uPHP Reference

uPHP functions have an identical syntax to PHP functions in most cases. Below is a list of all the functions that have been implemented.

Certain additional functions are available as WattmonOS include files. For a list of these see library_functions.

Click on the function name for further details:

FUNCTION NAME	PARAMETER(S)	RETURN	DESCRIPTION
adc_read	int channel	int ADC value	Read an onboard ADC channel
aes_decrypt	string text, int length, string key, string iv	string with data	Return an AES-decrypted string
aes_encrypt	string text, int length, string key,string iv	string with data	Return an AES-encrypted string
array	mixed values ...	array	Create an array, with optional values
array_key	array, int index	string key	Return the key for an array index
array_keys	array with key/value pairs	array of keys	Return keys for an array that has key/value pairs
array_resize	array indexed array, int length	none	Resize indexed array
base64_decode	string base64	string decoded or int 0	Decode a base64-encoded string
base64_encode	string to encode	string base64 or int 0	Return the base64-encoded version of a string
call_user_func	string function_name, mixed parameters ...	mixed result	Call a user defined function with optional parameters
charat	string, int index	int ASCII code	Return the ASCII code for a character in a string at an index
chdir	string directory	int 0=OK	Change the current directory
chr	int code	string 1 character	Return the character for an ASCII code
clear_watchdog			Clear the software watchdog timer
cos	number radian_angle	float cosine	Return cosine of a radian_angle
debug	string output		Print to debug output
debugout	int 0 or 1		Enable or disable debug messages
die			Kill the script
disk_free_space	int drive	int KiloBytes	Return free space on drive
disk_status	int drive	int Status	Return mount status of drive
disk_total_space	int drive	int KiloBytes	Return total space on drive
download	string url	int res	Download a file in the background

FUNCTION NAME	PARAMETER(S)	RETURN	DESCRIPTION
download_info		array info	Get info about ongoing download
download_state		int status	Get state of download
error_reporting	int verbosity		Set the debug output level
ereg	string pattern, string content [, &array matches]	int	Perform a regex operation
exec	string script, int delay		Run a script with an optional delay
exec_action	mixed action	int 1=OK	Triggers a manually executable action by id or name
explode	string, string delimiter	array	Turn a string into an array
f485open	int baud, int parity	int handle or 0	Open the RS-485 port at the specified baud rate and parity
fclose	int handle		Close a file, stream or socket
feof	int handle	int 1 or 0	Test if no more data is available in a file, stream or socket
fgets	int handle, int size	string or int -1	Return a single line from a file, stream or socket, with optional size limit
file_exists	string filename	int 1 or 0	Check if a file exists
filesize	string filename or int handle	int bytes	Return the size of a file, or the number of unread bytes in a stream or socket
findfirst	string pattern, int attributes	array first file found	Start searching the current folder for files matching a pattern and attributes
findnext		array next file found	Return next matching file information (after a findfirst)
firmwareupdate			Initiate a firmware update sequence and reboot the device
floatval	mixed value	float value or int 0/1	Return the float value of a number or string
flush	socket socket to flush		Flush current output or socket to the browser
fopen	string filename, string mode	int handle or 0	Open a file for reading or writing
fread	int handle, int bytes	string or int 0	Read bytes from a file, stream or socket
fread_unpack	int handle,string format, int count, int interval	number	Write contents of an indexed array to a file in binary
freemem		int bytes	Return free memory space
freestack		int bytes	Return free stack space
fseek	int handle, int offset, int whence		Position the file pointer in an open file
fseropen	int baud, int blocking, int invert, int parity	int handle or 0	Open the serial port at the specified baud rate with optional parameters

FUNCTION NAME	PARAMETER(S)	RETURN	DESCRIPTION
fsockopen	string host, int port, int timeout	int handle or 0	Open an internet socket connection with optional timeout
ftell	int handle	int position	Return the current position of a file read/write pointer
ftp_command	string result	string command]	Send an FTP command
ftp_close	int result		Close an active connection with FTP server
ftp_download	int result	string remote_file,string local_file,[int position]	Initiate a download of a remote file
ftp_error	int result		Get last FTP response code
ftp_is_busy	int result		Check if the FTP engine is busy
ftp_is_connected	int result		Check if the FTP connection is active
ftp_is_connecting	int result		Check if the FTP connection is in the process of connecting
ftp_list	int result	string folder, string output_file	Lists a folder on the FTP server and outputs the result to the specified file
ftp_open	int result	string host, int port, string username, string password, int keepalive, int ignore_reply	Open a connection to an FTP server
ftp_size	int size	string filename	Get the file size of a file on the FTP server
ftp_status	array status		
ftp_upload	int result	string remote_file,string local_file,[int position]	Initiate an upload of a file
function_exists	string function_name	int 1 or 0	Check if a function exists (custom or native)
fwrite	int handle, mixed data, int length	int bytes written or -1	Write data to a file, stream or socket
fwrite_pack	int handle,array data, int length	number	Write contents of an indexed array to a file in binary
get3gstat		array	Get cellular data connection status information
getcwd		string path	Get the current directory
getethstat		array	Get Ethernet connection status information
getmac		string MAC	Get the Wattmon's MAC address
gettype	any variable	string type	Get a variable type as a string
getusbstat		array	Get USB host status information
getwifistat		array	Get WIFI status information
header	string header_data		Add to HTTP header

FUNCTION NAME	PARAMETER(S)	RETURN	DESCRIPTION
hash_hmac	string algorithm, string data, string key	string converted	Generate a keyed hash value using the HMAC method
htmlspecialchars	string data	string converted	Convert special characters for display in HTML
ieee754toint	float value	int representation	Convert a float value to an IEEE-754 encoded integer (32 bit)
implode	array, string delimiter	string	Turn an array into a string
include	string filename		Include a file within the current script at the current location
indexed_array	int type, int size	array	Create an array of a specific type and size
ini_get	string filename, string section, string key, mixed default	mixed value	Get a value from an INI file
ini_get_array	string filename, string section	array	Get a group of parameters from an INI file as an array
ini_put_array	string filename, array data, string section		Write a group of parameters to an INI file from an array
ini_set	string filename, string section, string key, mixed value	int 1=OK	Set a value in an INI file
init_watchdog	int interval		Initialize the software watchdog timer
inttoieee754	int representation	float value	Convert an IEEE-754 encoded integer representation (32 bit) to a float
intval	mixed value	int value	Return the integer value of a number or string
is_array	mixed variable	int 1 or 0	Check if a variable is an array
is_float	mixed variable	int 1 or 0	Check if a variable is a float
is_int	mixed variable	int 1 or 0	Check if a variable is an integer
is_numeric	mixed value	int 1 or 0	Check if a value is numeric (int, float or numeric string)
is_string	mixed variable	int 1 or 0	Check if a variable is a string
isset	mixed variable	int 1 or 0	Check if a variable exists
json_encode	array, int method	string	JSON encode an array into a string, with optional method
ln	number number	float $\log_e$	Return the natural logarithm of a number
log	string output, string file		Print to the System Log (or optional file)
log10	number number	float $\log_{10}$	Return the base 10 logarithm of a number
mail	string recipient, string subject, string body	int 0 or SMTP error code	Send an email [deprecated]
max_execution_time	int seconds		Set the maximum execution time for the current script

FUNCTION NAME	PARAMETER(S)	RETURN	DESCRIPTION
mb_add_dev	int id, int type, string name, int poll_interval, int status, int bus	int 0=OK	Add a device to the list of polled devices
mb_delete_dev	int id	int 1=OK	Delete a device from the list of active devices
mb_get_dev_by_id	int id	array	Return modbus device details by id
mb_get_dev_by_index	int index	array	Return modbus device details by index
mb_get_dev_by_name	string name	array	Return modbus device details by name
mb_get_dev_info	int type	array	Return modbus device details by type
mb_get_role_array		array	Return an array of all roles and their values
mb_get_status_by_role	int role	int 1=OK	Return status of the device attached to the role
mb_get_val_by_role	int role	number	Return value of the role
mb_num_devices		int	Return number of devices on the modbus
mb_queue_command	mixed values ...	array of numbers	Queue a sequence of characters to the RS-485 bus and get but ignore the reply
mb_scan_complete		int 1=complete, 0=ongoing	Check to see if a modbus scan has completed
mb_scan_percent		number percent completed	Return scan percentage completed
mb_send_command	mixed values ...	array of numbers	Send a sequence of characters to the RS-485 bus and get a reply
mb_set_dev_var	string name or int id, string variable, mixed value	int 1=OK	Set a variable on a modbus device
mb_set_val_by_role	int role, number value	int 1=OK	Set a role value on a modbus device
mb_start_scan	int start, int end		Initiate an automatic scan of the modbus
md5	string input	string 32 characters	Calculate the MD5 hash of a string
md5_file	string filename	string 32 characters	Calculate the MD5 hash of a file
mem_dump			Write the current memory map to /dump.txt
mem_usage			Write memory usage to standard output
microtime		int ms	Return the number of milliseconds since boot
mkdir	string pathname	int 0 or error code	Make a directory

FUNCTION NAME	PARAMETER(S)	RETURN	DESCRIPTION
mktime	int hour, int minute, int second, int month, int day, int year	int seconds	Return the Linux Timestamp for a given date and time
mqtt_disconnect			Disconnect MQTT connection
mqtt_publish	string channel, string content	int 1 for success or 0 for error	Publish a message to an MQTT server
mqtt_subscribe	string channel, string callback	int 1 for success or 0 for error	Subscribe to a channel on an MQTT server
mqttstat		array array with connection status	Get MQTT Connection status
net_disable3g			Disable 3G support for the dongle
net_enable3g			Enable 3G support for the dongle
netstat		array	Get Ethernet information
number_format	mixed number, int digits	string formatted	Return the string value of a number formatted to a particular precision
nvram_backup	string filename	int bytes written or 0=error	Backup the contents of NVRAM to a file on the SD Card
nvram_defrag			Defragment NVRAM to optimise it
nvram_dump			Dump the contents of NVRAM to standard output
nvram_free		int bytes	Return the number of bytes available in NVRAM
nvram_get	string key	mixed value	Get a value from NVRAM
nvram_restore	string filename		Restore the contents of NVRAM from a file
nvram_set	string key, string value	int 1=OK	Set a key and value in NVRAM
nvram_unset	string key	int 1=OK	Clear a key from NVRAM
ord	string character	int ASCII code	Return the ASCII code for a character
ow_first		array or int 0	Initiate a OneWire bus scan and return the address of the first device found
ow_next		array or int 0	Return the address of the next OneWire device found (after an ow_first)
ow_read		int value or 0	Read a byte from the OneWire bus
ow_read_temp	array device_id	float degrees Celsius	Read a temperature from a device on the OneWire bus
ow_reset			Reset the OneWire bus
ow_write	int value		Write a byte to the OneWire bus
pack	string format, mixed value	string	Pack a value into a string

FUNCTION NAME	PARAMETER(S)	RETURN	DESCRIPTION
phpinfo		string	Return information about the system
pin_configure	int pin_index, int pin_type, int counter_type		Configure an I/O pin as a digital input, output, or analog input
pin_get	int pin_index, int pin_type	int value	Return the value of an I/O pin
pin_set	int pin_index, int value		Set a digital output to value 1 or 0
ping	string host	array	Send an ICMP ping and place the result in an array
power	number base, number exp	number base^{exp}	Return base raised to the power of exp
print	string data		Print data to the current output stream such as a web page or terminal
print_r	array		Dump the contents of an array to the current output
printf	string format, mixed values ...		Print a formatted string to standard output
process_kill	int pid		Send a kill request to a process
process_list		array	Return an array of the currently running scripts
rand	int min, int max	int	Return a random integer between min and max
reboot			Reboot the processor
register_callback	string callback_type, string filename, string functionname	int 0 or error code	Register a callback function for system events
rename	string source, string destination	int 0 or error code	Rename or move a file or directory from source to destination
reset			Reset the processor
rmdir	string pathname, int delete_contents	int 0=OK	Remove a directory, with optional deletion of contents
send_sms	string phone_number, string message	int result	sends an sms through a cellular dongle
session_destroy			Clear the current session's data
session_is_new		int	Check if a session was just initiated
session_start			Initiate a new session and send the cookie data for it
set_cert_key	string key,string cert		Set a custom certificate encryption key
set_search_path	string pathname		Set the search path for the telnet client
setethpower	int state		Enable or disable the ethernet controller
setpriority	int priority		Set the priority of the current script
settime	int timestamp, int calibration		Set the system time from a Linux Timestamp, with optional calibration
setusbpower	int state		Enable or disable USB power

sha1	string input	string 40 characters	Calculate the SHA1 hash of a string
sin	number radian_angle	float sine	Return sine of a radian_angle
sizeof	array	int number of elements	Return the number of elements in an array
sleep	int ms		Sleep for specified milliseconds
snmp_trap_send	string message	int 0 or 1	Send an SNMP trap message with ASCII content of source
spi_clearcs			Clear the CS output of the SPI bus
spi_read		int byte	Read a byte from the SPI bus
spi_setcs			Set the CS output of the SPI bus
spi_write	int byte		Write a byte to the SPI bus
sprintf	string format, mixed values ...	string formatted	Return a formatted string
sqr	number number	number squared	Return the square of a number
sqrt	number number	number square root	Return the square root of a number
stats		array	Return system statistics
str_replace	string search, string replace, string subject,[int &count]	string result	Return the string with each occurrence of search replaced with replace
strftime	string format, int timestamp	string formatted	Format a Linux Timestamp using a format string
strlen	string input	int length	Return the length of a string
strpos	string haystack, string needle	int position or -1	Return the position of the first occurrence of a needle in a haystack
strrpos	string haystack, string needle	int position or -1	Return the position of the last occurrence of a needle in a haystack
strtolower	string input	string lowercase	Return the lowercase version of a string
strtoupper	string input	string UPPERCASE	Return the UPPERCASE version of a string
strval	mixed value	string	Return the string equivalent of a number
substr	string input, int start, int length	string substring	Return part of a string
tar_finish	int handle	int 1=OK	Add the ending header to a TAR file
tar_put	int handle, string src_pathname, string tar_pathname	int 1=OK	Add a file to an open file in TAR format
time		int seconds	Return the current system timestamp
timefromfat	int filetime	int seconds	Convert a FAT filetime to a Linux Timestamp
trim	string input	string trimmed	Return the trimmed string
ucfirst	string input	string Lowercase	Convert a string to Lowercase except for the first character
unlink	string filename	int 0 or error code	Remove a file (delete it)
untar	string filename, int verbosity	int 1=OK	Expand a TAR file into the current folder, optionally verbose

unpack	string format, string value	number	Unpack a packed string value and return the original data
uptime		int ms	Return the uptime in milliseconds
urldecode	string str	string string to encode	URL-Decode a string
urlencode	string str	string encoded string	URL-Encode a string
wifi_disable			Disable Wifi module
wifi_enable			Enable Wifi module