

Command	Parameters	Description
	Separate with a space between Command and the first Parameter Except as shown for Time, Date, Record Index.	
***	None – Escape sequence	Enter command mode from idle mode. Exit Test mode.
+++	Enter Radio Command Mode after Enter(CR), and +++	Press "+" 3 times, hit "Enter", then press "+" 3 more times (Quickly). "OK" will appear on the screen. AT commands must be entered within 15 seconds
RBOOT	None	Reboot the module and reset the Digimesh module.
SERNO		Print the hardware address of the xbee - digimesh module, MAC address.
MVER		Print the firmware version and flash configuration version
TIME	None	Print the time.
	<hour:min:sec>	Set the time. All HH:MM:SS required. Stop not needed in V109.
DATE	None	Print the date.
	<month/day/year>	Set the date. all MM/DD/YYYY is required
STAT		Print the status of SAPIP - Prints Battery Status, Rec-num, Date, time, Log State, Comm State, Batt V, Inputs State.
START	None	Start the logger, exit to online data mode.
STOP	None	Stop the logger. Allows changes to setup with: ADC, AVRS, EXSET, BATT, INTER, PDOW, FACT, ERASE, OSETS, TCAL
DRETA	None	Print all records, starting with record 00000. Stop log required. Escape to exit.
RETRN	<Record index> 1 to 5 digits.	Print all records starting with Record index, until the last record. Stop Log required. Escape to exit.
TEST	None	After every 20 seconds, a new sample is produced, without logging the sample data. (Ver 210.)
DREP	None	Print the most recent record.
DLRN	None	Same as DREP.
	<Record index> 1 to 5 digits	Print only one record with index Record index.
HEAD	None	Print the record header. It will be separated by commas as the logger data.
ADC	None	Print the channel configuration table.
	- <Channel ID (0-7)> <Type (0-4)> <Range (0-7)> <Label (5 characters)>	Set channel configuration. TYPE – Default 0 Range 0 – Default for channel Vin (+/- 2.5 V) Range 6 - +/- .5000 mV – Default for Sap Flow channels, Ah, Bh, Vin (diff TC), for test and most significant digits (4).
	- <Channel ID (8-9)> <Label (5 characters)>	LABEL = Only Alpha - Numeric

AVRS	None	Print the heater status.
	<Voltage (mV)>	Set the heater voltage.
AVRS (LPM)	None	Print heater status
	<Voltage (mV)> <Time (s)>	Set the heater voltage and heater pre-warmup time Voltage from 0, 1500 to 9000 mV are valid Time from 0 to 1200 seconds are valid. See Chart below.
EXSET	None	Print the excitation voltage warm-up delay(milli sec).
	<Warm-up delay (ms) (0 - 4000)>	Set the excitation voltage warm-up delay.
BATT	None	Print the battery type.
	<Battery type (9 or 12)>	Set the battery type.
INTER	None	Print the sampling interval identifier.
	<Sampling interval identifier> (10, 15, 15p, 30, 30p, 60p, tn, tf)	Set the sampling interval identifier.
PDOW	None	Print the power-down configuration. Powers down heater current
	<Enable flag (Y or N)>	Set the power-down configuration.
	<Power-down hour (17-24)>	
	<Power-up hour (1-8)>	
FACT	None	Set the device and channel configuration to defaults.
ERASE	None	Erase all records. Must stop logger first!
Factory Settings, Manufacturing Technician		
321LPM	None	Display current Low Power Mode setting
	0	Disable Low Power Mode
	1	Enable Low Power Mode
TCAL	<Current Temp in tenths of degrees C>	Records the current temperature and performs an offset correction. 23.5 C entered as 235
OSETS	None	Print the differential channel offset correction.
	<reset>	Clears the current offset correction stored in flash.
	<cal>	Performs offset correction. 0.0000 mV must be provided to each channel for the zero function. Special input cable at Factory.

Note: after each test/start/exit command, disconnect, to reconnect USB cable, go to File – Disconnect, go to Setup – Serial Port, then hit “Enter” to re-establish communication.

Table of Battery Status (Discharging)		
Battery Status	9V Battery (V)	12V Battery (V)
OK	BATT > 8	BATT > 10
< 10%	7.2 < BATT < 7.9	9.5 < BATT < 10
< 1%	6.4 < BATT < 7.2	6.4 < BATT < 8
Lock	5.5 < BATT < 6.4	5.5 < BATT < 8
Suspend	BATT < 5.5	BATT < 5.5

Logging Intervals & Table of Heater Warm-up Time in LPM	
Logging Interval	MAX Pre-Warmup Time Allowed (second)
TF -20 sec interval / TN – 60 sec interval	N/A
10 (HIGH_RES) – avg 10 samples x 1 min	55
15 (FINE_RES) -avg 5 samples x 3 min	175
15P (*) – 1 sample 15 min	895
30 (MED_RES) – avg 10 samples x 3 min	175
30P (MED_RES_POWER SAVING) 1 sample	1795
60P (EXTREME_POWER_SAVING) 1 sample	3595

*15P logging interval is only available for V116 or newer Firmware. On agrisensors.com website, this logging interval is replaced by “REM_LOW_RESOLUTION” (60).