

AirHMI Control Board

AIRCONTROLBOARD

Overview

AirHMI Control Boards offer a fast and easy solution with relays, analog and digital inputs.

The board, which can be directly connected to AirHMI HMI displays via TTL (UART) and can work synchronously, can be multiplexed up to 4 via RS485 and can be upgraded to 32 Relays, 16 Analog Inputs and 16 Digital Inputs in total.

The card, which operates with 24V supply, provides 5V output for AirHMI HMI Display and offers 8 - 24V 7A relays, 4 8bit Analog Inputs and 4 Digital Inputs.

Package include:

*AirHMI Control Board

*2mm x 4P power and TTL UART cable

Specifications

	Data	Pieces	
Layout size	147mm(L)×80mm(W)×17mm(H)		
Relay	24V 7A	x8	
Analog Input	8bit	x4	
Digital Input		x4	

Electronic Characteristics

	Test Conditions	Min	Typical	Max	Unit
Operating Voltage		16	24	32	V
Operating Current	VCC=+24V	–	70	–	mA
Power supply recommend	24V, 2.0A, DC				

Interfaces Performance

	Test Conditions	Min	Typical	Max	Unit
Serial Port Baudrate	Standard		9600		bps
Serial Port Mode	5.0V TTL (3.3V optional)				
Serial Port	4Pin_2.00mm				

Command Set

MASTER COMMAND SET

R11	Pull Relay 1 to Closed circuit Position
R10	Pull Relay 1 to Open circuit Position
R21	Pull Relay 2 to Closed circuit Position
R20	Pull Relay 2 to Open circuit Position

R31	Pull Relay 3 to Closed circuit Position
R30	Pull Relay 3 to Open circuit Position
R41	Pull Relay 4 to Closed circuit Position
R40	Pull Relay 4 to Open circuit Position
R51	Pull Relay 5 to Closed circuit Position
R50	Pull Relay 5 to Open circuit Position
R61	Pull Relay 6 to Closed circuit Position
R60	Pull Relay 6 to Open circuit Position
R71	Pull Relay 7 to Closed circuit Position
R70	Pull Relay 7 to Open circuit Position
R81	Pull Relay 8 to Closed circuit Position
R80	Pull Relay 8 to Open circuit Position

AIN1	Asking for Analog 1 Input Value
AIN2	Asking for Analog 2 Input Value
AIN3	Asking for Analog 3 Input Value
AIN4	Asking for Analog 4 Input Value

DIN1	Ask for Digital 1 Input Value
DIN2	Ask for Digital 2 Input Value
DIN3	Ask for Digital 3 Input Value
DIN4	Ask for Digital 4 Input Value

SLAVE COMMAND SET

SLAVE 1		Slave 2	
SR111	Slave 1 Pull Relay 1 to Closed Circuit	SR211	Slave 2 Pull Relay 1 to Closed Circuit
SR110	Pull Slave 1 Relay 1 to Open Circuit	SR210	Pull Slave 2 Relay 1 to Open Circuit
SR121	Slave 1 Pull Relay 2 to Closed Circuit	SR221	Slave 2 Pull Relay 2 to Closed Circuit
SR120	Pull Slave 1 Relay 2 to Open Circuit	SR220	Pull Slave 2 Relay 2 to Open Circuit
SR131	Slave 1 Pull Relay 3 to Closed Circuit	SR231	Slave 2 Pull Relay 3 to Closed Circuit
SR130	Pull Slave 1 Relay 3 to Open Circuit	SR230	Pull Slave 2 Relay 3 to Open Circuit
SR141	Slave 1 Pull Relay 4 to Closed Circuit	SR241	Slave 2 Pull Relay 4 to Closed Circuit
SR140	Pull Slave 1 Relay 4 to Open Circuit	SR240	Pull Slave 2 Relay 4 to Open Circuit
SR151	Slave 1 Pull Relay 5 to Closed Circuit	SR251	Slave 2 Pull Relay 5 to Closed Circuit
SR150	Pull Slave 1 Relay 5 to Open Circuit	SR250	Pull Slave 2 Relay 5 to Open Circuit
SR161	Slave 1 Pull Relay 6 to Closed Circuit	SR261	Slave 2 Pull Relay 6 to Closed Circuit
SR160	Pull Slave 1 Relay 6 to Open Circuit	SR260	Pull Slave 2 Relay 6 to Open Circuit
SR171	Slave 1 Pull Relay 7 to Closed Circuit	SR271	Slave 2 Pull Relay 7 to Closed Circuit
SR170	Pull Slave 1 Relay 7 to Open Circuit	SR270	Pull Slave 2 Relay 7 to Open Circuit
SR181	Slave 1 Pull Relay 8 to Closed Circuit	SR281	Slave 2 Pull Relay 8 to Closed Circuit
SR180	Pull Slave 1 Relay 8 to Open Circuit	SR280	Pull Slave 2 Relay 8 to Open Circuit
SAIN11	Slave 1 - 1st Analog Input Value Prompt	SAIN21	Slave 2 - 1st Analog Input Value Prompt
SAIN12	Slave 1 - 2nd Analog Input Value Prompt	SAIN22	Slave 2 - 2nd Analog Input Value Prompt
SAIN13	Slave 1 - 3rd Analog Input Value Prompt	SAIN23	Slave 2 - 3rd Analog Input Value Prompt
SAIN14	Slave 1 - 4th Analog Input Value Prompt	SAIN24	Slave 2 - 4th Analog Input Value Prompt
SDIN11	Slave 1 - Request 1st Digital Input Value	SDIN21	Slave 2 - Request 1st Digital Input Value
SDIN12	Slave 1 - 2nd Digital Input Value Prompt	SDIN22	Slave 2 - 2nd Digital Input Value Prompt
SDIN13	Slave 1 - 3rd Digital Input Value Prompt	SDIN23	Slave 2 - 3rd Digital Input Value Prompt
SDIN14	Slave 1 - Request 4th Digital Input Value	SDIN24	Slave 2 - Request 4th Digital Input Value

Slave 3	
SR311	Slave 3 Pull Relay 1 to Closed Circuit
SR310	Pull Slave 3 Relay 1 to Open Circuit
SR321	Slave 3 Pull Relay 2 to Closed Circuit
SR320	Pull Slave 3 Relay 2 to Open Circuit
SR331	Slave 3 Pull Relay 3 to Closed Circuit
SR330	Pull Slave 3 Relay 3 to Open Circuit
SR341	Slave 3 Pull Relay 4 to Closed Circuit
SR340	Pull Slave 3 Relay 4 to Open Circuit
SR351	Slave 3 Pull Relay 5 to Closed Circuit
SR350	Pull Slave 3 Relay 5 to Open Circuit
SR361	Slave 3 Pull Relay 6 to Closed Circuit
SR360	Pull Slave 3 Relay 6 to Open Circuit

SR371	Slave 3 Pull Relay 7 to Closed Circuit
SR370	Pull Slave 3 Relay 7 to Open Circuit
SR381	Slave 3 Pull Relay 8 to Closed Circuit
SR380	Pull Slave 3 Relay 8 to Open Circuit
SAIN31	Slave 3 - 1st Analog Input Value Prompt
SAIN32	Slave 3 - 2nd Analog Input Value Prompt
SAIN33	Slave 3 - 3rd Analog Input Value Prompt
SAIN34	Slave 3 - 4th Analog Input Value Prompt
SDIN31	Slave 3 - Request 1st Digital Input Value
SDIN32	Slave 3 - 2nd Digital Input Value Prompt
SDIN33	Slave 3 - 3rd Digital Input Value Prompt
SDIN34	Slave 3 - Request 4th Digital Input Value

Returns the value of the queried item with the same name.

Ex: AIN3 query returns AIN3:2.45673453

Relays work by querying command Analog and Digital inputs.