

Default baud rate of OLED is 115200

```
void Write_AT_Command(char *string)
{
    Serial.print(string);
    while (Serial.read() != 'E') {}
    delay(2);
}
```

Code	Function	Instruction of ATcommand mode	API for Arduino	Example of using Write_AT_Command() subroutine above
N/A	Sent a page(128X64 bitmap) to OLED (An array consist of 1024 bytes bitmap information)	1. A "for" loop to send 1024 bytes user define display information 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	for (i = 0 ; i < 1024; i++) { Serial.write(User_define_array[i]); while (Serial.read() != 'E') {} delay(2); }	
0x80	Write a 5X7 Character	1. AT80=(line,column,Character) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(AT80=(0,0,A)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("AT80=(0,0,A)")
0x81	Write a 5X7 String	1.AT81=(line,column,String) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(AT81=(0,0,ABCD1234)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("AT80=(0,0,A)")
0x82	Write a 8X16 Character	1. AT82=(line,column,Character) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(AT82=(0,0,A)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("AT81=(0,0,ABCD1234)")
0x83	Write a 8X16 String	1.AT83=(line,column,String) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(AT83=(0,0,ABCD1234)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("AT83=(0,0,ABCD1234)")
0x84	Display a 8X8 pattern	1. AT84=(X position,Y position,pattern ID) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(AT84=(16,32,1)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("AT84=(16,32,1)")
0x85	Display a 8X16 pattern	1.AT85=(X position,Y position,pattern ID) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(AT85=(16,32,1)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("AT85=(16,32,1)")
0x86	Display a 16X16 pattern	1. AT86=(X position,Y position,pattern ID) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(AT86=(16,32,1)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("AT86=(16,32,1)")
0x87	Display a 32X32 pattern	1. AT87=(X position,Y position,pattern ID) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(AT87=(16,32,1)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("AT87=(16,32,1)")
0x90	Draw a line	1. AT90=(X0 position,Y0 position,X1 position,Y1 position,0 or 1) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(AT90=(0,0,127,63,1)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("AT90=(0,0,127,63,1)")
0x91	Draw a Rectangle	1. AT91=(X0 position,Y0 position,X1 position,Y1 position,0 or 1) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(AT91=(10,10,100,49,1)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("AT91=(10,10,100,49,1)")
0x92	Draw a filled Rectangle	1. AT92=(X0 position,Y0 position,X1 position,Y1 position,0 or 1) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(AT92=(10,10,100,49,1)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("AT92=(10,10,100,49,1)")
0x93	Draw a Square	1. AT93=(X position,Y position,Width,0 or 1) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(AT93=(8,10,30,1)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("AT93=(8,10,30,1)")
0x94	Draw a Circle	1. AT94=(X position,Y position,Radius,0 or 1) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(AT94=(64,32,30,1)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("AT94=(64,32,30,1)")
0x95	Draw a filled Circle	1. AT95=(X position,Y position,Radius,0 or 1) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(AT95=(64,32,30,1)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("AT95=(64,32,30,1)")
0x96	Draw a tip upward Triangle	1. AT96=(X position,Y position,Height,0 or 1) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(AT96=(64,10,30,1)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("AT96=(64,10,30,1)")
0x97	Draw a filled tip upward Triangle	1. AT97=(X position,Y position,Height,0 or 1) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(AT97=(64,10,30,1)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("AT97=(64,10,30,1)")
0x98	Draw a tip downward Triangle	1. AT98=(X position,Y position,Height,0 or 1) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(AT98=(64,50,30,1)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("AT98=(64,50,30,1)")
0x99	Draw a filled tip downward Triangle	1. AT99=(X position,Y position,Height,0 or 1) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(AT99=(64,50,30,1)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("AT99=(64,50,30,1)")
0x9a	Draw a tip leftward Triangle	1. AT9a=(X position,Y position,Width,0 or 1) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(AT9a=(16,32,30,1)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("AT9a=(16,32,30,1)")
0x9b	Draw a filled tip leftward Triangle	1. AT9b=(X position,Y position,Width,0 or 1) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(AT9b=(16,32,30,1)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("AT9b=(16,32,30,1)")
0x9c	Draw a tip rightward Triangle	1. AT9c=(X position,Y position,Width,0 or 1) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(AT9c=(120,32,30,1)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("AT9c=(120,32,30,1)")
0x9d	Draw a filled tip rightward Triangle	1. AT9d=(X position,Y position,Width,0 or 1) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(AT9d=(120,32,30,1)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("AT9d=(120,32,30,1)")
0x9e	Set a pixel for positive display (show pixel)	1. AT9e=(X position,Y position) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(AT9e=(120,32)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("AT9e=(120,32)")
0x9f	Set a pixel for negative display (clear pixel)	1. AT9f=(X position,Y position) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(AT9f=(120,32)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("AT9f=(120,32)")
0xa0	Display image row by row Up Ward	1. ATa0=(Speed in ms) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATa0=(20)) while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATa0=(20)")
0xa1	Display image row by row Down Ward	1. ATa1=(Speed in ms) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATa1=(20)) while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATa1=(20)")
0xa2	Display image column by column Left Ward	1. ATa2=(Speed in ms) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATa2=(20)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATa2=(20)")

0xa3	Display image column by column Right Ward	1. ATa3=(Speed in ms) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATa3=(20)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATa3=(20)")
0xa4	Erase image row by row Up Ward	1. ATa4=(Speed in ms) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATa4=(20)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATa4=(20)")
0xa5	Erase image row by row Down Ward	1. ATa5=(Speed in ms) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATa5=(20)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATa5=(20)")
0xa6	Erase image column by column Left Ward	1. ATa6=(Speed in ms) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATa6=(20)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATa6=(20)")
0xa7	Erase image column by column Right Ward	1. ATa7=(Speed in ms) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATa7=(20)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATa7=(20)")
0xa8	Display image Inside Out	1. ATa8=(Speed in ms) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATa8=(20)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATa8=(20)")
0xa9	Display image Outside In	1. ATa9=(Speed in ms) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATa9=(20)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATa9=(20)")
0xaa	Erase image Inside Out	1. ATaa=(Speed in ms) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATaa=(20)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATaa=(20)")
0xab	Erase image Outside In	1. ATab=(Speed in ms) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATab=(20)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATab=(20)")
0xd0	Clear display	1. ATd0=() 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATd0=()); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATd0=()")
0xd1	Show the data in the display memory	1. ATd1=() 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATd1=()); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATd1=()")
0xd2	Scroll the whole display upward	1. ATd2=(shif time in ms) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATd2=(20)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATd2=(20)")
0xd3	Scroll the whole display downward	1. ATd3=(shif time in ms) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATd3=(20)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATd3=(20)")
0xd4	Scroll the whole display leftward	1. ATd4=(shif time in ms) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATd4=(20)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATd4=(20)")
0xd5	Scroll the whole display rightward	1. ATd5=(shif time in ms) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATd5=(20)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATd5=(20)")
0xd6	Scroll the section display upward	1. ATd6=(X0 position,Y0 position,X1 position,Y1 position, shif time in ms) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATd6=(10,16,120,50,1)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATd6=(10,16,120,50,1)")
0xd7	Scroll the section display downward	1. ATd7=(X0 position,Y0 position,X1 position,Y1 position, shif time in ms) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATd7=(10,16,120,50,1)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATd7=(10,16,120,50,1)")
0xd8	Scroll the section display leftward	1. ATd8=(X0 position,Y0 position,X1 position,Y1 position, shif time in ms) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATd8=(10,16,120,50,1)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATd8=(10,16,120,50,1)")
0xd9	Scroll the section display rightward	1. ATd9=(X0 position,Y0 position,X1 position,Y1 position, shif time in ms) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATd9=(10,16,120,50,1)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATd9=(10,16,120,50,1)")
0xd0	Turn display Off	1. ATT0=() 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATT0=()); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATT0=()")
0xd1	Turn display On	1. ATT1=() 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATT1=()); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATT1=()")
0xd2	Set the brightness of the OLED	1. ATT2=(levele of brightness 0-255) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATT2=(225)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATT2=(225)")
0xd3	Set the status of 8 output pins on OLED	1. ATT3=(Out_Pin_No, 0 or 1) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATT3=(2, 1)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATT3=(2, 1)")
0xd4	Read the input pins status on the OLED	1. ATT4=(Inupt_Pin_No ) 2. Wait until receive a the input pins status from OLED (0 or 1) from OLED	Serial.print(ATT4=(2)); while (Serial.available() <= 0) {} incomingByte = Serial.read();	Write_AT_Command("ATT4=(2)") while (Serial.available() <= 0) {} incomingByte = Serial.read();
0xd6	Change Instruction mode (0 for HEX command, 1 for AT command)	1. ATT6=(instruction mode) 2. Wait until receive a module available byte ('E') from OLED 3. Wait 2ms	Serial.print(ATT6=(0)); while (Serial.read() != 'E') {} delay(2);	Write_AT_Command("ATT6=(0)")