9.3 GPIO

In rack configuration you can connect objects of MambaNet nodes to AXUM engine functions. Here you can also configure the GPIO objects of your I/O cards (MambaNet nodes). By following the links, you can reconfigure the functions that connect to the objects. The sensor and actuator data types determine which function assigns to the object.
For a complete list of the functions, you can look up chapter 20 Appendix C – Engine functions.

9.3.1 GPI

Axum » Rack configuration » Address 0000001B

Nr.	Description	Type	Default	Function	Label	Default label
			Object configuration for Rack-MICAD 1..4 (slot 8)			
1027	GPI-1	sensor		DJ: Module cough on/off	None	Cough
1028	GPI-2	sensor		not configured	None	
1029	GPI-3	sensor		Guest 1: Module cough on/off	None	Cough
1030	GPI-4	sensor		not configured	None	
1031	GPI-5	sensor		Guest 2: Module cough on/off	None	Cough
1032	GPI-6	sensor		not configured	None	
1033	GPI-7	sensor		Guest 3: Module cough on/off	None	Cough
1034	GPI-8	sensor		not configured	None	

Figure 41: GPI configuration

- **Function**
  Here you may select which engine function is connected to the object. To use the GPI functions you must select the hardware jumper setting TLL mode on the board (see chapter 11.3.1 GPIO TTL/Relay selection). The default jumper setting is GPO-Relay for all cards except for the MIC input card. The default jumper setting for the MIC input card is GPIO-TTL for GPIO 1, 3, 5 and 7 and GPO-Relay for GPIO 2, 4, 6 and 8.

9.3.2 GPI Active-state

Axum » Rack configuration » Address 0000001B

Nr.	Description	Type	Default	Function	Label	Default label
			Object configuration for Rack-MICAD 1..4 (slot 8)			
1035	GPI-1-Active-state	actuator	1	not configured	None	
1036	GPI-2-Active-state	actuator	1	not configured	None	
1037	GPI-3-Active-state	actuator	1	not configured	None	
1038	GPI-4-Active-state	actuator	1	not configured	None	
1039	GPI-5-Active-state	actuator	1	not configured	None	
1040	GPI-6-Active-state	actuator	1	not configured	None	
1041	GPI-7-Active-state	actuator	1	not configured	None	
1042	GPI-8-Active-state	actuator	1	not configured	None	

Figure 42: GPI Active-state configuration

- **Default**
  The gray value '1' is the startup default, this may be changed by assigning a custom value (0 or 1). A value of '1' makes sure that if the GPI is +5V the function is made active. The value '0' makes sure that if the GPI is 0V the function is made active.
  When you submit an empty box the object returns to the startup default value.

9.3.3   GPO

Figure 43: GPO configuration

- **Default**
  The gray value is the startup default, this may be changed by assigning a custom value(0 or
  1). A value of '1' makes sure the GPO is active at startup. A value of '0' makes sure the GPO
  is inactive at startup. The GPO output state is also depending on the GPO active-state setting.
  When you submit an empty box the object returns to the startup default value.

- **Function**
  Here you may select which engine function is connected to the object. To use the GPO
  functions you should maybe change the hardware jumper setting on the board (see chapter
  11.3.1 GPIO TTL/Relay selection) to enable the given engine function The default jumper
  setting is GPO-Relay for all cards except for the MIC input card. The default jumper setting for
  the MIC input card is GPIO-TTL for GPIO 1, 3, 5 and 7 and GPO-Relay for GPIO 2, 4, 6 and
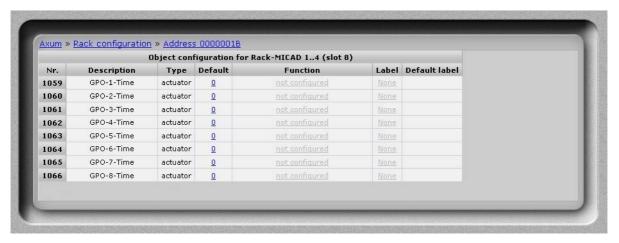 8.

9.3.4   GPO Time

Figure 44: GPO Time configuration

- **Default**
  The gray value is the startup default, this may be changed by assigning a custom value.
  The value must be between 0 – 250, where 0 is a continuous signal and 1 - 250 is the pulse
  width in milliseconds.
  When you submit an empty box the object returns to the startup default value.

9.3.5   GPO Active-state

Nr.	Description	Type	Default	Function	Label	Default label
			Object configuration for Rack-MICAD 1..4 (slot 8)			
1067	GPO-1-Active-state	actuator	1	not configured	None	
1068	GPO-2-Active-state	actuator	1	not configured	None	
1069	GPO-3-Active-state	actuator	1	not configured	None	
1070	GPO-4-Active-state	actuator	1	not configured	None	
1071	GPO-5-Active-state	actuator	1	not configured	None	
1072	GPO-6-Active-state	actuator	1	not configured	None	
1073	GPO-7-Active-state	actuator	1	not configured	None	
1074	GPO-8-Active-state	actuator	1	not configured	None	

Axum » Rack configuration » Address 0000001B

Figure 45: GPO Active-state configuration

- **Default**
  The gray value '1' is the startup default, this may be changed by assigning a custom value (0 or 1). A value of '1' makes sure that if the GPO is active the output is +5V in TTL mode or A/B connected for relay mode. The value '0' makes sure that if the GPO is active the output is 0V in TTL mode or A/B disconnected in relay mode.
  When you submit an empty box the object returns to the startup default value.