CR-EXPAND1 Tesira Command Sheet

For Tesira Command String blocks · Version 1.0.4

Every command the CR-EXPAND1 takes over the network, as fixed strings for Tesira Command String blocks. The unit is controlled on its own control port (TCP 8000); no other KanexPro software is needed. The same strings, with their bytes, are in `KanexPro-CR-EXPAND1-Tesira-Command-Sheet-1.0.4.csv` for copying.

> **Before you start —** the Tesira server must reach the CR-EXPAND1 on TCP port 8000. Give the unit a fixed IP address (or a DHCP reservation).

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1. CONNECTION

HOW THE UNIT IS CONTROLLED	
Transport	TCP, port 8000 (the unit's control port)
Line ending	"!" (hex `21`), after every string
Pacing	One string at a time. The unit answers within about 1.5 s; wait for the answer before the next string.
A refused string	The unit answers with an error line.

2. USING THE STRINGS

1. Point the Command String block at the unit's IP address, TCP port 8000.
2. Add one command per row of section 3: its string, then the line ending (hex `21`).
3. Wire each command to the control that should send it. The Bytes column is the whole string as it goes on the wire, to compare with a network capture.

Settings that only the unit's own web page has (its network, logins and firmware) stay on that page.

3. COMMANDS

8 strings.

#	Command	String	Bytes (hex, with the line ending)
1	**Relays: Relay 1: On on**	`cs relay 1 to 1`	`63 73 20 72 65 6C 61 79 20 31 20 74 6F 20 31 21`
2	**Relays: Relay 1: On off**	`cs relay 1 to 0`	`63 73 20 72 65 6C 61 79 20 31 20 74 6F 20 30 21`
3	**Relays: Relay 2: On on**	`cs relay 2 to 1`	`63 73 20 72 65 6C 61 79 20 32 20 74 6F 20 31 21`
4	**Relays: Relay 2: On off**	`cs relay 2 to 0`	`63 73 20 72 65 6C 61 79 20 32 20 74 6F 20 30 21`
5	**Digital I/O: I/O port = Input**	`cs i/o mode 1`	`63 73 20 69 2F 6F 20 6D 6F 64 65 20 31 21`
6	**Digital I/O: I/O port = Output**	`cs i/o mode 2`	`63 73 20 69 2F 6F 20 6D 6F 64 65 20 32 21`
7	**Digital I/O: Output high on**	`cs i/o output level 1`	`63 73 20 69 2F 6F 20 6F 75 74 70 75 74 20 6C 65 76 65 6C 20 31 21`

8	**Digital I/O: Output high off**	`cs i/o output level 0`	`63 73 20 69 2F 6F 20 6F 75 74 70 75 74 20 6C 65 76 65 6C 20 30 21`

4. READING THE UNIT BACK

Send these to read the unit back (on a timer, or after a change).

#	String	Bytes (hex)	The reply gives
1	`cr relay 1`	`63 72 20 72 65 6C 61 79 20 31 21`	On
2	`cr relay 2`	`63 72 20 72 65 6C 61 79 20 32 21`	On
3	`cr i/o mode`	`63 72 20 69 2F 6F 20 6D 6F 64 65 21`	I/O port
4	`cr i/o output level`	`63 72 20 69 2F 6F 20 6F 75 74 70 75 74 20 6C 65 76 65 6C 21`	Output high
5	`cr status`	`63 72 20 73 74 61 74 75 73 21`	Firmware, I/O input

5. TROUBLESHOOTING

Nothing happens.
Check the unit's IP address and that TCP 8000 is open between the Tesira server and the unit (same network or VLAN, or routed; no firewall in between). Check the line ending is sent after each string.

The unit answers with an error.
The string or its value is not one it takes, or the unit is in standby: turn it on first.