10.5 Deprecated ON Command Line Option for Program Memory Range

The command line option ON for the program memory range has been deprecated. The option was available only until the v5.10 release. As of the v5.15 release, this option is no longer supported.

10.6 Special Instructions for Mac Users to Run IPECMD Application

Mac users should use ***ipecmd.sh*** instead of ***ipecmd.jar*** to run the application. This file is located under ***/Applications/microchip/mplabx/<version>/mplab_platform/mplab_ipe/bin/***.

11 Installation

The following IPECMD files are automatically installed in the default locations when the MPLAB X IPE is installed (vx.xx represents the version):

- IPECMD.jar – Command line utility classes (..\Microchip\MPLABX\vx.xx\mplab_platform\mplab_ipe\)
- IPECMD.exe – Application (..\Microchip\MPLABX\vx.xx\mplab_platform\mplab_ipe\).
- ipelibs.jar – Core Library functionalities (..\Microchip\MPLABX\vx.xx\mplab_platform\mplab_ipe\modules\ext\)

12 Upgrading the Programming Tool Operating System

Upgrading the operating system of the programming tool happens automatically when the first operation using the tool is performed.

13 Command Line Options

For Windows-based computers, you can use the java –jar ipecmd.jar command or use the ipecmd.exe to execute the tool.

Notes:

1. When selecting a part using the “P” option, use the following:
   - For PIC devices, drop “PIC”, for example, PIC16F877 becomes 16F877
   - For dsPIC devices, drop “dsPIC”, for example, dsPIC30F6014 becomes 30F6014
   - For rfPIC devices, drop “rfPIC” and appended letters, for example, rfPIC12C509AG becomes 12C509
   - For MCS/HCS/MCV/SST devices use as is, for example, MCS3122 stays as MCS3122
2. MPLAB PM3 specific commands are highlighted.
3. Commands are not case-sensitive. The Escape character can be either a dash ‘-’ or a slash ‘/’.

The following commands are available in the command line interface:

Options	Description	Default
#	Communication Ports 1 through 255 supported. Com port 5 indicates USB and other Com ports indicate RS232.	5
?	Help Screen	Not Shown
A	VDDAPP (Applicable only for MPLAB PM3)	Device specific

Options	Description	Default
B<operation><path>	Environment Operation Operation L: = Load environment, All paths = full file path. All paths located on PM3Card must be preceded by a ‘P’ All paths on the computer must be preceded by a ‘C’. Operation S: = Save environment, All paths = full environment path. All paths located on PM3Card must be preceded by a ‘P’ All paths on the computer must be preceded by a ‘C’. Operation D: Delete environment All paths = full file path. All paths located on PM3Card must be preceded by a ‘P’ All paths on the computer must be preceded by a ‘C’ Operation C: Copy environment Path = Full file path to the environment file of the environment to be copied followed by the path to the destination directory. The two paths must be separated by asterisk (*), and each path must be preceded by either ‘C’ if the path is on the computer or ‘P’ if the path is on the MPLAB PM3. Operation V: = View environment Path = full file path to the environment file of the environment file to be viewed. All paths located on the PM3Card must be preceded by ‘P’. All paths on the computer must be preceded by ‘C’.	None
C	Blank Check Device	Do Not Blank Check
D<file>	Manual Firmware Upgrade	None
E	Erase Flash Device	Do Not Erase
F<file>	Hex File Selection	None
G<Type><range/path>	Read functions: Type F = read into hex file, path = full file path, range is not used. Types P, E, I, C, B, A = output read of Program, EEPROM, ID, Configuration, Boot and Auxiliary Memory to the screen. P and E must be followed by an address range in the form of x-y where x is the start address and y is the end address both in hex, path is not used.	None
I	Display Device ID	Do Not Display
J	High Voltage MCLR (Not selected)	Selected
K	Display Hex File Checksum (for PIC and legacy devices) Display Hex File CRC32 Checksum (for AVR and SAM devices)	Do Not Display

Options	Description	Default
L	Low voltage programming (for devices that support PGM pin)	Not Selected
M<region><range>	Program Device region: A = Auxiliary memory P = Program memory<range> E = EEPROM<range> I = ID memory C = Configuration memory B = Boot Flash Memory If no region is entered, the entire device will be programmed. Range programming is supported only for Program Memory and EEPROM.	None
N	VDD Nominal (Applicable only for MPLAB PM3)	Device Specific
OA<Type><Value>	Type: A = PGC resistor value in Kohms	None
	B = PGD resistor value in Kohms	None
	C = PGC Configuration (0=None, 1=Pull up, 2=Pull down)	None
	D = PGD Configuration (0=None, 1=Pull up, 2=Pull down)	None
	L = LED Brightness (1 to 10)	1
	S = Programming Speed (0=Minimum, 1=Medium, 2=Maximum)	2
OB	Batch Mode Operation	None
OC<memory region>	Select Memory Regions (Applicable with Programmer-to-go) P = Program memory E = EEPROM I = ID memory C = Configuration memory	All Regions Selected
OD	VDD First (Applicable for PICKIT 3 and MPLAB ICD 3)	VPP First
OE	Description File for Saving Environment	None
OG<Type><Value>	Programmer to Go (Applicable for PK3 and PK4) Type: S = Send Image (PK4 only) M = Program Device PTG (PK4 only)	None
OH	Erase All Before Program (Not Selected)	Selected

Options	Description	Default
OI	Display Device ID Revision (Applicable only for MPLAB PM3)	Do Not Display
OID	Preserve user ID memory on Program	Do Not Preserve
OJ<value>	2-wire or 4-wire JTAG selection (Applicable only for MPLAB REAL ICE)	None
OL	Release From Reset (Not Applicable for MPLAB PM3)	Hold in reset
OM	Miscellaneous File for Saving Environment.	None
OP<range>	Preserve Program Memory Example OP0-1FF	Do Not Preserve
OR<Setting><Value>	AVR/SAM-related Setting Type: I = [Interface type] [JTAG, SWD, UPDI, DW, ISP, TPI, PDI, HVPP, HVSP]	None
	S = Speed in MHz	None
	J = JTAG 2wire or 4wire	None
	N = No high voltage activation mode	None
	H = Simple pulse activation mode	None
	U = User Power Toggle	None
	R = Reset before or after programming (Applicable for only J32 Debug Probe	Selected
	A = Device Actions (Applicable for SAMLxx devices)	None
	E = [Chip Erase Type] (Applicable for SAMLxx devices) [ChipEraseAll, ChipEraseS, ChipEraseNS]	Selected and Default Type: ChipEraseAll,
	K = Chip Erase Key (Applicable for SAMLxx devices) Default Key: 0xFFFFFFFF, 0xFFFFFFFF, 0xFFFFFFFF, 0xFFFFFFFF	Selected

Options	Description	Default
OS<Type>	Special Memory Setting Type: C = CP-OFF Checksum L<Level 0..7><Path> = Enable Diagnostics Log [0=OFF, 1=SEVERE, 2=WARNING, 3=INFO, 4=CONFIG, 5=FINE, 6=FINER, 7=FINEST] O = Program/ Read User OTP Memory F = OTP Fuse memory	None
OT	Applicable for read and verification operations only. To be used only if the device is configured to work in dual-partition mode.	Multi-partition device
OU	Overwrite Calibration Memory	Do Not Overwrite
OV	Verify device ID before program in batch mode.	None
OW<Type><Value>	Pack Selection Type: D = Device Family Pack (DFP) Selection T = Tool Pack Selection Value: <PIC16Fxxx_DFP,1.2.33,Microchip> <1.1.701>	Latest Available Packs
OX	Determines legacy checksum support	Enable
OY<port_number>	Port number for ipecmdboost and ipecmd communication (Applicable only for IPECMDBoost)	None
OQ	To terminate the process communication obtained by IPECMD (Applicable only for IPECMDBoost)	None
OZ	CRC32 Checksum	None
P<part>	Part Selection. Example: 16F877	None
Q	Quiet Mode, no screen output (Applicable only for MPLAB PM3)	Quiet mode off
R<on><off>	Safe/Restricted mode (Applicable only for MPLAB PM3)	None
S<file>	SQTP File Selection	None

Options	Description	Default
T	P = Tool Selection E.g. –**TPRICE** for MPLAB REAL ICE **–TPPK3** for PICKIT 3 S = Specific Tool Selection using Serial No, E.g. **TSBUR1234566** Short Name for Tools: MPLAB REAL ICE – RICE MPLAB ICE 4 - ICE4 MPLAB ICD 4 - ICD4 MPLAB ICD 3 – ICD3 MPLAB PICkit 4 – PK4 MPLAB Snap -- SNAP PICKIT 3 – PK3 MPLAB PM3 – PM3 PKOB - PKOB PKOB 4 - PKOB4 EDBG - EDBG mEDBG - mEDBG nEDBG – nEDBG J-32 – J32	None
V	VPP	Device Specific
W	Power target from tool	Externally Power Target
X	VDD Max (Applicable only for MPLAB PM3)	Device Specific
Y<memory region>	Verify Device P = Program memory E = EEPROM I = ID memory C = Configuration memory B = Boot memory A = Auxiliary memory If no region is entered, the entire device will be verified.	Do Not Verify
Z<range>	Preserve EEData on Program	Do Not Preserve

14 Using Multiple Tools

The IPECMD supports the tools listed below. Each tool can be identified with the short name of the tool or using serial number if more than one tool is connected.