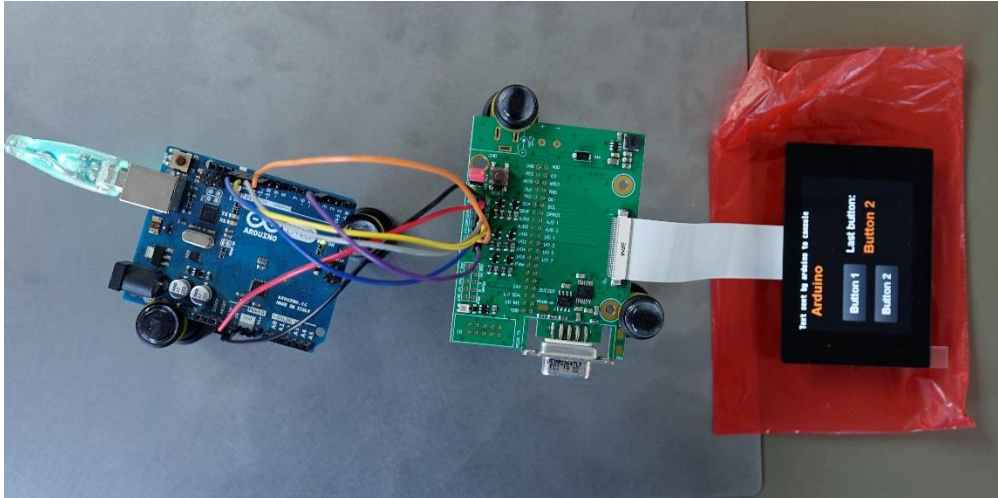


## Connect Arduino Uno to EA uniTFTs



### ABOUT THIS PROJECT

This example illustrates the connection between an Arduino Uno and the EA uniTFT(s)-Series through the SPI or the I<sup>2</sup>C interface.

The Arduino project contains all necessary functions for a very basic protocol handling.

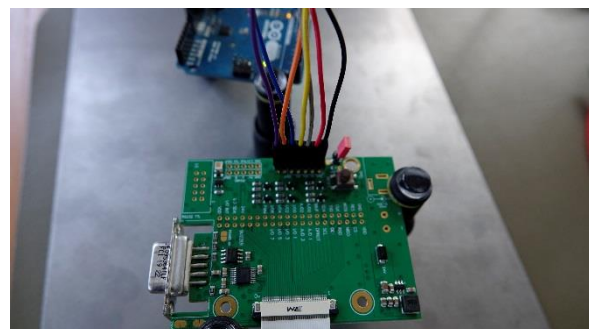
We use the EA DEMOPACK-CONN1 as there are already level-shifters included to adopt 5V levels from Arduino to 3.3 V of EA uniTFTs-Series.

To power up the EA uniTFTs you can use either the USB mini input on the module itself or feed the VIN of the EA DEMOPACK-CONN1 board with 5-30 VDC.

### HARDWARE

SPI connection:

	Arduino	DEMOPACK-CONN1 SPI Pin-Header
Description	Pin	Pin
GND	GND	1
5V	5V	2
MOSI	11	3
MISO	12	4
CLK	13	5
CS	10	6
SBUF	3	7



I<sup>2</sup>C connection:

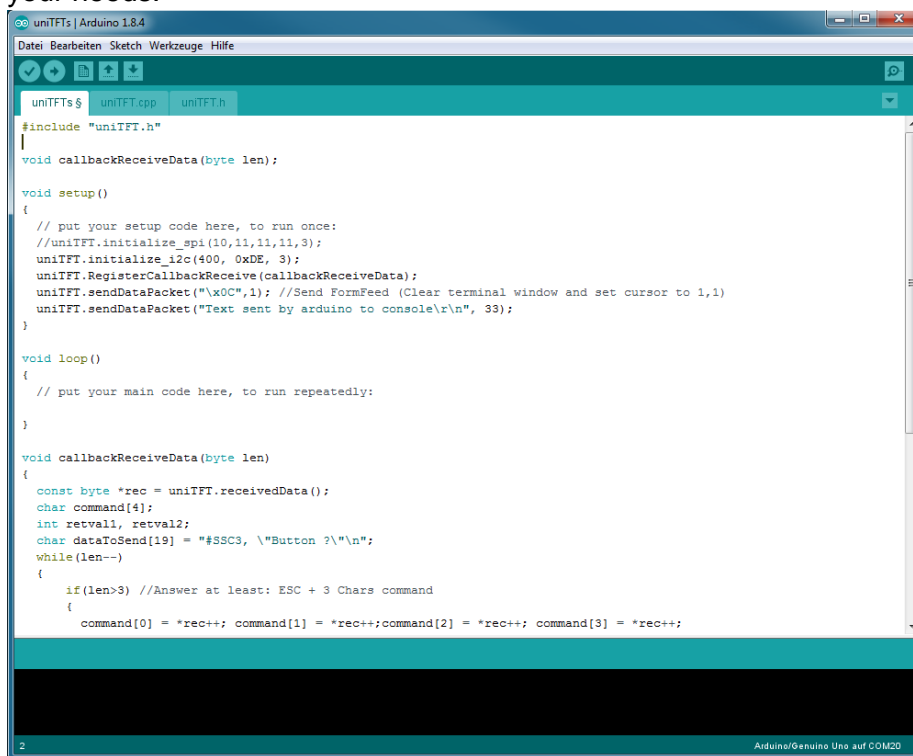
	Arduino	DEMOPACK-CONNI I <sup>2</sup> C Pin-Header
Description	Pin	Pin
GND	GND	1
5V	5V	2
SDA	A4	3
SCL	A5	4
SBUF	3	5

## HOW-TO-USE

Please install uniTFT-Designer ([Downloadlink](#)). Open Arduino.emp (?:\uniTFTs\_Protokoll\uniTFTsProject\Arduino\Arduino.emp) and download (press F5) to EA uniTFTs028-ATC through the USB connection.

Second install Arduino IDE and open uniTFTs.ino (?:\uniTFTs\_Protokoll\ArduinoUnoProject\uniTFTs\ uniTFTs.ino).

To select SPI or I<sup>2</sup>C mode you have to initialize the uniTFTs-Library in the setup()-section corresponding to your needs:



```

uniTFTs $ uniTFT.cpp uniTFT.h
#include "uniTFT.h"

void callbackReceiveData(byte len);

void setup()
{
    // put your setup code here, to run once:
    //uniTFT.initialize_spi(10,11,11,11,3);
    uniTFT.initialize_i2c(400, 0xDE, 3);
    uniTFT.RegisterCallbackReceive(callbackReceiveData);
    uniTFT.sendDataPacket("\x0C",1); //Send FormFeed (Clear terminal window and set cursor to 1,1)
    uniTFT.sendDataPacket("Text sent by arduino to console\r\n", 33);
}

void loop()
{
    // put your main code here, to run repeatedly:
}

void callbackReceiveData(byte len)
{
    const byte *rec = uniTFT.receiveData();
    char command[4];
    int retval1, retval2;
    char dataToSend[19] = "$SC3, \"Button ?\"\\n";
    while(len--)
    {
        if(len>3) //Answer at least: ESC + 3 Chars command
        {
            command[0] = *rec++; command[1] = *rec++;command[2] = *rec++; command[3] = *rec++;
        }
    }
}
  
```