W	1000W (500W)	Operation Value	715	Internal③ (Warning)	DC / RF Disable (Notification Only)
114	-	-	-	-	-	-	-	-	-	-	-	-
114(1.3G)	FA Unit-5 ③④ FWD	0x03	0 - 2000	1	W	Read Only	0W	1100W (1000W)	Operation Value	712	Internal③ (Warning)	DC / RF Disable (Notification Only)
115	-	-	-	-	-	-	-	-	-	-	-	-
115(1.3G)	FA Unit-5 ③④ REF	0x03	0 - 2000	1	W	Read Only	0W	1000W (500W)	Operation Value	716	Internal③ (Warning)	DC / RF Disable (Notification Only)
116	-	-	-	-	-	-	-	-	-	-	-	-
116(1.3G)	FA Unit-5 ① +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	721	Warning	Notification Only
117	-	-	-	-	-	-	-	-	-	-	-	-
117(1.3G)	FA Unit-5 ② +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	722	Warning	Notification Only
118	-	-	-	-	-	-	-	-	-	-	-	-
118(1.3G)	FA Unit-5 ③ +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	723	Warning	Notification Only
119	-	-	-	-	-	-	-	-	-	-	-	-
119(1.3G)	FA Unit-5 ④ +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	724	Warning	Notification Only
120	-	-	-	-	-	-	-	-	-	-	-	-
120(1.3G)	FA Unit-5 +12VDC	0x03	0 - 100.0	0.1	V	Read Only	+8.0V	+16.0V	Operation Value	725	Warning	Notification Only
121	-	-	-	-	-	-	-	-	-	-	-	-
121(1.3G)	FA Unit-5 Heat Sink Temperature	0x03	0 - 100.0	0.1	degC	Read Only	+22.0degC	+60.0degC	Operation Value	731	Warning	Notification Only
122	-	-	-	-	-	-	-	-	-	-	-	-
122(1.3G)	FA-5 FADA Sub CPU PCB Temperature	0x03	0 - 100.0	0.1	degC	Read Only	+4.0degC (+8.0degC)	+60.0degC (+55.0degC)	Operation Value	732	Internal③ (Warning)	DC / RF Disable (Notification Only)
123	-	-	-	-	-	-	-	-	-	-	-	-
124	-	-	-	-	-	-	-	-	-	-	-	-
124(1.3G)	DA Unit Pre Driver AMP Current	0x03	0 - 5.0	0.1	A	Read Only	0.5A	3.0A	Operation Value	1	Warning	Notification Only
125	DA Unit ① Pre Driver AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.5A	3.0A	Operation Value	1	Warning	Notification Only
125(1.3G)	DA Unit ① Driver AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.0A	11.5A	Operation Value	2	Warning	Notification Only
126	DA Unit ② Pre Driver AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.5A	3.0A	Operation Value	2	Warning	Notification Only
126(1.3G)	DA Unit ② Driver AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.0A	11.5A	Operation Value	3	Warning	Notification Only
127	DA Unit ① Driver AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.0A	11.5A	Operation Value	3	Warning	Notification Only
127(1.3G)	-	-	-	-	-	-	-	-	-	-	-	-
128	DA Unit ② Driver AMP Current	0x03	0 - 30.0	0.1	A	Read Only	0.0A	11.5A	Operation Value	4	Warning	Notification Only
128(1.3G)	-	-	-	-	-	-	-	-	-	-	-	-
129	DA Unit FWD	0x03	0 - 1250	1	W	Read Only	0W	250W (200W)	Operation Value	11	Internal③ (Warning)	DC / RF Disable (Notification Only)
129(1.3G)	DA Unit ①② FWD	0x03	0 - 1250	1	W	Read Only	0W	550W (500W)	Operation Value	11	Internal③ (Warning)	DC / RF Disable (Notification Only)

Address	Description	Function	Display Range	Multiplier	Unit	Permitted Raw Value	Lower Threshold	Upper Threshold	Command / Status	Error Code	Error Type	Error Operation
130	DA Unit REF	0x03	0 - 1250	1	W	Read Only	0W	200W (150W)	Operation Value	15	Internal③ (Warning)	DC / RF Disable (Notification Only)
130(1.3G)	DA Unit ①② REF	0x03	0 - 1250	1	W	Read Only	0W	500W (250W)	Operation Value	15	Internal③ (Warning)	DC / RF Disable (Notification Only)
131	-	-	-	-	-	-	-	-	-	-	-	-
132	-	-	-	-	-	-	-	-	-	-	-	-
133	DA Unit ① +12VDC	0x03	0 - 70.0	0.1	V	Read Only	+8.0V	+16.0V	Operation Value	22	Warning	Notification Only
133(1.3G)	DA Unit ① +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	22	Warning	Notification Only
134	-	-	-	-	-	-	-	-	-	-	-	-
134(1.3G)	DA Unit ② +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	23	Warning	Notification Only
135	DA Unit ② +45VDC	0x03	0 - 70.0	0.1	V	Read Only	+10.0V	+50.0V	Operation Value	23	Warning	Notification Only
135(1.3G)	-	-	-	-	-	-	-	-	-	-	-	-
136	-	-	-	-	-	-	-	-	-	-	-	-
137	DA Unit +12VDC	0x03	0 - 100.0	0.1	V	Read Only	+8.0V	+16.0V	Operation Value	21	Warning	Notification Only
138	DA Unit Heat Sink Temperature	0x03	0 - 100.0	0.1	degC	Read Only	+22.0degC	+60.0degC	Operation Value	31	Warning	Notification Only
139	DA FADA Sub CPU PCB Temperature	0x03	0 - 100.0	0.1	degC	Read Only	+4.0degC (+8.0degC)	+60.0degC (+55.0degC)	Operation Value	32	Internal③ (Warning)	DC / RF Disable (Notification Only)
140	-	-	-	-	-	-	-	-	-	-	-	-
141	HE Unit Air Inlet Temperature	0x03	0 - 100.0	0.1	degC	Read Only	+4.0degC	+45.0degC	Operation Value	405	Internal③	DC / RF Disable
142	HE Sub CPU PCB Temperature	0x03	0 - 100.0	0.1	degC	Read Only	+4.0degC (+8.0degC)	+60.0degC (+55.0degC)	Operation Value	406	Internal③ (Warning)	DC / RF Disable (Notification Only)
143	-	-	-	-	-	-	-	-	-	-	-	-
144	-	-	-	-	-	-	-	-	-	-	-	-
145	HE Unit Fan 1 Rotation Speed	0x03	0 - 9450	1	rpm	Read Only	5000rpm	9000rpm	Operation Value	431	Warning	Notification Only
146	HE Unit Fan 2 Rotation Speed	0x03	0 - 9450	1	rpm	Read Only	5000rpm	9000rpm	Operation Value	432	Warning	Notification Only
147	HE Unit Fan 3 Rotation Speed	0x03	0 - 9450	1	rpm	Read Only	5000rpm	9000rpm	Operation Value	433	Warning	Notification Only
148	HE Unit Fan 4 Rotation Speed	0x03	0 - 9450	1	rpm	Read Only	5000rpm	9000rpm	Operation Value	434	Warning	Notification Only
149	HE Unit Fan 5 Rotation Speed	0x03	0 - 9450	1	rpm	Read Only	5000rpm	9000rpm	Operation Value	435	Warning	Notification Only
150	HE Unit Fan 6 Rotation Speed	0x03	0 - 9450	1	rpm	Read Only	5000rpm	9000rpm	Operation Value	436	Warning	Notification Only
151	-	-	-	-	-	-	-	-	-	-	-	-
152	-	-	-	-	-	-	-	-	-	-	-	-
153	-	-	-	-	-	-	-	-	-	-	-	-
154	Outlet LCW Flow Rate	0x03	0 - 40.0	0.1	L/min	Read Only	20L/min (22L/min)	-	Operation Value	409	Internal③ (Warning)	DC / RF Disable (Notification Only)
155	Inlet LCW Temperature	0x03	15.0 - 60.0	0.1	degC	Read Only	+22.0degC	+38.0degC	Operation Value	410	Internal③	DC / RF Disable
156	Outlet LCW Temperature	0x03	15.0 - 60.0	0.1	degC	Read Only	+22.0degC	+45.0degC	Operation Value	411	Internal③	DC / RF Disable
157	Moisture Sensor Status	0x03	0 - 100.0	0.1	%	Read Only	n/a	n/a	Operation Value	n/a	n/a	n/a
158	SSA Software Version	0x03	0 - 9999	0.01	Version	Read Only	n/a	n/a	Operation Value	n/a	n/a	n/a
159	Debug-SD CPU Software Version	0x03	0 - 9999	0.01	Version	Read Only	n/a	n/a	Operation Value	n/a	n/a	n/a
160	Year for Calendar	0x03,06	00 - 99	1	Year	00 - 99	n/a	n/a	Operation Value	n/a	n/a	n/a
161	Month for Calendar	0x03,06	1 - 12	1	Month	1 - 12	n/a	n/a	Operation Value	n/a	n/a	n/a
162	Date for Calendar	0x03,06	1 - 31	1	Date	1 - 31	n/a	n/a	Operation Value	n/a	n/a	n/a
163	Hour for Calendar	0x03,06	0 - 23	1	Hour	0 - 23	n/a	n/a	Operation Value	n/a	n/a	n/a
164	Minute for Calendar	0x03,06	0 - 59	1	Minute	0 - 59	n/a	n/a	Operation Value	n/a	n/a	n/a

Address	Description	Function	Display Range	Multiplier	Unit	Permitted Raw Value	Lower Threshold	Upper Threshold	Command / Status	Error Code	Error Type	Error Operation
165 (21-27)	RF Control Unit_Warning Status (bit)	0x03	0 - 0x003F	n/a	n/a	Read Only	n/a	n/a	0: No Error bit0: Input Driver Power bit1: Forward Power bit2: Reflected Power bit3: Main CPU PCB Temp. bit4: Main CPU PCB Volt. +24VDC bit5: Fan Rotation Speed bit6 - bit15: 0	bit0: 500 bit1: 501 bit2: 530 bit3: 550 bit4: 522 bit5: 503	(Warning)	(Notification Only)
166 (33-37)	PS Unit_Warning Status (bit)	0x03	0 - 0x003A	n/a	n/a	Read Only	n/a	n/a	0: No Error bit0: 0 bit1: PS Sub CPU PCB Temp. bit2: 0 bit3: PS Sub CPU PCB Volt. +24VDC bit4: Fan 1 Rotation Speed bit5: Fan 2 Rotation Speed bit6 - bit15: 0	bit0: - bit1: 404 bit2: - bit3: 442 bit4: 437 bit5: 438	(Warning)	(Notification Only)
167 (40-54)	FA Unit-1_Warning Status (bit)	0x03	0 - 0XEBEA	n/a	n/a	Read Only	n/a	n/a	0: No Error bit0: 0 bit1: ①Final AMP Curr. bit2: 0 bit3: ②Final AMP Curr. bit4: 0 bit5: ①FWD bit6: ①REF bit7: ②FWD bit8: ②REF bit9: ①+45VDC bit10: 0 bit11: ②+45VDC bit12: 0 bit13: HeatSink Temp. bit14: DAFA Sub CPU PCB Temp. bit15: +12VDC	bit0: - bit1: 101 bit2: - bit3: 103 bit4: - bit5: 111 bit6: 115 bit7: 112 bit8: 116 bit9: 121 bit10: - bit11: 123 bit12: - bit13: 131 bit14: 132 bit15: 125	(Warning)	(Notification Only)
167(1.3G) (40-54)	FA Unit-1_Warning Status (bit)	0x03	0 - 0xFFFE	n/a	n/a	Read Only	n/a	n/a	0: No Error bit0: 0 bit1: ①Final AMP Curr. bit2: ②Final AMP Curr. bit3: ③Final AMP Curr. bit4: ④Final AMP Curr. bit5: ①②FWD bit6: ①②REF bit7: ③④FWD bit8: ③④REF bit9: ①+45VDC	bit0: - bit1: 101 bit2: 102 bit3: 103 bit4: 104 bit5: 111 bit6: 115 bit7: 112 bit8: 116 bit9: 121 bit10: 122 bit11: 123	(Warning)	(Notification Only)

Address	Description	Function	Display Range	Multiplier	Unit	Permitted Raw Value	Lower Threshold	Upper Threshold	Command / Status	Error Code	Error Type	Error Operation
									bit10: ②+45VDC bit11: ③+45VDC bit12: ④+45VDC bit13: HeatSink Temp. bit14: DAFA Sub CPU PCB Temp. bit15: +12VDC	bit12: 124 bit13: 131 bit14: 132 bit15: 125		
168 (57-71)	FA Unit-2_Warning Status (bit)	0x03	0 - 0XEBEA	n/a	n/a	Read Only	n/a	n/a	0: No Error bit0: 0 bit1: ①Final AMP Curr. bit2: 0 bit3: ②Final AMP Curr. bit4: 0 bit5: ①FWD bit6: ①REF bit7: ②FWD bit8: ②REF bit9: ①+45VDC bit10: 0 bit11: ②+45VDC bit12: 0 bit13: HeatSink Temp. bit14: DAFA Sub CPU PCB Temp. bit15: +12VDC	bit0: - bit1: 201 bit2: - bit3: 203 bit4: - bit5: 211 bit6: 215 bit7: 212 bit8: 216 bit9: 221 bit10: - bit11: 223 bit12: - bit13: 231 bit14: 232 bit15: 225	(Warning)	(Notification Only)
168(1.3G) (57-71)	FA Unit-2_Warning Status (bit)	0x03	0 - 0xFFFE	n/a	n/a	Read Only	n/a	n/a	0: No Error bit0: 0 bit1: ①Final AMP Curr. bit2: ②Final AMP Curr. bit3: ③Final AMP Curr. bit4: ④Final AMP Curr. bit5: ①②FWD bit6: ①②REF bit7: ③④FWD bit8: ③④REF bit9: ①+45VDC bit10: ②+45VDC bit11: ③+45VDC bit12: ④+45VDC bit13: HeatSink Temp. bit14: DAFA Sub CPU PCB Temp. bit15: +12VDC	bit0: - bit1: 201 bit2: 202 bit3: 203 bit4: 204 bit5: 211 bit6: 215 bit7: 212 bit8: 216 bit9: 221 bit10: 222 bit11: 223 bit12: 224 bit13: 231 bit14: 232 bit15: 225	(Warning)	(Notification Only)
169 (74-88)	FA Unit-3_Warning Status (bit)	0x03	0 - 0XEBEA	n/a	n/a	Read Only	n/a	n/a	0: No Error bit0: 0 bit1: ①Final AMP Curr. bit2: 0 bit3: ②Final AMP Curr.	bit0: - bit1: 301 bit2: - bit3: 303 bit4: -	(Warning)	(Notification Only)

Address	Description	Function	Display Range	Multiplier	Unit	Permitted Raw Value	Lower Threshold	Upper Threshold	Command / Status	Error Code	Error Type	Error Operation
									bit4: 0 bit5: ①FWD bit6: ①REF bit7: ②FWD bit8: ②REF bit9: ①+45VDC bit10: 0 bit11: ②+45VDC bit12: 0 bit13: HeatSink Temp. bit14: DAFA Sub CPU PCB Temp. bit15: +12VDC	bit5: 311 bit6: 315 bit7: 312 bit8: 316 bit9: 321 bit10: - bit11: 323 bit12: - bit13: 331 bit14: 332 bit15: 325		
169(1.3G) (74-88)	FA Unit-3_Warning Status (bit)	0x03	0 - 0xFFFE	n/a	n/a	Read Only	n/a	n/a	0: No Error bit0: 0 bit1: ①Final AMP Curr. bit2: ②Final AMP Curr. bit3: ③Final AMP Curr. bit4: ④Final AMP Curr. bit5: ①②FWD bit6: ①②REF bit7: ③④FWD bit8: ③④REF bit9: ①+45VDC bit10: ②+45VDC bit11: ③+45VDC bit12: ④+45VDC bit13: HeatSink Temp. bit14: DAFA Sub CPU PCB Temp. bit15: +12VDC	bit0: - bit1: 301 bit2: 302 bit3: 303 bit4: 304 bit5: 311 bit6: 315 bit7: 312 bit8: 316 bit9: 321 bit10: 322 bit11: 323 bit12: 324 bit13: 331 bit14: 332 bit15: 325	(Warning)	(Notification Only)
170 (91-105)	FA Unit-4_Warning Status (bit)	0x03	0 - 0XEBEA	n/a	n/a	Read Only	n/a	n/a	0: No Error bit0: 0 bit1: ①Final AMP Curr. bit2: 0 bit3: ②Final AMP Curr. bit4: 0 bit5: ①FWD bit6: ①REF bit7: ②FWD bit8: ②REF bit9: ①+45VDC bit10: 0 bit11: ②+45VDC bit12: 0 bit13: HeatSink Temp. bit14: DAFA Sub CPU PCB Temp.	bit0: - bit1: 601 bit2: - bit3: 603 bit4: - bit5: 611 bit6: 615 bit7: 612 bit8: 616 bit9: 621 bit10: - bit11: 623 bit12: - bit13: 631 bit14: 632 bit15: 625	(Warning)	(Notification Only)

Address	Description	Function	Display Range	Multiplier	Unit	Permitted Raw Value	Lower Threshold	Upper Threshold	Command / Status	Error Code	Error Type	Error Operation
									bit15: +12VDC			
170(1.3G) (91-105)	FA Unit-4_Warning Status (bit)	0x03	0 - 0xFFFE	n/a	n/a	Read Only	n/a	n/a	0: No Error bit0: 0 bit1: ①Final AMP Curr. bit2: ②Final AMP Curr. bit3: ③Final AMP Curr. bit4: ④Final AMP Curr. bit5: ①②FWD bit6: ①②REF bit7: ③④FWD bit8: ③④REF bit9: ①+45VDC bit10: ②+45VDC bit11: ③+45VDC bit12: ④+45VDC bit13: HeatSink Temp. bit14: DAFA Sub CPU PCB Temp. bit15: +12VDC	bit0: - bit1: 601 bit2: 602 bit3: 603 bit4: 604 bit5: 611 bit6: 615 bit7: 612 bit8: 616 bit9: 621 bit10: 622 bit11: 623 bit12: 624 bit13: 631 bit14: 632 bit15: 625	(Warning)	(Notification Only)
171	-	-	-	-	-	-	-	-	-	-	-	-
171(1.3G) (108-122)	FA Unit-5_Warning Status (bit)	0x03	0 - 0xFFFE	n/a	n/a	Read Only	n/a	n/a	0: No Error bit0: 0 bit1: ①Final AMP Curr. bit2: ②Final AMP Curr. bit3: ③Final AMP Curr. bit4: ④Final AMP Curr. bit5: ①②FWD bit6: ①②REF bit7: ③④FWD bit8: ③④REF bit9: ①+45VDC bit10: ②+45VDC bit11: ③+45VDC bit12: ④+45VDC bit13: HeatSink Temp. bit14: DAFA Sub CPU PCB Temp. bit15: +12VDC	bit0: - bit1: 701 bit2: 702 bit3: 703 bit4: 704 bit5: 711 bit6: 715 bit7: 712 bit8: 716 bit9: 721 bit10: 722 bit11: 723 bit12: 724 bit13: 731 bit14: 732 bit15: 725	(Warning)	(Notification Only)
172 (124-139)	DA Unit_Warning Status (bit)	0x03	0 - 0xEA7E	n/a	n/a	Read Only	n/a	n/a	0: No Error bit0: 0 bit1: ①Pre Driver AMP Curr. bit2: ②Pre Driver AMP Curr. bit3: ①Driver AMP Curr. bit4: ②Driver AMP Curr. bit5: DA FWD bit6: DA REF bit7: 0 bit8: 0	bit0: - bit1: 1 bit2: 2 bit3: 3 bit4: 4 bit5: 11 bit6: 15 bit7: - bit8: - bit9: 22	(Warning)	(Notification Only)

Address	Description	Function	Display Range	Multiplier	Unit	Permitted Raw Value	Lower Threshold	Upper Threshold	Command / Status	Error Code	Error Type	Error Operation
									bit9: ①+12VDC bit10: 0 bit11: ②+45VDC bit12: 0 bit13: HeatSink Temp. bit14: DAFA Sub CPU PCB Temp. bit15: +12VDC	bit10: - bit11: 23- bit12: - bit13: 31 bit14: 32 bit15: 21		
172(1.3G) (124-139)	DA Unit_Warning Status (bit)	0x03	0 - 0xE667	n/a	n/a	Read Only	n/a	n/a	0: No Error bit0: Pre Driver AMP Curr. bit1: ①Driver AMP Curr. bit2: ②Driver AMP Curr. bit3: 0 bit4: 0 bit5: ①②FWD bit6: ①②REF bit7: 0 bit8: 0 bit9: ①+45VDC bit10: ②+45VDC bit11: 0 bit12: 0 bit13: HeatSink Temp. bit14: DAFA Sub CPU PCB Temp. bit15: +12VDC	bit0: 1 bit1: 2 bit2: 3 bit3: - bit4: - bit5: 11 bit6: 15 bit7: - bit8: - bit9: 22 bit10: 23 bit11: - bit12: - bit13: 31 bit14: 32 bit15: 21	(Warning)	(Notification Only)
173 (142-154)	HE Unit, Water INFO_Warning Status (bit)	0x03	0 - 0x13F2	n/a	n/a	Read Only	n/a	n/a	0: No Error bit0: 0 bit1: HE Sub CPU Temp. bit2: 0 bit3: 0 bit4: Fan 1 Rotation Speed bit5: Fan 2 Rotation Speed bit6: Fan 3 Rotation Speed bit7: Fan 4 Rotation Speed bit8: Fan 5 Rotation Speed bit9: Fan 6 Rotation Speed bit10: 0 bit11: 0 bit12: Outlet Flow Rate bit13 - bit15: 0	bit0: - bit1: 406 bit2: - bit3: - bit4: 431 bit5: 432 bit6: 433 bit7: 434 bit8: 435 bit9: 436 bit10: - bit11: - bit12: 409	(Warning)	(Notification Only)
174	Input Drive Power Upper Limit (Warning Limit)	0x03,06	0 - 2000	1	mV	Read Write	n/a	1335mV	(0 - 2000)	(500)	n/a	n/a
175	Input Drive Power Upper Limit (Critical Warning Limit)	0x03,06	0 - 2000	1	mV	Read Write	n/a	1550mV	(0 - 2000)	(500)	n/a	n/a
176	Forward Power Upper Limit (Warning Limit)	0x03,06	0 - 10000	1	W	Read Write	n/a	6300W	(0 - 6600)	(501)	n/a	n/a
176(1.3G)	Forward Power Upper Limit (Warning Limit)	0x03,06	0 - 10000	1	W	Read Write	n/a	7350W	(0 - 7700)	(501)	n/a	n/a

Address	Description	Function	Display Range	Multiplier	Unit	Permitted Raw Value	Lower Threshold	Upper Threshold	Command / Status	Error Code	Error Type	Error Operation
177	Forward Power Upper Limit (Critical Warning Limit)	0x03,06	0 - 10000	1	W	Read Write	n/a	6600W	(0 - 6600)	(501)	n/a	n/a
177(1.3G)	Forward Power Upper Limit (Critical Warning Limit)	0x03,06	0 - 10000	1	W	Read Write	n/a	7700W	(0 - 7700)	(501)	n/a	n/a
178	Reflected Power Upper Limit (Warning Limit)	0x03,06	0 - 10000	1	W	Read Write	n/a	200W	(0 - 300)	(530)	n/a	n/a
178(1.3G)	Reflected Power Upper Limit (Warning Limit)	0x03,06	0 - 10000	1	W	Read Write	n/a	350W	(0 - 700)	(530)	n/a	n/a
179	Reflected Power Upper Limit (Fault Limit)	0x03,06	0 - 10000	1	W	Read Write	n/a	300W	(0 - 300)	(530)	n/a	n/a
179(1.3G)	Reflected Power Upper Limit (Fault Limit)	0x03,06	0 - 10000	1	W	Read Write	n/a	700W	(0 - 700)	(530)	n/a	n/a
180	Main CPU PCB Temperature Upper Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	n/a	+55.0degC	(4.0 - 60.0)	(550)	n/a	n/a
181	Main CPU PCB Temperature Upper Limit (Fault Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	n/a	+60.0degC	(4.0 - 60.0)	(550)	n/a	n/a
182	Main CPU PCB Temperature Lower Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	+8.0degC	n/a	(4.0 - 60.0)	(550)	n/a	n/a
183	Main CPU PCB Temperature Lower Limit (Fault Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	+4.0degC	n/a	(4.0 - 60.0)	(550)	n/a	n/a
184	Main CPU PCB Input Voltage +12VDC Upper Limit (Fault Limit)	0x03,06	0 - 100.0	0.1	V	Read Write	n/a	+16.0V	(8.0 - 16.0)	(521)	n/a	n/a
185	Main CPU PCB Input Voltage +12VDC Lower Limit (Fault Limit)	0x03,06	0 - 100.0	0.1	V	Read Write	+8.0V	n/a	(8.0 - 16.0)	(521)	n/a	n/a
186	Main CPU PCB Input Voltage +24VDC Upper Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	V	Read Write	n/a	+28.0V	(20.0 - 28.0)	(522)	n/a	n/a
187	Main CPU PCB Input Voltage +24VDC Lower Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	V	Read Write	+20.0V	n/a	(20.0 - 28.0)	(522)	n/a	n/a
188	RF Control Unit Fan Rotation Speed Upper Limit (Warning Limit)	0x03,06	0 - 9450	1	rpm	Read Write	n/a	9000rpm	(5600 - 9000)	(503)	n/a	n/a
189	RF Control Unit Fan Rotation Speed Lower Limit (Warning Limit)	0x03,06	0 - 9450	1	rpm	Read Write	5000rpm	n/a	(5600 - 9000)	(503)	n/a	n/a
190	-	-	-	-	-	-	-	-	-	-	-	-
191	-	-	-	-	-	-	-	-	-	-	-	-
192	PS Status Upper Limit (Fault Limit)	0x03,06	0 - 4	1	n/a	Read Write	n/a	2	(1 - 2)	(420)	n/a	n/a
192(1.3G)	PS Status Upper Limit (Fault Limit)	0x03,06	0 - 6	1	n/a	Read Write	n/a	3	(1 - 3)	(420)	n/a	n/a

Address	Description	Function	Display Range	Multiplier	Unit	Permitted Raw Value	Lower Threshold	Upper Threshold	Command / Status	Error Code	Error Type	Error Operation
193	-	-	-	-	-	-	-	-	-	-	-	-
194	-	-	-	-	-	-	-	-	-	-	-	-
195	PS Sub CPU PCB Temperature Upper Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	n/a	+55.0degC	(4.0 - 60.0)	(404)	n/a	n/a
196	PS Sub CPU PCB Temperature Upper Limit (Fault Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	n/a	+60.0degC	(4.0 - 60.0)	(404)	n/a	n/a
197	PS Sub CPU PCB Temperature Lower Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	+8.0degC	n/a	(4.0 - 60.0)	(404)	n/a	n/a
198	PS Sub CPU PCB Temperature Lower Limit (Fault Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	+4.0degC	n/a	(4.0 - 60.0)	(404)	n/a	n/a
199	-	-	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-	-	-
201	PS Sub CPU PCB Input Voltage +24VDC Upper Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	V	Read Write	n/a	+28.0V	(20.0 - 28.0)	(442)	n/a	n/a
202	PS Sub CPU PCB Input Voltage +24VDC Lower Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	V	Read Write	+20.0V	n/a	(20.0 - 28.0)	(442)	n/a	n/a
203	PS Unit Fan 1, 2 Rotation Speed Upper Limit (Warning Limit)	0x03,06	0 - 9450	1	rpm	Read Write	n/a	9000rpm	(5600 - 9000)	(437, 438)	n/a	n/a
204	PS Unit Fan 1, 2 Rotation Speed Lower Limit (Warning Limit)	0x03,06	0 - 9450	1	rpm	Read Write	5000rpm	n/a	(5600 - 9000)	(437, 438)	n/a	n/a
205	-	-	-	-	-	-	-	-	-	-	-	-
206	-	-	-	-	-	-	-	-	-	-	-	-
207	FA Unit-1, 2, 3, 4_①, ② Final AMP Current Upper Limit (Warning Limit)	0x03,06	0 - 60.0	0.1	A	Read Write	n/a	40.0A	(0.0 - 40.0)	(101, 103) (201, 203) (301, 303) (601, 603)	n/a	n/a
207(1.3G)	FA Unit-1, 2, 3, 4, 5_①, ②, ③, ④ Final AMP Current Upper Limit (Warning Limit)	0x03,06	0 - 30.0	0.1	A	Read Write	n/a	20.0A	(0.0 - 20.0)	(101 - 104) (201 - 204) (301 - 304) (601 - 604) (701 - 704)	n/a	n/a
208	FA Unit-1, 2, 3, 4_①, ② Final AMP Current Lower Limit (Warning Limit)	0x03,06	0 - 60.0	0.1	A	Read Write	0.0A	n/a	(0.0 - 40.0)	(101, 103) (201, 203) (301, 303) (601, 603)	n/a	n/a
208(1.3G)	FA Unit-1, 2, 3, 4, 5_①, ②, ③, ④ Final AMP Current Lower Limit (Warning Limit)	0x03,06	0 - 30.0	0.1	A	Read Write	0.0A	n/a	(0.0 - 20.0)	(101 - 104) (201 - 204) (301 - 304) (601 - 604) (701 - 704)	n/a	n/a

Address	Description	Function	Display Range	Multiplier	Unit	Permitted Raw Value	Lower Threshold	Upper Threshold	Command / Status	Error Code	Error Type	Error Operation
209	FA Unit-1, 2, 3, 4_①, ② FWD Upper Limit (Warning Limit)	0x03,06	0 - 2000	1	W	Read Write	n/a	1100W	(0 - 1200)	(111, 112) (211, 212) (311, 312) (611, 612)	n/a	n/a
209(1.3G)	FA Unit-1, 2, 3, 4, 5_①, ②, ③, ④ FWD Upper Limit (Warning Limit)	0x03,06	0 - 2000	1	W	Read Write	n/a	1000W	(0 - 1100)	(111, 112) (211, 212) (311, 312) (611, 612) (711, 712)	n/a	n/a
210	FA Unit-1, 2, 3, 4_①, ② FWD Upper Limit (Fault Limit)	0x03,06	0 - 2000	1	W	Read Write	n/a	1200W	(0 - 1200)	(111, 112) (211, 212) (311, 312) (611, 612)	n/a	n/a
210(1.3G)	FA Unit-1, 2, 3, 4, 5_①, ②, ③, ④ FWD Upper Limit (Fault Limit)	0x03,06	0 - 2000	1	W	Read Write	n/a	1100W	(0 - 1100)	(111, 112) (211, 212) (311, 312) (611, 612) (711, 712)	n/a	n/a
211	FA Unit-1, 2, 3, 4_①, ② REF Upper Limit (Warning Limit)	0x03,06	0 - 2000	1	W	Read Write	n/a	500W	(0 - 1000)	(115, 116) (215, 216) (315, 316) (615, 616)	n/a	n/a
211(1.3G)	FA Unit-1, 2, 3, 4, 5_①, ②, ③, ④ REF Upper Limit (Warning Limit)	0x03,06	0 - 2000	1	W	Read Write	n/a	500W	(0 - 1000)	(115, 116) (215, 216) (315, 316) (615, 616) (715, 716)	n/a	n/a
212	FA Unit-1, 2, 3, 4_①, ② REF Upper Limit (Fault Limit)	0x03,06	0 - 2000	1	W	Read Write	n/a	1000W	(0 - 1000)	(115, 116) (215, 216) (315, 316) (615, 616)	n/a	n/a
212(1.3G)	FA Unit-1, 2, 3, 4, 5_①, ②, ③, ④ REF Upper Limit (Fault Limit)	0x03,06	0 - 2000	1	W	Read Write	n/a	1000W	(0 - 1000)	(115, 116) (215, 216) (315, 316) (615, 616) (715, 716)	n/a	n/a
213	FA Unit-1, 2, 3, 4_①, ② +45VDC Upper Limit (Warning Limit)	0x03,06	0 - 70.0	0.1	V	Read Write	n/a	+50.0V	(10.0 - 50.0)	(121, 123) (221, 223) (321, 323) (621, 623)	n/a	n/a
213(1.3G)	FA Unit-1, 2, 3, 4, 5_①, ②, ③, ④ +45VDC Upper Limit (Warning Limit)	0x03,06	0 - 70.0	0.1	V	Read Write	n/a	+50.0V	(10.0 - 50.0)	(121 - 124) (221 - 224) (321 - 324) (621 - 624) (721 - 724)	n/a	n/a
214	FA Unit-1, 2, 3, 4_①, ② +45VDC Lower Limit (Warning Limit)	0x03,06	0 - 70.0	0.1	V	Read Write	+10.0V	n/a	(10.0 - 50.0)	(121, 123) (221, 223) (321, 323) (621, 623)	n/a	n/a

Address	Description	Function	Display Range	Multiplier	Unit	Permitted Raw Value	Lower Threshold	Upper Threshold	Command / Status	Error Code	Error Type	Error Operation
214(1.3G)	FA Unit-1, 2, 3, 4, 5_①, ②, ③, ④ +45VDC Lower Limit (Warning Limit)	0x03,06	0 - 70.0	0.1	V	Read Write	+10.0V	n/a	(10.0 - 50.0)	(121 - 124) (221 - 224) (321 - 324) (621 - 624) (721 - 724)	n/a	n/a
215	FA Unit-1, 2, 3, 4 +12VDC Upper Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	V	Read Write	n/a	+16.0V	(8.0 - 16.0)	(125) (225) (325) (625)	n/a	n/a
215(1.3G)	FA Unit-1, 2, 3, 4, 5 +12VDC Upper Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	V	Read Write	n/a	+16.0V	(8.0 - 16.0)	(125) (225) (325) (625) (725)	n/a	n/a
216	FA Unit-1, 2, 3, 4 +12VDC Lower Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	V	Read Write	+8.0V	n/a	(8.0 - 16.0)	(125) (225) (325) (625)	n/a	n/a
216(1.3G)	FA Unit-1, 2, 3, 4, 5 +12VDC Lower Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	V	Read Write	+8.0V	n/a	(8.0 - 16.0)	(125) (225) (325) (625) (725)	n/a	n/a
217	FA Unit-1, 2, 3, 4 Heat Sink Temperature Upper Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	n/a	+60.0degC	(22.0 - 60.0)	(131) (231) (331) (631)	n/a	n/a
217(1.3G)	FA Unit-1, 2, 3, 4, 5 Heat Sink Temperature Upper Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	n/a	+60.0degC	(22.0 - 60.0)	(131) (231) (331) (631) (731)	n/a	n/a
218	FA Unit-1, 2, 3, 4 Heat Sink Temperature Lower Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	+22.0degC	n/a	(22.0 - 60.0)	(131) (231) (331) (631)	n/a	n/a
218(1.3G)	FA Unit-1, 2, 3, 4, 5 Heat Sink Temperature Lower Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	+22.0degC	n/a	(22.0 - 60.0)	(131) (231) (331) (631) (731)	n/a	n/a
219	FA-1, 2, 3, 4 DAFA Sub CPU PCB Temperature Upper Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	n/a	+55.0degC	(4.0 - 60.0)	(132) (232) (332) (632)	n/a	n/a
219(1.3G)	FA-1, 2, 3, 4, 5 DAFA Sub CPU PCB Temperature Upper Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	n/a	+55.0degC	(4.0 - 60.0)	(132) (232) (332) (632)	n/a	n/a

Address	Description	Function	Display Range	Multiplier	Unit	Permitted Raw Value	Lower Threshold	Upper Threshold	Command / Status	Error Code	Error Type	Error Operation
										(732)		
220	FA-1, 2, 3, 4 DAFA Sub CPU PCB Temperature Upper Limit (Fault Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	n/a	+60.0degC	(4.0 - 60.0)	(132) (232) (332) (632)	n/a	n/a
220(1.3G)	FA-1, 2, 3, 4, 5 DAFA Sub CPU PCB Temperature Upper Limit (Fault Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	n/a	+60.0degC	(4.0 - 60.0)	(132) (232) (332) (632) (732)	n/a	n/a
221	FA-1, 2, 3, 4 DAFA Sub CPU PCB Temperature Lower Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	+8.0degC	n/a	(4.0 - 60.0)	(132) (232) (332) (632)	n/a	n/a
221(1.3G)	FA-1, 2, 3, 4, 5 DAFA Sub CPU PCB Temperature Lower Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	+8.0degC	n/a	(4.0 - 60.0)	(132) (232) (332) (632) (732)	n/a	n/a
222	FA-1, 2, 3, 4 DAFA Sub CPU PCB Temperature Lower Limit (Fault Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	+4.0degC	n/a	(4.0 - 60.0)	(132) (232) (332) (632)	n/a	n/a
222(1.3G)	FA-1, 2, 3, 4, 5 DAFA Sub CPU PCB Temperature Lower Limit (Fault Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	+4.0degC	n/a	(4.0 - 60.0)	(132) (232) (332) (632) (732)	n/a	n/a
223	-	-	-	-	-	-	-	-	-	-	-	-
224	-	-	-	-	-	-	-	-	-	-	-	-
225	DA Unit_①, ② Pre Driver AMP Current Upper Limit (Warning Limit)	0x03,06	0 - 5.0	0.1	A	Read Write	n/a	3.0A	(0.5 - 3.0)	(1, 2)	n/a	n/a
225(1.3G)	DA Unit Pre Driver AMP Current Upper Limit (Warning Limit)	0x03,06	0 - 5.0	0.1	A	Read Write	n/a	3.0A	(0.5 - 3.0)	(1)	n/a	n/a
226	DA Unit_①, ② Pre Driver AMP Current Lower Limit (Warning Limit)	0x03,06	0 - 5.0	0.1	A	Read Write	0.5A	n/a	(0.5 - 3.0)	(1, 2)	n/a	n/a
226(1.3G)	DA Unit Pre Driver AMP Current Lower Limit (Warning Limit)	0x03,06	0 - 5.0	0.1	A	Read Write	0.5A	n/a	(0.5 - 3.0)	(1)	n/a	n/a
227	DA Unit_①, ② Driver AMP Current Upper Limit (Warning Limit)	0x03,06	0 - 30.0	0.1	A	Read Write	n/a	11.5A	(0.0 - 11.5)	(3, 4)	n/a	n/a
227(1.3G)	DA Unit_①, ② Driver AMP Current Upper Limit (Warning Limit)	0x03,06	0 - 30.0	0.1	A	Read Write	n/a	11.5A	(0.0 - 11.5)	(2, 3)	n/a	n/a

Address	Description	Function	Display Range	Multiplier	Unit	Permitted Raw Value	Lower Threshold	Upper Threshold	Command / Status	Error Code	Error Type	Error Operation
228	DA Unit_①, ② Driver AMP Current Lower Limit (Warning Limit)	0x03,06	0 - 30.0	0.1	A	Read Write	0.0A	n/a	(0.0 - 11.5)	(3, 4)	n/a	n/a
228(1.3G)	DA Unit_①, ② Driver AMP Current Lower Limit (Warning Limit)	0x03,06	0 - 30.0	0.1	A	Read Write	0.0A	n/a	(0.0 - 11.5)	(2, 3)	n/a	n/a
229	DA Unit_FWD Upper Limit (Warning Limit)	0x03,06	0 - 1250	1	W	Read Write	n/a	200W	(0 - 250)	(11)	n/a	n/a
229(1.3G)	DA Unit_①, ② FWD Upper Limit (Warning Limit)	0x03,06	0 - 1250	1	W	Read Write	n/a	500W	(0 - 550)	(11)	n/a	n/a
230	DA Unit_FWD Upper Limit (Fault Limit)	0x03,06	0 - 1250	1	W	Read Write	n/a	250W	(0 - 250)	(11)	n/a	n/a
230(1.3G)	DA Unit_①, ② FWD Upper Limit (Fault Limit)	0x03,06	0 - 1250	1	W	Read Write	n/a	550W	(0 - 550)	(11)	n/a	n/a
231	DA Unit_REF Upper Limit (Warning Limit)	0x03,06	0 - 1250	1	W	Read Write	n/a	150W	(0 - 200)	(15)	n/a	n/a
231(1.3G)	DA Unit_①, ② REF Upper Limit (Warning Limit)	0x03,06	0 - 1250	1	W	Read Write	n/a	250W	(0 - 500)	(15)	n/a	n/a
232	DA Unit_REF Upper Limit (Fault Limit)	0x03,06	0 - 1250	1	W	Read Write	n/a	200W	(0 - 200)	(15)	n/a	n/a
232(1.3G)	DA Unit_①, ② REF Upper Limit (Fault Limit)	0x03,06	0 - 1250	1	W	Read Write	n/a	500W	(0 - 500)	(15)	n/a	n/a
233	DA Unit_+45VDC Upper Limit (Warning Limit)	0x03,06	0 - 70.0	0.1	V	Read Write	n/a	+50.0V	(10.0 - 50.0)	(23)	n/a	n/a
233(1.3G)	DA Unit_①, ② +45VDC Upper Limit (Warning Limit)	0x03,06	0 - 70.0	0.1	V	Read Write	n/a	+50.0V	(10.0 - 50.0)	(22, 23)	n/a	n/a
234	DA Unit_+45VDC Lower Limit (Warning Limit)	0x03,06	0 - 70.0	0.1	V	Read Write	+10.0V	n/a	(10.0 - 50.0)	(23)	n/a	n/a
234(1.3G)	DA Unit_①, ② +45VDC Lower Limit (Warning Limit)	0x03,06	0 - 70.0	0.1	V	Read Write	+10.0V	n/a	(10.0 - 50.0)	(22, 23)	n/a	n/a
235	DA Unit +12VDC Upper Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	V	Read Write	n/a	+16.0V	(8.0 - 16.0)	(21, 22)	n/a	n/a
235(1.3G)	DA Unit +12VDC Upper Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	V	Read Write	n/a	+16.0V	(8.0 - 16.0)	(21)	n/a	n/a
236	DA Unit +12VDC Lower Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	V	Read Write	+8.0V	n/a	(8.0 - 16.0)	(21, 22)	n/a	n/a
236(1.3G)	DA Unit +12VDC Lower Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	V	Read Write	+8.0V	n/a	(8.0 - 16.0)	(21)	n/a	n/a
237	DA Unit Heat Sink Temperature Upper Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	n/a	+60.0degC	(22.0 - 60.0)	(31)	n/a	n/a
238	DA Unit Heat Sink Temperature Lower Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	+22.0degC	n/a	(22.0 - 60.0)	(31)	n/a	n/a
239	DA DAFA Sub CPU PCB Temperature Upper Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	n/a	+55.0degC	(4.0 - 60.0)	(32)	n/a	n/a

Address	Description	Function	Display Range	Multiplier	Unit	Permitted Raw Value	Lower Threshold	Upper Threshold	Command / Status	Error Code	Error Type	Error Operation
240	DA DAFA Sub CPU PCB Temperature Upper Limit (Fault Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	n/a	+60.0degC	(4.0 - 60.0)	(32)	n/a	n/a
241	DA DAFA Sub CPU PCB Temperature Lower Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	+8.0degC	n/a	(4.0 - 60.0)	(32)	n/a	n/a
242	DA DAFA Sub CPU PCB Temperature Lower Limit (Fault Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	+4.0degC	n/a	(4.0 - 60.0)	(32)	n/a	n/a
243	-	-	-	-	-	-	-	-	-	-	-	-
244	-	-	-	-	-	-	-	-	-	-	-	-
245	HE Unit Air Inlet Temperature Upper Limit (Fault Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	n/a	+45.0degC	(4.0 - 45.0)	(405)	n/a	n/a
246	HE Unit Air Inlet Temperature Lower Limit (Fault Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	+4.0degC	n/a	(4.0 - 45.0)	(405)	n/a	n/a
247	HE Sub CPU PCB Temperature Upper Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	n/a	+55.0degC	(1.0 - 60.0)	(406)	n/a	n/a
248	HE Sub CPU PCB Temperature Upper Limit (Fault Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	n/a	+60.0degC	(1.0 - 60.0)	(406)	n/a	n/a
249	HE Sub CPU PCB Temperature Lower Limit (Warning Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	+8.0degC	n/a	(4.0 - 60.0)	(406)	n/a	n/a
250	HE Sub CPU PCB Temperature Lower Limit (Fault Limit)	0x03,06	0 - 100.0	0.1	degC	Read Write	+4.0degC	n/a	(4.0 - 60.0)	(406)	n/a	n/a
251	-	-	-	-	-	-	-	-	-	-	-	-
252	-	-	-	-	-	-	-	-	-	-	-	-
253	-	-	-	-	-	-	-	-	-	-	-	-
254	-	-	-	-	-	-	-	-	-	-	-	-
255	HE Unit Fan 1, 2, 3 Rotation Speed Upper Limit (Warning Limit)	0x03,06	0 - 9450	1	rpm	Read Write	n/a	9000rpm	(5600 - 9000)	(431 - 433)	n/a	n/a
256	HE Unit Fan 1, 2, 3 Rotation Speed Lower Limit (Warning Limit)	0x03,06	0 - 9450	1	rpm	Read Write	5000rpm	n/a	(5600 - 9000)	(431 - 433)	n/a	n/a
257	HE Unit Fan 4, 5, 6 Rotation Speed Upper Limit (Warning Limit)	0x03,06	0 - 9450	1	rpm	Read Write	n/a	9000rpm	(5600 - 9000)	(434 - 436)	n/a	n/a
258	HE Unit Fan 4, 5, 6 Rotation Speed Lower Limit (Warning Limit)	0x03,06	0 - 9450	1	rpm	Read Write	5000rpm	n/a	(5600 - 9000)	(434 - 436)	n/a	n/a
259	-	-	-	-	-	-	-	-	-	-	-	-
260	-	-	-	-	-	-	-	-	-	-	-	-
261	-	-	-	-	-	-	-	-	-	-	-	-
262	-	-	-	-	-	-	-	-	-	-	-	-
263	Outlet LCW Flow Rate Lower Limit (Warning Limit)	0x03,06	0 - 40.0	0.1	L/min	Read Write	22.0L/min	n/a	(20.0 - 40.0)	(409)	n/a	n/a
264	Outlet LCW Flow Rate Lower Limit (Fault Limit)	0x03,06	0 - 40.0	0.1	L/min	Read Write	20.0L/min	n/a	(20.0 - 40.0)	(409)	n/a	n/a

Address	Description	Function	Display Range	Multiplier	Unit	Permitted Raw Value	Lower Threshold	Upper Threshold	Command / Status	Error Code	Error Type	Error Operation
265	Inlet LCW Temperature Upper Limit (Fault Limit)	0x03,06	15.0 - 60.0	0.1	degC	Read Write	n/a	+38.0degC	(22.0 - 38.0)	(410)	n/a	n/a
266	Inlet LCW Temperature Lower Limit (Fault Limit)	0x03,06	15.0 - 60.0	0.1	degC	Read Write	+22.0degC	n/a	(22.0 - 38.0)	(410)	n/a	n/a
267	Outlet LCW Temperature Upper Limit (Fault Limit)	0x03,06	15.0 - 60.0	0.1	degC	Read Write	n/a	+45.0degC	(22.0 - 45.0)	(411)	n/a	n/a
268	Outlet LCW Temperature Lower Limit (Fault Limit)	0x03,06	15.0 - 60.0	0.1	degC	Read Write	+22.0degC	n/a	(22.0 - 45.0)	(411)	n/a	n/a

Description about Error Type on the Register Table

- 1) Internal Fault① (RED colored on the Register Table)
 - Detect ⇒ Hard Wire ⇒ Interlock Circuit Operation (Main CPU PCB)Interlock function by hard wire.
- 2) Internal Fault② (ORANGE colored on the Register Table)
 - Detect ⇒ CPU ⇒ Hard Wire ⇒ Interlock Circuit Operation (Main CPU PCB)Interlock function by hard wire which occurs after detection of Internal Fault on the Main CPU and Sub CPUs.
- 3) Internal Fault③ (YELLOW colored on the Register Table)
 - Detect ⇒ Main CPU Operation (Main CPU PCB)
 - Detect ⇒ Sub CPU ⇒ RS485 ⇒ Main CPU Operation (Main CPU PCB)Interlock function by communication which occurs after detection of Internal Fault from Main CPU and Sub CPUs via RS 485 communication on the Main CPU.
- 4) Warning (GREEN colored on the Register Table)
 - Detect ⇒ Main CPU Operation (Main CPU PCB)
 - Detect ⇒ Sub CPU ⇒ RS485 ⇒ Main CPU Operation (Main CPU PCB)Notification only.
- 5) Critical Warning (GREEN colored on the Register Table)
 - Detect ⇒ Main CPU Operation (Main CPU PCB)RF will be disabled and Internal Fault LED starts flashing.