

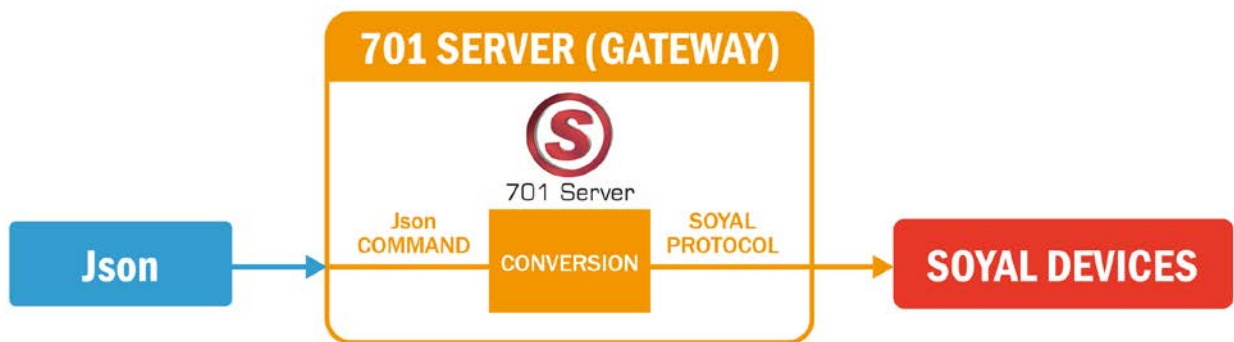
JSON COMMAND

JSON Command provides simply and faster way of integration with SOYAL access controller that usually used on WEB based system.

APPLICABLE TO:

SOYAL Enterprise Series, SOYAL Home Series, SOYAL Control Panel Series, SOYAL IO Series VIA 701 SERVER

SCHEMATIC DIAGRAM:



IMPLEMENTATION STEPS:

701Server JSON Command Schema Format

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3. Controller Family Code

1.1 Request Schema:

```
{
  "l_user"      : "login user",
  "cmd_array"   : [
    {
      "c_cmd"    : 1000,
      "user"     : "Engineer"
    },
    {
      "c_cmd"    : 1002,
      "NodeID"   : 1,
      "Start"    : 0,
      "End"      : 3
    }
  ]
}
```

1.2 Response Schema:

```
{
  "resp_array" : [
    {
      "c_cmd"    : 1000,
      "c_resp"   : 3,
      "db_used"  : true,
      "name"     : "\u8302\u65ed\u8cc7\u8a0aName",
      "ver"     : "10.1"
    },
    {
      "c_cmd"    : 1002,
      "c_resp"   : 3,
      "NodeID"   : 1,
      "Array"    : [
        {"Data":"0xFFFFFFFF","Index":0},
        {"Data":"0xFFFFFFFF","Index":1},
        {"Data":"0xFFFFFFFF","Index":2},
        {"Data":"0xFFFFFFFF","Index":3}
      ]
    }
  ]
}
```

1.3 701Server JSON Response code (c_resp):

Response Code	Description	Parameters
3	Echo request data	
4	Echo ACK	
5	Echo NACK	

1.4 Error response Schema:

```
{
  "resp_err"    : "(0x80000003) command array can not be null!"
}
```

2 Commands

2.1 Get Server Information

Request Schema	Value	Type		Notes
"c_cmd"	1000	INT		

Response Schema	Value	Type		Notes
"c_cmd"	1000	INT		
"c_resp"	3	INT		
"ver"	Host OS version	String		
"name"	"Host Name"	String		UTF8
"db_used"	true	Bool		

2.2 Get Controller Type and Online Status

Request Schema	Value	Type		Notes
"c_cmd"	1001	INT		
"Area"	0, (Default 0)	INT	00~15	<input type="checkbox"/>
"Start Node"	Start Node of Polling Controller Range.	INT	1~254	
"End Node"	End Node of Polling Controller Range.	INT	1~254	
"PollNode"	The polling Node that checked on LAN.	String	""	<input type="checkbox"/>
"Online"	The Controller Online/Offline State	String	""	<input type="checkbox"/>
"CtlCode"	The Online Controller Type Code	String	""	<input type="checkbox"/> Refer to "SOYAL Controllers ID.pdf"om reference
"NetFamily"	The Controller Family of each net on LAN.	String	""	<input type="checkbox"/> Refer to "3 Controller Family Code"

※SS: Begin Node, EE:End Node (Hex) Notes : : Can be Omitted.

Response Schema	Value	Type		Notes
"c_cmd"	1001	INT		
"c_resp"	3	INT		
"Area"	0	INT	00~15	
"Start Node"	Start Node of Response Data.	INT		
"End Node"	End Node of Response Data.	INT		
"PollNode"	"10100000... ", "1":Checked, "0": Uncheck	String		
"Online"	"10100000... ", "1":Online, "0": Offline	String		
" CtlCode "	"0xC2FFFF "	String	"FF": Unknown	
"NetFamily"	'0x1621'	String	NET Family Setting	

```

{
  "cmd_array": [{
    "c_cmd": 1001,
    "Area": 1,
    "Start Node": 1,
    "End Node": 10, "Online": "",
    "CtlCode": "",
    "NetFamily": "",
    "PollNode": ""
  },
  {
    "c_cmd": 1001,
    "Area": 0,
    "Start Node": 1,
    "End Node": 10, "Online": "",
    "CtlCode": "",
    "NetFamily": "",
    "PollNode": ""
  }
],
  "_user": "supervisor"
}

{
  "resp_array": [{
    "Area": 1,
    "CtlCode": "0xFFFFFFFFFFFFFFFF",
    "End Node": 10,
    "NetFamily": "0x16161616161616161616", "Online":
    "000000000",
    "PollNode": "000000000",
    "Start Node": 1,
    "c_cmd": 1001,
    "c_resp": 3
  }, {
    "Area": 0,
    "CtlCode": "0xFFFFFFFFFFFFFFFF",
    "End Node": 10,
    "NetFamily": "0x16161616161616161616", "Online":
    "000000000",
    "PollNode": "100000000",
    "Start Node": 1,
    "c_cmd": 1001,
    "c_resp": 3
  }
]}

```

2.3 Get Remote Terminal Controller IO status

Request Schema	Value	Type	Value	Notes
"c_cmd"	1002	INT		
""				

Response Schema	Value	Type	Range	Notes
"c_resp"	3	Value		
""				
""				
""				

2.4 Get Access Controller IO status

Request Schema	Value	Type		Notes
"c_cmd"	1003	INT		
"Area"	0, (Default 0)	INT	00~15	<input type="checkbox"/>
"Start"	1	INT		
"End"	2	INT		

Notes : : Can be Omitted.

Response Schema	Value	Type		Notes
"c_cmd"	1003,	INT		
"c_resp"	3,	INT		
"Array"	[
	{			
"Node"	1	INT		
"Status"	"Online !"	String		
"SubArray"	[[
	"ARM": "Off"		Main Port	
	"Alarm Relay": "Off"			
	"Alarming": "Off"			
	"Door": "Close"			
	"Door Relay": "Close"			
	"PTE": "Off"			
	"SubNode": "Main"			
	},{			
	"ARM": "Off"		WG Port	
	"Alarm Relay": "Off"			
	"Alarming": "Off"			
	"Door": "Close"			
	"Door Relay": "Close"			
	"PTE": "Off"			
	"SubNode": "WG"			
	}},			
	{			
"Node"	2,	INT		
"Status"	"Offline !"	String		
	}			
]			

2.5 Set Remote Terminal Controller IO status

Request Schema	Value	Type		Notes
"c_cmd"	1004	INT		
"Area"	0, (Default 0)	INT	00~15	<input type="checkbox"/>
"Node"	1	INT		
"Pp"	256	INT		Pp refer to "701Server Modbus IO Mapping-EN.pdf" on reference
"State"	1	INT		
"Value"	0: For Latch(default) 1:For Pulse	INT		<input type="checkbox"/>

Notes : : Can be Omitted.

**The "Value" Field is an option field and support for Access Controller to control Door Relay.

Response Schema	Value	Type		Notes
"c_cmd"	1004	INT		
"c_resp"	4	INT		

2.6 Set Guest Tag UID and Date Time limit

Request Schema	Value	Type		Notes
"c_cmd"	1021	INT		
"Area"	0, (Default 0)	INT	00~15	<input type="checkbox"/>
"Node"	1,	INT		
"Addr"	10000	INT		
"TagUID"	"0x000000003A5B67DE",	String	8 Bytes UID (HEX)	
"Begin_dt"	"2020-11-05 00:00",	String		
"End_dt"	"2020-11-05 23:59",	String		
"Lift"	"0x3A5B67DE", [1~8F][9~16F][17~24F][25~32F]	String	4 Bytes Lift (HEX)	<input type="checkbox"/>

Notes : : Can be Omitted.

Response Schema	Value	Type		Notes
"c_cmd"	1021	INT		
"c_resp"	4	INT		

2.7 Clear Guest Tag UID and Date Time limit

Request Schema	Value	Type		Notes
"c_cmd"	1022	INT		
"Area"	0, (Default 0)	INT	00~15	<input type="checkbox"/>
"Node"	1,	INT		

"Addr"	10000	INT		
--------	-------	-----	--	--

Response Schema	Value	Type		Notes
"c_cmd"	1022	INT		
"c_resp"	4	INT		

3. Controller Family Code

Code	Family Description		
00H	The AR701 Serial Desktop Remote I/O Controller Serial.		
01H	The AR704E 4 Door Controller Serial.		
02H	The AR716E 16 Door Controller Serial. (Version I)		
03H	The AR716E 16 Door Controller Serial. (Version II)		
04H	The AR716E 16 Door Controller Serial with TCP/IP Module. (Version II)		
05H	The AR821E LCD Fingerprint Controller Serial.		
06H	The AR821E LCD Fingerprint Controller with lift control function Serial.		
07H	The AR829E LCD Controller Serial.		
08H	The AR821E LCD Fingerprint Controller Serial. (Version II)		
09H	The AR727H LCD Controller Serial. (Version I)		
0AH	The AR101H/323D/721H/723H & 888W Controller Serial.		
0BH	The AR727/747H LCD Controller Serial. (Version III)		
0CH	The AR829E LCD Controller Serial. (Version III)		
0DH	The AR716E18 16+2 Door Controller Serial with TCP/IP Module. (Version III)		
0EH	The AR401E Remote Programmer Logic Controller.		
0FH	The AR821E LCD Fingerprint Controller Serial. (Version III)		
10H	The AR821E LCD Vein Controller Serial. (Version I)		
11H	The AR821E LCD Fingerprint Controller Serial. (Version IV)		
12H	The AR725E Controller Serial. (Version I)		
13H	The AR821E LCD Vein Controller Serial. (Version II)		
14H	The AR321H/331H/725H/888H Controller Serial. (Version I)		
15H	The AR721E Dual Port Wiegand Controller Serial. (Version I)		
16H	The AR331E/327E/725Ev2/727E/837E/EF/881E/716E16 Controller Serial.		
17H	The RS-485 Remote IO Serial with MODBUS-RTU Support.		
18H	The TCP/IP Remote Gateway and IO Serial with MODBUS-TCP Support		

Reference:



SOYAL Controllers
ID.pdf



701Server Modbus
IO Mapping-EN.pdf