

FCMkIV Profile Data Specification

Attribute	Default value
• Core	
– Name	"Unnamed FC Profile"
– Description	<i>empty string</i>
– Platform	UNKNOWN
• Network	
– Broadcast port	65000
– Broadcast period (ms)	1000
– Broadcast period (s)	<i>get from ms</i>
– Communication period (ms)	100
– Communication period (s)	<i>get from ms</i>
– Max. message length (characters)	512
– Max. timeouts	10
– Main queue size	10
– Slave queue size	10
– Broadcast queue size	2
– Listener queue size	3
– MISO queue size	2
– Printer queue size	3
– Passcode	"CT"
– Default slave values (tuple)	
* Name	"Module"
* MAC	<i>Given by slave</i>
* Index	<i>list index</i>
* Fan model	"Unknown"
* Fan mode	SINGLE
* Target relation (tuple)	(1.0, 0.0)
* Chaser tolerance (decimal for %)	0.02
* Fan frequency (For PWM, in Hz)	25000
* Counter counts	2
* Counter timeout (ms)	30
* Pulses per rotation	2
* Max. RPM's (tuple, see fan mode)	(16000)
* Min. RPM's (tuple, see fan mode)	(1200)
* Min. DC's (tuple, see fan mode)	(0.5)
* Max. fans	21
* Max. fan timeouts	1
* Pinout (name as str)	<i>CAST pinout</i>
– Saved slaves (tuple tuple; see def. SV)	<i>empty tuple</i>
– Pinouts (str (name) to str (code) dict.)	<i>built in</i>
• Fan Array	
– Default module rows	0
– Default module columns	0
– Default fan assignment	<i>empty tuple</i>
– Fan arrays (tuple)	<i>empty tuple</i>
* Name	"Unnamed fan array"
* Description	<i>empty string</i>
* Rows	0
* Columns	0
* Layers (fan mode)	<i>Def. fan mode</i>
* Modules (tuple tuple)	<i>empty tuple</i>
· Slave index	-1
· Row in array	-1
· Column in array	-1
· Number of rows	0
· Number of columns	0
· Number of fans	<i>max fans</i>
· Fan assignment (tuple tuple)	<i>empty tuple</i>

Notes

- Profile data will be kept in memory as a Python dictionary, and distributed using deep copies.
- In MkIV revisions that use the MkIII Communicator, the relevant parameters must be adjusted to be compatible with the MkIII Archiver.
- Fan assignments are represented as tuples of tuples, where each inner tuple represents, as integers (fan indices) the fans that correspond to a particular grid cell. Grid cells may be empty (use an empty tuple), and the length of inner tuples must be consistent with the "fan mode" — that is, they must be at most singletons for single fans and at most pairs for double fans. For example, the following is the fan assignment that corresponds to a module from the CAST wind tunnel:
((0, 1), (2, 3), (4, 5), (6, 7), (8, 9), (10, 11), (12, 13), (14, 15), (16, 17))