HI 6500 Programmer's Quick Reference

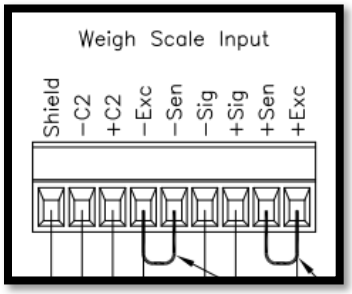
The Programmer's Quick Reference guide is intended to be a helpful and efficient reference tool for power users and technical personnel when interfacing with this Hardy product. It is not designed to replace the User's Guide.

Users Guide:

http://www.hardysolutions.com/tenants/hardy/documents/HI6500seriesUserGuid_0116.pdf

Online Unit:

http://hi6500.hardysolutions.com/



Default IP Address:

192.168.0.100
NOTE: Units have an internal webpage to use.

Input Table:

EIP_HI6500:I	{...}		_0102:
EIP_HI6500:I.ConnectionFaulted	1	Decimal	BOOL
EIP_HI6500:I.Command	16#0000_0066	Hex	DINT
EIP_HI6500:I.Command_Status	16#0000_0003	Hex	DINT
EIP_HI6500:I.Parameter_ID	0	Decimal	DINT
EIP_HI6500:I.Parameter_Value	0	Decimal	DINT
EIP_HI6500:I.Unit_Status	16#0000_0000	Hex	DINT
EIP_HI6500:I.Net_Weight	60.19476	Float	REAL
EIP_HI6500:I.Gross_Weight	15.0	Float	REAL
EIP_HI6500:I.Read_1	0	Decimal	DINT
EIP_HI6500:I.Read_2	0	Decimal	DINT
EIP_HI6500:I.Read_3	0	Decimal	DINT
EIP_HI6500:I.Read_4	0	Decimal	DINT
EIP_HI6500:I.Read_5	0	Decimal	DINT

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Output Table:

EIP_HI6500:O	{...}		_0102:
EIP_HI6500:O.Command	16#0000_0066	Hex	DINT
EIP_HI6500:O.status_data	0	Decimal	DINT
EIP_HI6500:O.Parameter_ID	0	Decimal	DINT
EIP_HI6500:O.Parameter_Value	0	Decimal	DINT
EIP_HI6500:O.Reserved1	0	Decimal	DINT
EIP_HI6500:O.Reserved2	0	Decimal	DINT
EIP_HI6500:O.Reserved3	0	Decimal	DINT
EIP_HI6500:O.Parameter_ID_1	0	Decimal	DINT
EIP_HI6500:O.Parameter_ID_2	0	Decimal	DINT
EIP_HI6500:O.Parameter_ID_3	0	Decimal	DINT
EIP_HI6500:O.Parameter_ID_4	0	Decimal	DINT
EIP_HI6500:O.Parameter_ID_5	0	Decimal	DINT

Commands:

Command number	Command
0	Read Parameter
1	Zero Cmd
2	Tare Cmd
4	Write Non-Volatile Cmd
5	Print Cmd
6	Weigh Sample Cmd
0x64 (100 dec)	Cal Low Cmd
0x65 (101 dec)	Cal High Cmd
0x66 (102 dec)	C2 Cal Cmd
0x1000 (4096 dec)	Write Integer Cmd
0x1001 (4097 dec)	Write Float Cmd

COMMANDS

E.G. A C2 Cal command through the output table:

EIP_HI6500:O	{...}		_0102:Hardy...
EIP_HI6500:O.Command	16#0000_0066	Hex	DINT

COMMAND BEING GIVEN

Each command will echo in the “Command” tag of the input table once it has been run and will have its status returned into the “Command Status” tag.

Example: A C2 Cal command being echoed back (66) and failure status due to motion (3).

EIP_HI6500:I	{...}		_0102:H
EIP_HI6500:I.ConnectionFaulted	1	Decimal	BOOL
EIP_HI6500:I.Command	16#0000_0066	Hex	DINT
EIP_HI6500:I.Command_Status	16#0000_0003	Hex	DINT

COMMAND ECHO

Status returns will vary. A complete list of status returns is listed in the Users Guide (starting on page 38).

0x66 (102 decimal): C2 CAL CMD. Write a 0x66 hex to the command register to perform a C2 calibration.

- Calibration_Fail 1
- Calibration_Fail_Motion 3
- Calibration_Fail_Adc_Error 4
- Calibration_Fail_Noc2 5
- Calibration_Fail_C2capeq 6
- Calibration_Fail_C2clones 7
- During a C2 Cal Command: Code 2 indicates "calibration in progress".

COMMAND STATUSES

General Tip:

"0x" and "16#" are used to signify a Hex value.

Hexadecimal commands and statuses are common however a decimal value can also be used.

E.G. A hex command of 0x66 would be equal to a decimal value of 102.

EIP_HI6500:O.Command	16#0000_0066	Hex	DINT

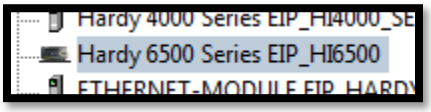
COMMANDS IN HEX AND DECIMAL

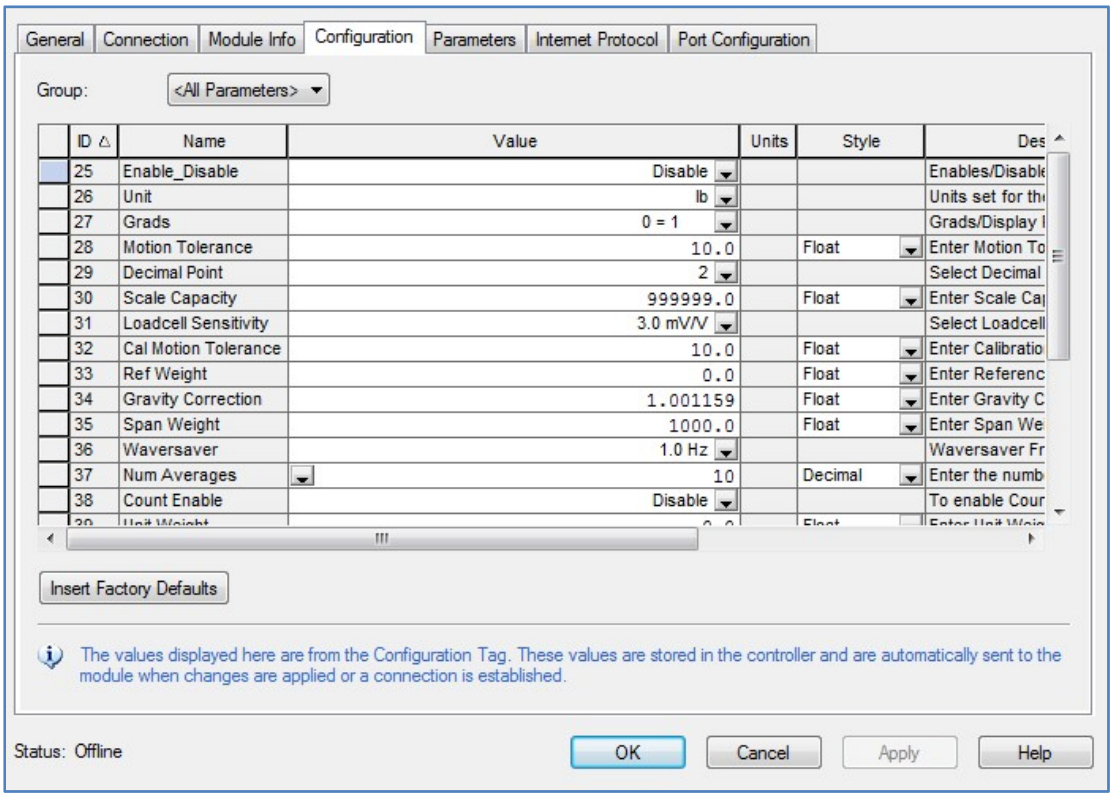
EIP_HI6500:O.Command	102	Decimal	DINT

Example: A C2 Calibrate command of "0x66" would be entered as "16#0000_0066"

Parameters:

Parameters can be changed with the built-in webpage or the AOP by double clicking on the unit in the controller organizer of the program. The ID# 25 must be "Enabled" to use this feature.



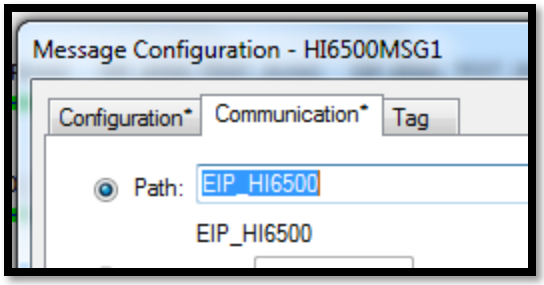


AOP

Parameter Message Tip:

Parameters can be changed in the “C” (Configuration) table and a Module Reconfigure type MSG instruction can be executed to write the “C” parameters to the unit.

Example:



Reading Parameters Manually:

A command of “0” is a read parameter command.
The parameter ID must be chosen to read a parameter.
The parameter IDs are located in the manual. (Starting on page 115)

Menu	SubMenu	Parameter Name	Param ID
Filter	(menu items)	WAVERSAVER	0x2081
Filter	(menu items)	Num Averages	0x2082

PARAMETER VALUES

E.G. A read parameter command to read the number of averages (0x2082)

EIP_HI6500:O.Command	16#0000_0000	Hex	DINT
EIP_HI6500:O.status_data	0	Decimal	DINT
EIP_HI6500:O.Parameter_ID	16#0000_2082	Hex	DINT

READING A PARAMETER

The command will echo and the parameter value will appear in the input table of the PLC.

EIP_HI6500:I	{...}		_0102
EIP_HI6500:I.ConnectionFaulted	1	Decimal	BOOL
EIP_HI6500:I.Command	16#0000_0000	Hex	DINT
EIP_HI6500:I.Command_Status	16#0000_0000	Hex	DINT
EIP_HI6500:I.Parameter_ID	16#0000_2082	Hex	DINT
EIP_HI6500:I.Parameter_Value	10	Decimal	DINT

THE READ PARAMETER ECHO

Writing Parameters Manually:

A command of “1000” is the write integer command to write an integer value to an integer type parameter.
E.G. Writing a value of 50 to the number of averages parameter.

EIP_HI6500:O	{...}		_0102
EIP_HI6500:O.Command	16#0000_1000	Hex	DINT
EIP_HI6500:O.status_data	0	Decimal	DINT
EIP_HI6500:O.Parameter_ID	16#0000_2082	Hex	DINT
EIP_HI6500:O.Parameter_Value	50	Decimal	DINT

WRITING A PARAMETER

The input table will echo and the written data will appear.

EIP_HI6500:I	{...}		_0102
EIP_HI6500:I.ConnectionFaulted	0	Decimal	BOOL
EIP_HI6500:I.Command	16#0000_1000	Hex	DINT
EIP_HI6500:I.Command_Status	16#0000_0000	Hex	DINT
EIP_HI6500:I.Parameter_ID	16#0000_2082	Hex	DINT
EIP_HI6500:I.Parameter_Value	50	Decimal	DINT

THE WRITE PARAMETER ECHO

Using the USB

Saving Parameters to a USB drive is easy using the display or webpage.
The parameters will be a small text file inside an HI6500 folder on the USB.
NOTE: USBs vary. If the read or write does not appear to function, try another USB.

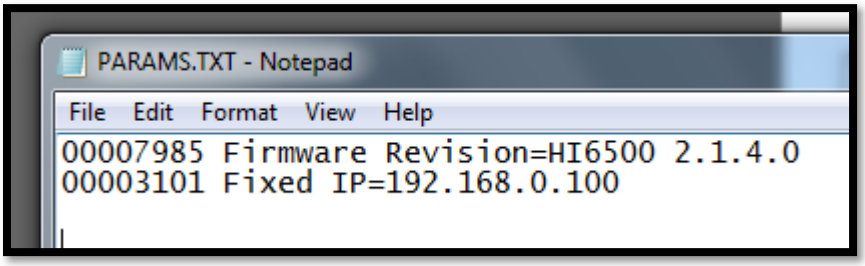
Restoring Parameters:

Upon bootup, the HI6500 will search a connected USB for a restore.txt file in an HI 6500 folder.
It will restore the values that are in the restore.txt file.
The restore.txt file is the same format as the params.txt file.
A params.txt file can be renamed restore.txt to create a default parameter restoration file.

For example, a commonly restored parameter is the IP address.

In this example, we have deleted the other parameters and just left the IP address.

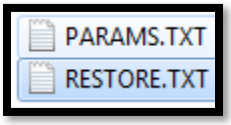
NOTE: The first line is ignored. Always paste a firmware revision line *then* the desired restore information.

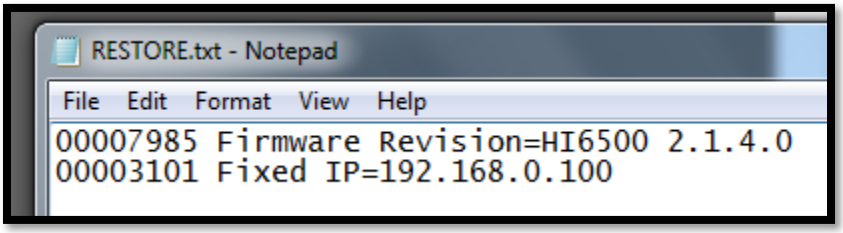


USB PARAMS TEXT FILE

00007985 Firmware Revision=HI6500 2.1.4.0
00003101 Fixed IP=192.168.0.100

Save the file as restore.txt in the HI6500 folder of the USB.





USB RESTORE TEXT FILE

If this file is saved in the HI6500 folder, then every time the USB is installed and power is cycled, the fixed IP will change to 192.168.0.100.