Generic JSON Parser v1.0
SIMPL Windows Application Guide

Description

This SIMPL Windows module parses JSON and returns values as strings for a specified key. It supports complex types, such as simple objects, which can be used for cascading modules to parse multiple nested objects. Complex data types, such as arrays and lists, are not supported in this version but will be included in a version 2 update.

Supported Processors

Any 3 or 4 series appliance, or VC-4 instance, with Ethernet and internet access is required. This module is not supported on 2-series or earlier processors.

Compatibility			Processor Requirements	
4 SERIES CONTROL COMPATIBLE	3 COMPATIBLE	NOT COMPATIBLE 2 SERIES	Ethernet REQUIRED	USB REMOVABLE MEDIA NOT REQUIRED

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Contents

Module Application

This SIMPL Windows module parses JSON and returns values as strings for a specified key. It works best with simple, single-layer objects and is not designed to handle nested complex data structures such as lists or dictionaries. Version 2 of the module will add support for complex lists and dictionaries.

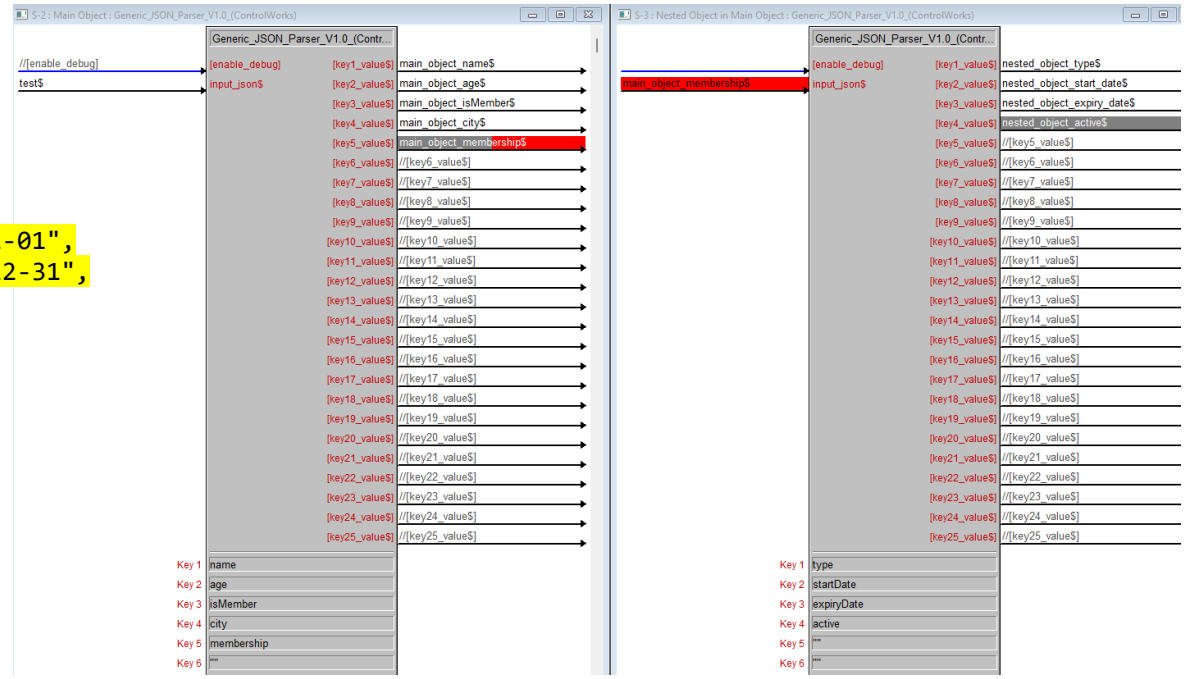
For example, given the following JSON:

```
{
  "name": "Alice",
  "age": 30,
  "isMember": true,
  "city": "New York"
}
```

The fields `name`, `age`, `isMember`, and `city` can be parsed, and the values for each key can be sent to the module's outputs.

If there are nested objects, such as the highlighted `membership` section below, a second module can be used in a cascaded configuration to retrieve the data from the nested object.

```
{
  "name": "Alice",
  "age": 30,
  "isMember": true,
  "city": "New York",
  "membership": {
    "type": "Gold",
    "startDate": "2026-01-01",
    "expiryDate": "2026-12-31",
    "active": true
  }
}
```



The module is designed to handle JSON strings that may contain invalid text before or after the JSON data. This is common in web server responses that include HTTP headers, debug messages, or other non-JSON content.

Example Input

```
HTTP/1.1 200 OK Date: Wed, 15 Jan 2026 18:30:00 GMT Server: Apache/2.4.41 (Unix) Content-Type: application/json Content-Length: 145 Connection: keep-alive X-Powered-By: PHP/7.4.25 Cache-Control: no-cache asdfghjklqwerty ###INVALID## @@@HEADER@@@ {"name":"David","age":37,"isMember":true,"city":"Boston","membership":{"type":"Gold","startDate":"2026-01-15","expiryDate":"2027-01-14","active":true}}
```

- The module automatically strips any text before the opening { of the JSON object.
- After stripping, only the valid JSON portion is processed.
- Nested objects (e.g., the membership object) can be parsed using a cascaded module setup if needed.

~~HTTP/1.1 200 OK Date: Wed, 15 Jan 2026 18:30:00 GMT Server: Apache/2.4.41 (Unix) Content-Type: application/json Content-Length: 145 Connection: keep-alive X-Powered-By: PHP/7.4.25 Cache-Control: no-cache asdfghjklqwerty ###INVALID## @@@HEADER@@@~~
```
{"name":"David","age":37,"isMember":true,"city":"Boston","membership":{"type":"Gold","startDate":"2026-01-15","expiryDate":"2027-01-14","active":true}}
```

This ensures that only clean, valid JSON data is available for key-based retrieval within the module, and removes the need to process the data before sending it to the module.

Signal and Parameter Descriptions

Bracketed signals such as "[signal_name]" are optional signals

DIGITAL INPUTS

[enable_debug] .....set to high to print messages to the console, set low to disable.

ANALOG INPUTS

This module does not use any analog outputs.

SERIAL INPUTS

Input_json$.....The JSON input string should contain an entire JSON message, including the opening { and closing } braces for the object. The JSON must be provided in a single string and cannot be split across multiple strings. Any extraneous text before or after the JSON will be automatically removed by the module, ensuring that only valid JSON is available for key-based retrieval.

DIGITAL OUTPUTS

This module does not use any digital outputs.

ANALOG OUTPUTS

This module does not use any analog outputs.

SERIAL OUTPUTS

[key#_value$].....This string will contain the deserialized value corresponding to the specified key, as defined by the string parameter Key #. The data will only be propagated if the key's value has changed since the last time the object was deserialized. If the value is a complex data type (non-scalar), the module will serialize the value and propagate the new data as JSON to be used in a cascaded module.

PARAMETERS

Key # .....Enter the string key of the JSON to process. If the key exists in the JSON, its value will be deserialized and propagated to the corresponding [Key#_Value$] output.

Support

This Module is supported by ControlWorks Consulting, LLC. Should you need support for this Module you may email us at support@controlworks.com or call us at:

- (+1) 440 449 1100 (Cleveland, Ohio)
- (+1) 508 695 0188 (Boston, Massachusetts)
- (+1) 202 381 9070 (Washington, DC)
- (+44) (0)20 4520 4600 (London, England)

ControlWorks normal office hours are 9 AM to 5 PM US Eastern time, Monday through Friday, excluding holidays.

Updates

Updates, when available, are free of charge, and are automatically distributed via our webstore. If you have purchased a license, you will receive an email notification to the address entered when the license was purchased. In addition, updates may be obtained using your username and password at https://store.controlworks.com/account/login.aspx.

Distribution Package Contents

The distribution package for this module should include:

Generic_JSON_Parser_Demo_V1.0_(ControlWorks).smw	Demonstration Program
Generic_JSON_Parser_V1.0_(ControlWorks).umc	Main User Module
Generic_JSON_Parser_V1.0_(ControlWorks).usp	SIMPL+ for use inside main module
Generic_JSON_Parser_V1.0_(ControlWorks).ush	SIMPL+ header file, for use inside main module
GenericJsonParser.clz	SIMPL# module for use in SIMPL+ module
Generic_JSON_Parser_V1.0_(ControlWorks)_Help.pdf	This help file.

Revision History

V1.0 caleb@controlworks.com 2026.01.15
-Initial Version

Development Environment

This module version was developed on the following hardware and software. Different versions of hardware or software may or may not operate properly. If you have questions, please contact us.

Crestron Hardware	Firmware Version
CP4	v2.8006.00110
Software	**Software Version**
SIMPL Windows	4.28
Device Database	200.345
Crestron Database	224.05

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