

EZIOxx INSTEON and X10 Messages/Commands



The following information is intended to aid in programming a PC application to support EZIO. The comprehensive INSTEON command set was established with and certified by SmartLabs to ensure interoperability and future expansion. Manufacturers of INSTEON applications follow this command set to ensure maximum customer satisfaction with INSTEON products. In the tables that follow, the column heading **SE DAB** denotes whether the command is Standard-length (**S**) or Extended-length (**E**), and whether it is a Direct (**D**), ALL-Link (**A**), or Broadcast (**B**) command. EZIO assigned codes by SmartLabs are: DevCat: 0x07, SubDevCat: 0x02. **PLEASE NOTE YOUR SPECIFIC EZIOxx MAY NOT SUPPORT ALL COMMANDS.**

INSTEON Standard-Length Direct Messages/Commands					
Command Name	SE DAB	Cmd 1	Cmd 2	Description	
Assign to ALL-Link Group	SD	0x01	0x00 - 0xFF Group Number	Used during INSTEON device linking session. Assigns a status snapshot to an ALL-Link group.	
Delete from ALL-Link Group	SD	0x02	0x00 - 0xFF Group Number	Used during unlinking session. Deletes a status snapshot from an ALL-Link group.	
Product Data Request	SD	0x03	0x00	EZIO responds with an Extended-length Product Data Response message.	
Device Text String Request	SD	0x03	0x02	EZIO responds with an Extended-length Device Text String Response message.	
Enter Link Mode	SD	0x09	0x00 - 0xFF Group Number	Same as holding down <i>SET Button</i> for 10 seconds.	
Enter Unlink Mode	SD	0x0A	0x00 - 0xFF Group Number	Cancels Linking session.	
ID Request	SD	0x10	0x00	EZIO first returns an ACK message, then it sends a <i>SET Button Pressed</i> Broadcast message, but it does not enter Linking Mode.	
Set Address MSB	SD	0x28	0x00—0xFF High byte of 16-bit address	Set Most-significant byte of EEPROM address for peek or poke. Set to 0x00 for access to EZIOxx.	
Poke (see note 2)	SD	0x29	0x00 - 0xFF value of parameter to store	Puts the byte in Cmd 2 into the parameter RAM location pointed to by PARPTR which is then incremented. To make permanent, follow this with the "Load EEPROM from RAM" command.	
Peek (see note 1)	SD	0x2B	0x00 - 0xFF PARPTR value	Sets Cmd 2 value into PARPTR. Cmd 2 of the ACK message returns the byte pointed to PARPTR.	
Output ON	SD	45	0x00—0x07 Output number	Turn ON output specified in Cmd2	
Output OFF	SD	46	0x00—0x07 Output number	Turn OFF output specified in Cmd2	
Write Output Port	SD	0x48	0x00-0xFF Value to store on data register (only output bits are affected)	ACK Cmd2 byte contains the data byte as written to the output port	
Read Input Port	SD	0x49	0x00	ACK Cmd2 byte contains the data byte as read from the input port	
Get Sensor Value	SD	0x4A	0x00 - 0x03 Sensor Number	ACK contains sensor value in Command 2.	
Set Sensor 1 OFF -> ON Alarm	SD	0x4B	0x00—0xFF Alarm value	Set value for Sensor 1 to trigger an alarm when its state goes from OFF to ON.	
Set Sensor 1 ON -> OFF Alarm	SD	0x4C	0x00—0xFF Alarm value	Set value for Sensor 1 to trigger an alarm when its state goes from ON to OFF.	
Write Configuration Port	SD	0x4D	Bits 0:7 See Note 1	Configure EZIO options. ACK Cmd2 byte contains the new Configuration byte (see Note 1.)	
Read Configuration Port	SD	0x4E	0x00	ACK Cmd2 byte contains the new Configuration byte.	
EZIO Control	SD	0x4F	Subcommand		
			0x00	Load Initialization Values	Resets EZIO to its factory default settings
			0x01	Load EEPROM from RAM	Makes permanent any changes to settings such as those made to parameters with the Poke command.
			0x02	Status Request	Return the Output Status in Cmd2 of ACK message
			0x03	Read Analog Once	Starts the A/D conversion once
			0x04	Read Analog Always	Starts the A/D conversion at preset interval
			0x09	Enable status change message	Enables Output Port status change broadcast messages
			0x0A	Disable status change message	Disables Output Port status change broadcast messages
			0x0B	Load RAM from EEPROM	Moves parameters values from EEPROM into RAM
			0x0E	Diagnostics ON	Put unit in Diagnostics mode (cycle outputs 1 sec each)
0x0F	Diagnostics OFF	Take unit out of Diagnostics mode			

INSTEON Extended-Length Direct Messages/Commands				
Command Name	SE DAB	Cmd 1	Cmd 2	Description
Product Data Response	ED	0x03	0x00	Response to Standard-Length Product Data Request. See Note .
Device Text String Response	ED	0x03	0x02	D1—D14 Text string null terminated unless 14 bytes
Set Sensor/Analog Alarms	ED	0x4B	0x00-0x03 Sensor / Analog Input Number	D1—D4 Alarm Values (2 bytes for S1-S4) or 4 bytes for AN1 - AN3
Set Output Timers	ED	0x4D	00	D1—D8 Timer values
INSTEON Standard-Length ALL-Link Messages/Commands				
ALL-Link Activate	SA	0x11	0x00 - 0x0F Group number	Recall and activate ALL-Link state for number in Cmd 2
INSTEON Standard-Length Broadcast Messages/Commands				
SET Button Pressed Slave	SB	0x01	None	Linking Mode as a Slave device
Output Status Changed	SB	0x27	EZIO Output Port	EZIO will send this message when there is change of data in its output port
Notes:				
1) EZIO Configuration Port: This port determines how EZIO responds to the various commands. The information in this port is encoded as shown on the right.		Bit 0—1:	00 = Analog Input is not used 01 = Analog Input used, convert on command 11 = Analog Input used, convert on fixed interval	
		Bit 2:	If set (1): Send Broadcast on Sensor Alarm	
		Bit 3:	If set (1): Debounce the inputs	
		Bit 4:	If set (1): Enable 1-Wire port	
		Bit 5:	If set (1): Output timers are in seconds	
		Bit 6:	If set (1): Enable broadcast of Output port change	
		Bit 7:	If set (1): Enable output timers if greater than 0	
2) EZIO Memory Layout: The range of fixed (EEPROM) and volatile (RAM) locations accessible for Peek and Poke (if applicable) correspond to the map on the right. The "rw" notation indicates whether the location is read only ("r"), or both readable and writable ("rw") when followed with the "RAM to EEPROM" command. Note that some locations are directly accessible with Standard Direct Commands. Also note that the MSB of the peek address must be first set to 0x00 for these locations to be accessible.		Address(rw)	Description	
		0x00—0x07	Output Timers (rw)	
		0x08	X10 House Code (rw)	
		0x09	Configuration Port (rw)	
		0x0A—0x11	Sensor 1-4 Alarms (4 X 2) (rw)	
		0x12—0x1D	Analog Inputs 1-3 Alarms (3 X 4) (rw)	
		0x1E	Special Firmware Flag (rw)	
		0x1F	Reserved (rw)	
		0x20—3F	Group Command On/Off sequence for I1—I8 (rw)	
		0x40—0x47	Group numbers for I1-I8 (rw)	
		0x48	Firmware Version (r)	
		0x49	EEPROM Loaded flag (r)	
0x4A	Output Port Status (r)			
0x4B	Input Port Status (r)			
0x4C	Analog Data (2 X 2) (r)			
0x50	1-Wire raw data (r)			

EZIOxx X-10 Commands			
Command Name	UNIT	CMD	Description
Turn Output ON	1-8	ON	Turn Output in UNIT (1-8) ON
Turn Output OFF	1-8	OFF	Turn Output in UNIT (1-8) OFF
Enable Timers	16	ON	Enable Output Timers
Disable Timers	16	OFF	Disable Output Timers

X10 Enabling/Disabling:

- Select the desired House code (A-P) on an X10 controller, then press and hold the Set Button on the side of EZIO for at least 4 seconds. The LED will start blinking once the button is released. Press and hold the button again to stop linking.
- If enabling X10 control, send 3 **ON** commands (any Unit code) in succession until the LED stops blinking. If disabling, send 3 **OFF** commands (any Unit code) in succession until the LED stops blinking.