TiNo Actions Definition

EEPROM Mapping:

Address from	to	Parameter
318	318	NUM_ACTIONS
319	478	Action Blocks
479	480	CRC16 Checksum

0<= NUM_ACTIONS <=40
40 X 4 Bytes = 160 Bytes

Action Structure: 4 Bytes

Node	The Node to Listen to	N_7	N_6	N_5	N_4	N_3	N_2	N_1	N_0	0…255
Mask	Bit in the Flag Byte that triggers	x	x	x	T	T	T	T	T	
Port	The Pin to activate	R	R	R	P_4	P_3	P_2	P_1	P_0	0…31
OnOff	Action to take on the Port	D	Pd_4	Pd_3	Pd_2	Pd_1	Pd_0	A_1	A_0	

N	Node
R	Reserved.
P	Pin of Receiver, 5 bit Number representing Arduino Pin Numbering. A0=14, A1=15, …
x	don't care
T	Trigger bit. Flag byte is compared with Flag Byte from Sender
D	Pin state at power up. 0= LOW, 1= HIGH
Pd	Pulse duration. time = 2^{Pd-1} seconds. Pd=0 is 0.5 seconds (minimum) only valid when A = 0b11

A1	A0	
0	0	turn pin LOW
0	1	turn pin HIGH
1	0	toggle port
1	1	Pulse

TiNo Wireless Smart-Socket Example

Remote Control Hardware:

D6 Tactile switch #1, connects D6 to GND when active Turns Smart-Socket to ON state

D7 Tactile switch #2, connects D7 to GND when active Turns Smart-Socket to OFF state

Remote Control Configuration:

NODEID	1	
GATEWAYID	22	
PCI0PIN	6	Connect Interrupt PCI0 to Pin D6
PCI0TRIGGER	10	Falling Edge, using internal Pull-up
PCI1PIN	7	Connect Interrupt PCI1 to Pin D7
PCI1TRIGGER	10	Falling Edge, using internal Pull-up
REQUESTACK	1	Request Acknoledge of command

If button #1 is active: PCI 0 will be triggered Flag Byte:

1	0	0	0	0	0	1	0

Request Ack

TiNo Data Protocol

PCI 0

If button #2 is active: PCI 1 will be triggered Flag Byte:

1	0	0	0	0	1	0	0

Request Ack

TiNo Data Protocol

PCI 1

Smart-Socket Hardware:

D6 Relais, operating active HIGH

D7 Tactile Switch Button, connects pin to GND when active (active LOW)

D8 Status LED (ON at HIGH state of Pin)

Smart Socket Configuration:

NODEID	22	
PCI0PIN	7	Define Interrupt PCI0 on Pin D7
PCI0TRIGGER	10	Falling Edge, using internal Pull-up

Action which turns Relais ON at Pin D6 and is triggered by the remote control:

ACTION0.NODE	1	React to remote control with Nodeid 1							
ACTION0.PORT	6	switch Pin D6							
ACTION0.MASK	2	if bit (PCI0) is set, take action.	x	x	x	x	x	x	**PCI0**	x
ACTION0.ONOFF	1	turn pin HIGH	x	x	x	x	x	x	**0**	**1**

Action which turns Relais OFF at Pin D6 and is triggered by the remote control:

ACTION1.NODE	1	React to remote control with Nodeid 1							
ACTION1.PORT	6	switch Pin D6							
ACTION1.MASK	4	if bit (PCI1) is set, take action.	x	x	x	x	x	**PCI 1**	x	x
ACTION1.ONOFF	0	turn pin LOW	x	x	x	x	x	x	**0**	**0**

Action which toggles Relais on Pin 6, triggered by the tactile switch button on Pin 6 of the Smart-Socket:

ACTION2.NODE	22	React to an interrupt on my device								
ACTION2.PORT	6	switch pin D6								
ACTION2.MASK	1	PCI 0 triggerd by D7								
ACTION2.ONOFF	2	toggle Pin	x	x	x	x	x	x	**1**	**0**

Action which toggles the LED at Pin 8 of the Smart-Socket, triggered by the tactile switch button at the Smart-Socket:

ACTION3.NODE	22	React to an interrupt on my device								
ACTION3.PORT	8	switch pin D8								
ACTION3.MASK	1	PCI 0 triggerd by D7								
ACTION3.ONOFF	2	toggle Pin	x	x	x	x	x	x	**1**	**0**

alternatively, permanent illumination of the LED can be replaced by a short pulse:

ACTION3.ONOFF	7	Pulse with 1 second duration

Action which turns the LED at the Smart-Socket ON, triggered by the remote control

ACTION4.NODE	1	React to remote control with Nodeid 1								
ACTION4.PORT	8	switch pin D8								
ACTION4.MASK	2	if bit (PCI0) is set, take action.	x	x	x	x	x	x	**PCI0**	x
ACTION4.ONOFF	1	turn pin HIGH	x	x	x	x	x	x	**0**	**1**

alternatively, permanent illumination of the LED can be replaced by a short pulse:

ACTION4.ONOFF	7	Pulse with 1s duration (3 for a Pulse with 1/2 second)

Action which turns the LED at the Smart-Socket ON, triggered by the remote control

ACTION5.NODE	1	React to remote control with Nodeid 1								
ACTION5.PORT	8	switch pin D8								
ACTION5.MASK	4	if bit (PCI1) is set, take action.	x	x	x	x	x	**PCI 1**	x	x
ACTION5.ONOFF	0	turn pin LOW	x	x	x	x	x	x	**0**	**0**

alternatively, permanent illumination of the LED can be replaced by a short pulse:

ACTION5.ONOFF	7	Pulse with 1s duration (3 for a Pulse with 1/2 second)