

Modbus-Slave

The **Modbus** protocol exchanges information using a request-reply mechanism between a master (client) and a **slave** (server). The master-slave principle is a model for a communication protocol in which one device (the master) controls one or more other devices (the **slaves**). The **slaves** can only send replies to the master.

The **master** initiates all communication transactions. Each **slave** has a unique id, responding to the **master** only when addressed by the **master**.

We provide the following data,

1. GPS Parameters
2. LAN Parameters
3. WAN Parameters
4. Cellular Parameters
5. Wi-Fi Parameters
6. General Parameters
7. Schedule DO trigger address

Following table shows the register mapping addresses and description for the different parameters,

1. GPS Parameters:

			000-199	25	
Parameters	Datatypes	Function Code	Start Address	Length	Remark
Status	Integer	4	0	1	0 or 1
Time	Double	4	1	4	
Latitude	Double	4	5	4	
Longitude	Double	4	9	4	
Altitude	Double	4	13	4	
Speed	Double	4	17	4	
Course of Ground	Double	4	21	4	

Note: Address 25 onwards reserved for future use.

2. LAN Parameters:

			200-399	19	
Parameters	Datatypes	Function Code	Start Address	Length	Remark
Status	Integer	4	200	1	1/0
Uptime	Long Integer	4	201	2	
Tx Bytes	Long Integer	4	203	2	
Rx Bytes	Long Integer	4	205	2	
IP	Double	4	207	4	
Mask	Double	4	211	4	
MAC Address	Double	4	215	4	

Note: Address 219 onwards reserved for future use.

3. WAN Parameters:

			400-599	23	
Parameters	Datatypes	Function Code	Start Address	Length	Remark
Status	Integer	4	400	1	0 or 1
Uptime	Long Integer	4	401	2	
Tx Bytes	Long Integer	4	403	2	
Rx Bytes	Long Integer	4	405	2	
IP	Double	4	407	4	
Mask	Double	4	411	4	
Gateway	Double	4	415	4	
MAC Address	Double	4	419	4	

Note: Address 423 onwards reserved for future use.

4. CELLULAR Parameters:

			600-619	33	
Parameters	Datatypes	Function Code	Start Address	Length	Remark
Status	Integer	4	600	1	0 or 1
Active SIM	Integer	4	601	1	1 or 2
signal Strength	Integer	4	602	1	
Network Status	Integer	4	603	1	0: Not Registered, 1: Registered
Roaming Status	Integer	4	604	1	0: Home n/w, 1: Roaming n/w
Operator Number	Long Integer	4	605	2	
Uptime	Long Integer	4	607	2	
Tx	Long Integer	4	609	2	
Rx	Long Integer	4	611	2	
IP	Double	4	613	4	
Mask	Double	4	617	4	
Gateway	Double	4	621	4	
DNS	Double	4	625	4	
IMSI	Double	4	629	4	

Note: Address 633 onwards reserved for future use.

5. WI-FI Parameters:

			800-999	23	
Parameters	Datatypes	Function Code	Start Address	Length	Remark
Status	Integer	4	800	1	
Uptime	Long Integer	4	801	2	
Tx	Long Integer	4	803	2	
Rx	Long Integer	4	805	2	
IP	Double	4	807	4	
Mask	Double	4	811	4	
Gateway	Double	4	815	4	
DNS	Double	4	819	4	

Note: Address 823 onwards reserved for future use.

6. GENERAL Parameters:

			1000-1199	25	
Parameters	Datatypes	Function Code	Start Address	Length	Remark
di1	bool	2	1000	1	
di2	bool	2	1001	1	
do1	bool	1 or 2	1002	1	
do2	bool	1 or 2	1003	1	
gsmreset	bool	2	1004	1	
gsmpower	bool	2	1005	1	
poe	bool	2	1006	1	
lastgasp	bool	2	1007	1	
Firmware Version	Integer	4	1008	1	Requires Total Length: 4 Firmware version will be 1008:1009:1010:1011
Firmware Version	Integer	4	1009	1	
Firmware Version	Integer	4	1010	1	
Firmware Version	Integer	4	1011	1	
Kernel Version	Integer	4	1012	1	Requires Total Length: 4 Firmware version will be 1012.1013.1014
Kernel Version	Integer	4	1013	1	
Kernel Version	Integer	4	1014	1	
System Uptime	long	4	1015	2	
Local Time	long	4	1017	2	yymmdd
Local Date	long	4	1019	2	HHMMSS
IMEI	Double	4	1021	4	

Note: Address 1025 onwards reserved for future use.

7. Schedule DO Trigger:

				1200-1399	12	
Description	Param	Data-types	Function Code	Start Address	Length	Remark
DO 1 High	ON/OFF flag	Integer	3 or 4	1200	1	0/1
	Hour	Integer	3 or 4	1201	1	0-23
	Minutes	Integer	3 or 4	1202	1	0-59
DO 1 Low	ON/OFF flag	Integer	3 or 4	1203	1	0/1
	Hour	Integer	3 or 4	1204	1	0-23
	Minutes	Integer	3 or 4	1205	1	0-59
DO2 High	ON/OFF flag	Integer	3 or 4	1206	1	0/1
	Hour	Integer	3 or 4	1207	1	0-23
	Minutes	Integer	3 or 4	1208	1	0-59
DO2 Low	ON/OFF flag	Integer	3 or 4	1209	1	0/1
	Hour	Integer	3 or 4	1210	1	0-23
	Minutes	Integer	3 or 4	1211	1	0-59

Note: Address 1212 onwards reserved for future use.