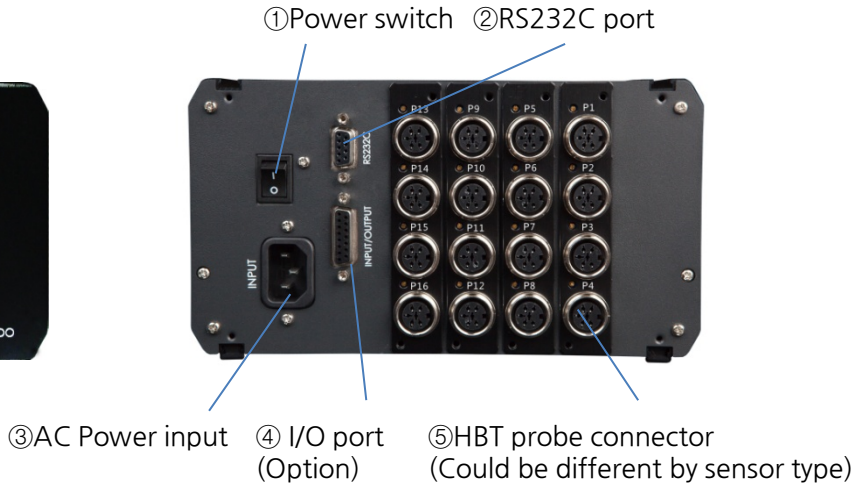
Product features & composition

1. Features



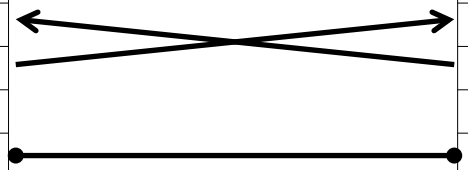
① AC power input socket : AC110~220V, 50Hz/60Hz power input.
② Power switch : power ON/OFF switch.
③ I/O port : To communicate with external PLC or controller.
④ RS232C port : To do serial communication with PC or PLC. (115200 bps)
⑤ HBT probe connector : Maximum 16 probes can be connected.

RS232C communication

1) Serial speed is 9600 bps , 115200 bps special.

2) Cable setting

Elec' micrometer		Direction of signal	Computer	
Signal	Pin No.		Pin No.	Signal
N.C	1		1	DC
RD	2		2	RD
TD	3		3	TD
N.C	4		4	DTR
SG	5		5	SG
N.C	6		6	DSR
N.C	7		7	RTS
N.C	8		8	CTS
N.C	9		9	RI



- Cable of computer serial working terminal - Connect 4Pin and 6Pin / Connect 7Pin and 8Pin

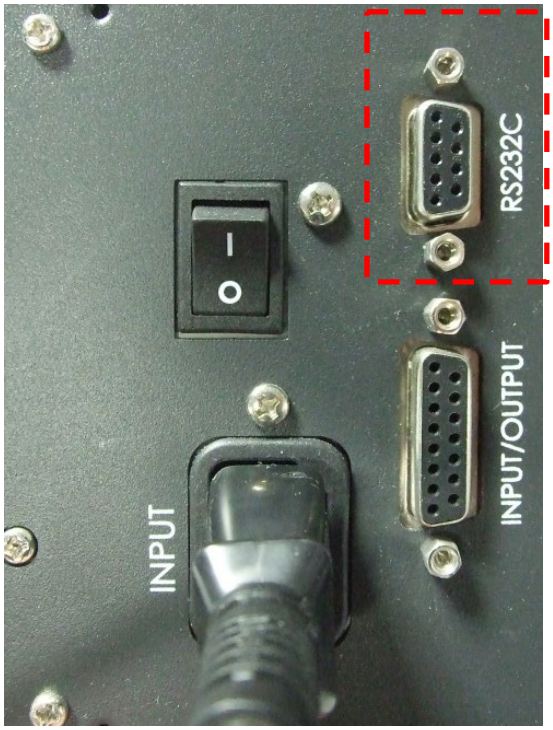
- ASCII Format

Byte	1	2	1	2	1	5*n+(n-1)	1	1	2	1	1
Char	ENQ (0x05)	Start Point	,	End Point	,	Data	,	ETX (0x03)	@@	CR	LF

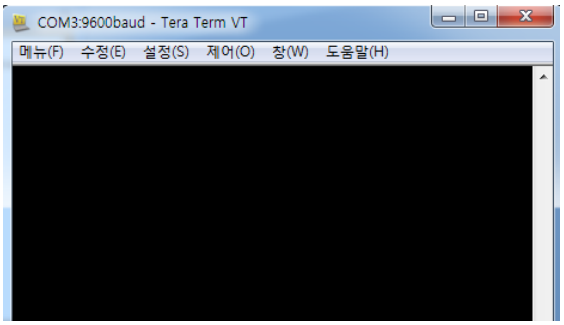
Ex) In case of No. of Data is 2.

1	2	1	2	1	5	1	5	1	1	2	1	1
ENQ	01	,	02	,	+0043	,	-0025	,	ETX	@@	CR	LF

How to use



1. Connect the RS232C cable between PC and ML-LPC.



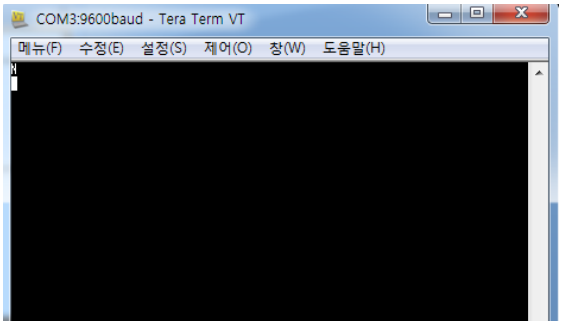
2. Open a communication software as like hyper terminal.

3. Give commands by RS232C

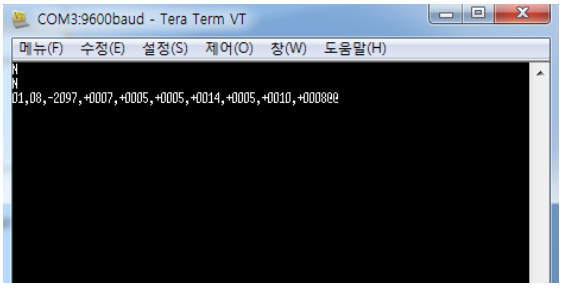
***Serial Commands :**
-START : Starts the measurement once & return the measured data.
-MZERO : Master Zero. No use for Air type.
-MCLEAR : Master Zero clear. No use for Air type.
-RECALL: Return the current data once without new measurement.

***Serial Commands Format:**
-If no use ID:
[COMMAND] [CR] [LF] → [ACK] returns after 5msec
([ACK] returns only for MZERO, MCLEAR, RESET. For START, RECALL, it just gives the data.)
-If use ID:
[ID] [,] [COMMAND] [CR] [LF] → [ACK] return after 5msec
-[CR] : 0x0D, [LF]: 0x0A, [ACK] : A [CR] [LF] (= A₩r₩n)

How to use(Serial quick commands)



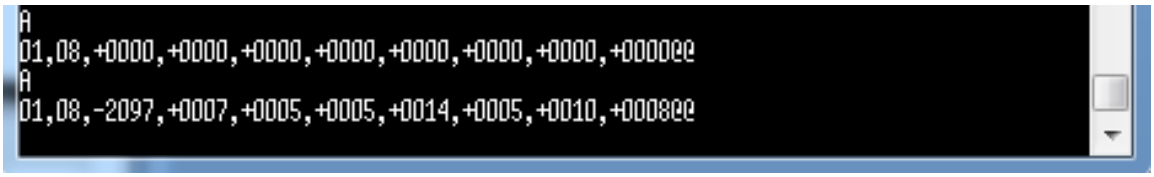
4. If the command is not right,
ML-LPC gives ‘N’ letter.



5. ‘START’ (should be capital letters)
→One data is shown.

→Actual command: START(CR) ------ (CR) : 0X0D

MZERO →
START →
MCLEAR →
START →



〈Various commands example〉

I/O port & operating sequence

1) I/O pin description - Option. Standard model only has RS232C output by polling.

Pin	Name	In/Out		Description	Circuit
1	NCOMMON		0 V	GROUND	
2	PCOMMON		+24V		
3	IN6	in	H/L		
4	IN5	in	H/L		
5	IN4	in	H/L	SCAN	
6	IN3	in	H/L	CLEAR (erase master)	
7	IN2	in	H/L	ZERO	
8	IN1	in	H/L	START / PAUSE(at SCAN mode)	
9	OUT6	out	H/L		
10	OUT5	out	H/L		
11	OUT4	out	H/L		
12	OUT3	out	H/L		
13	OUT2	out	H/L		
14	OUT1	out	H/L