

## Evaluation platform based on the BlueNRG-2



### Features

- Bluetooth® SMART board based on the BlueNRG-2 Bluetooth low energy system on chip
- Associated BlueNRG-2 development kit SW package including firmware and documentation
- Up to +8 dBm available output power (at antenna connector)
- Excellent receiver sensitivity (-88 dBm)
- Very low power consumption: 7.7 mA RX and 8.2 mA TX at +0 dBm
- Bluetooth® SMART v5.0 compliant, supports master, slave, simultaneous master-and-slave roles and Bluetooth low energy extended data length feature
- New integrated balun BALF-NRG-02D3 which integrates a matching network and harmonics filter
- SMA connector for antenna or measuring equipment
- 3 user LEDs
- 2 user buttons
- 3D digital accelerometer and 3D digital gyroscope
- MEMS pressure sensor with embedded temperature sensor
- RoHS compliant

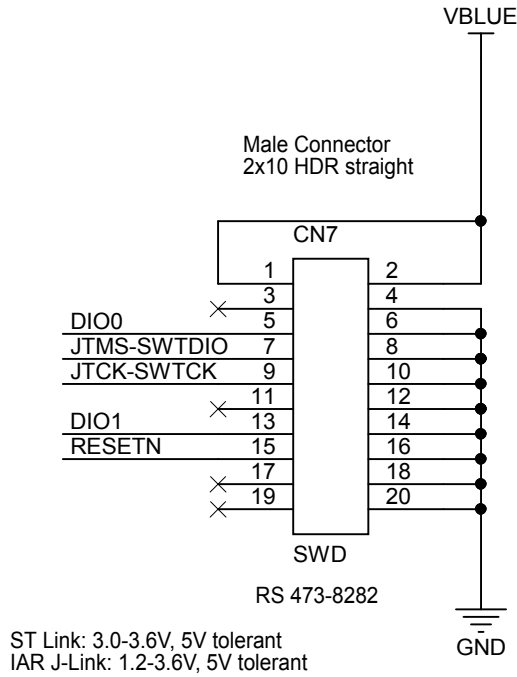
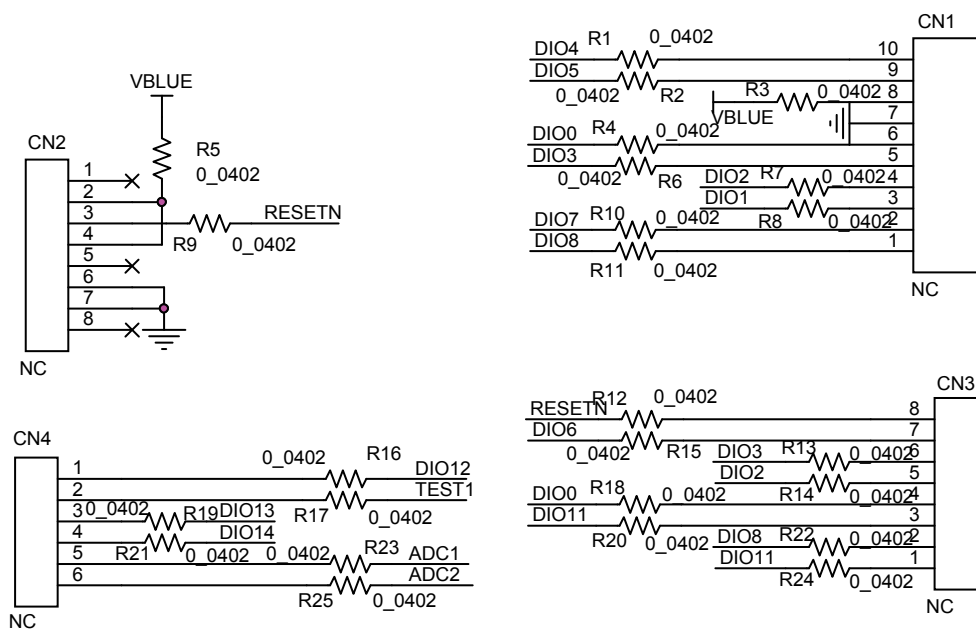
### Description

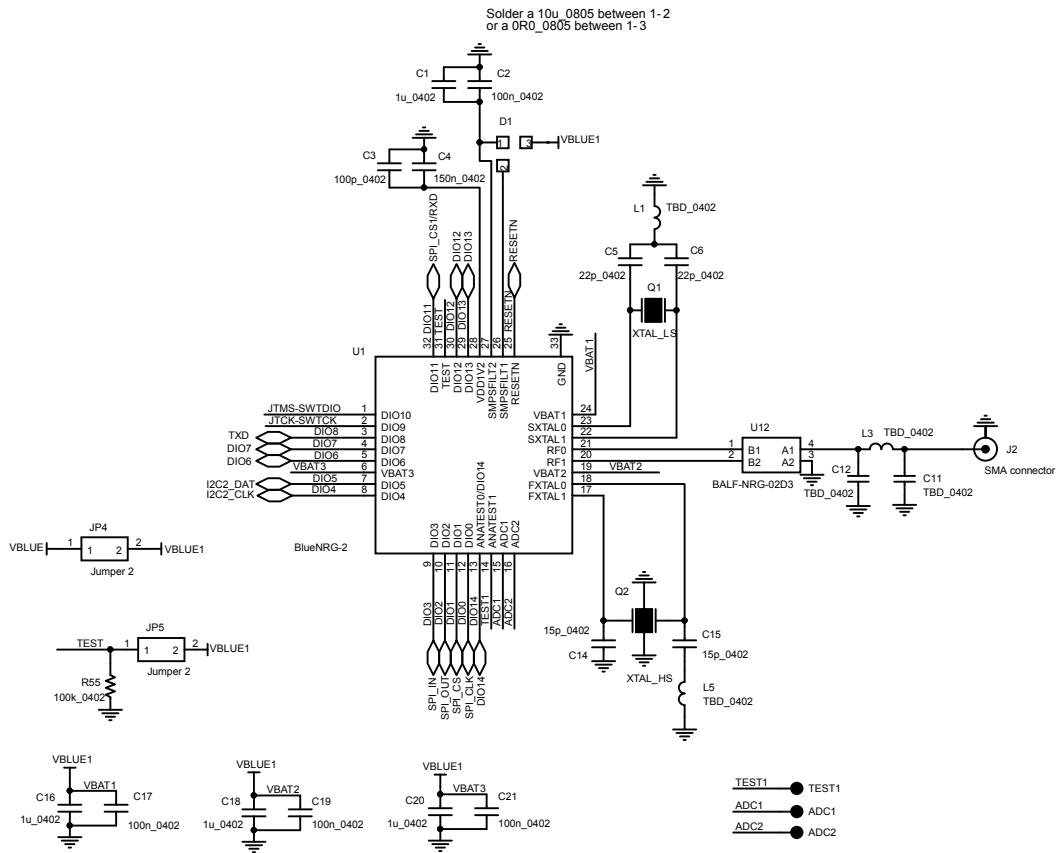
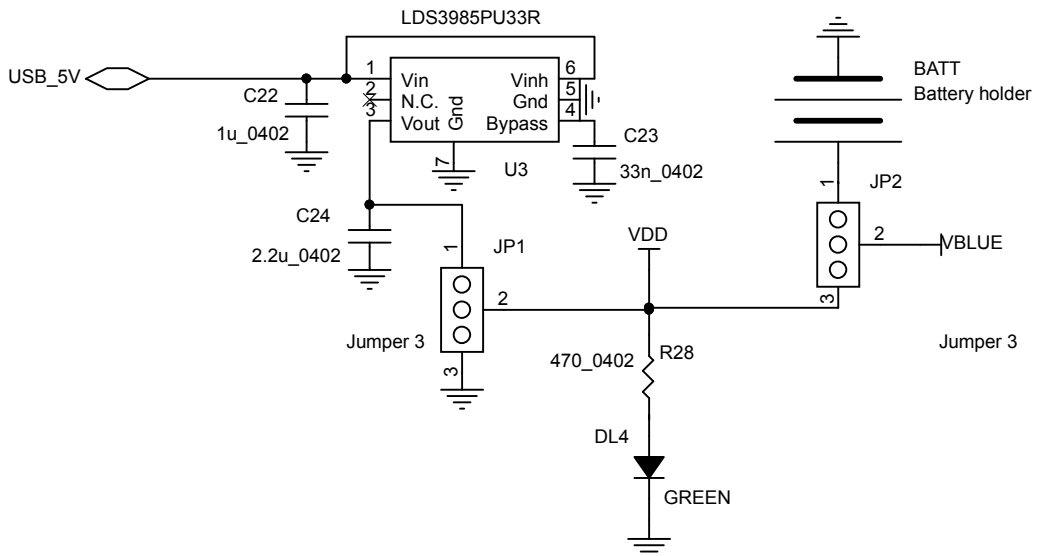
The [STEVAL-IDB008V2](#) evaluation platform is based on the [BlueNRG-2](#), low power Bluetooth® smart system on chip with 256 KB Flash, 24 KB RAM, compliant with the Bluetooth® SMART v5.0 specification, supporting master, slave and simultaneous master-and-slave roles and the Bluetooth low energy extended data length feature.

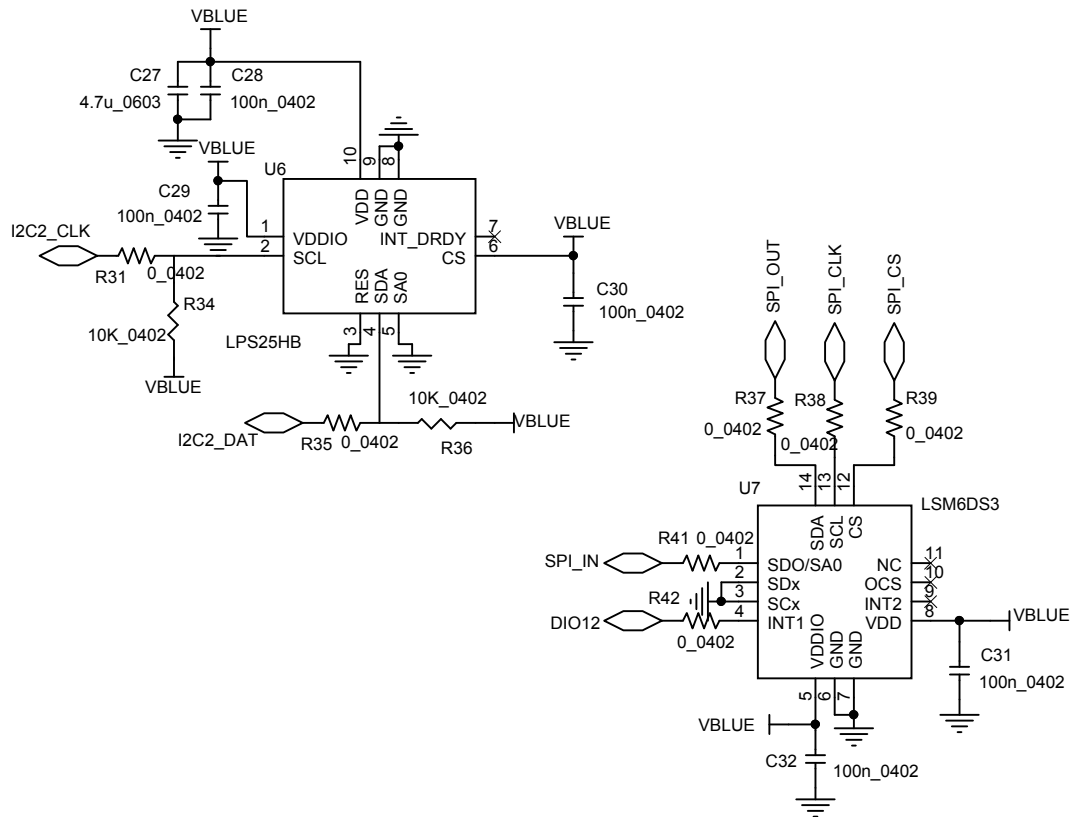
The STEVAL-IDB008V2 also provides a set of hardware resources for implementing a wide range of application scenarios: sensor data (accelerometer, pressure and temperature sensor), remote control (buttons and LEDs) and debug message management through USB virtual COM. Three power options are available (USB only, battery only, and external power supply plus USB) for high application development and testing flexibility.

| Summary table  |                                 |
|--|---------------------------------|
| STEVAL-IDB008V2 evaluation platform based on the BlueNRG-2 | <a href="#">STEVAL-IDB008V2</a> |
| Bluetooth low energy wireless system-on-chip               | <a href="#">BlueNRG-2</a>       |

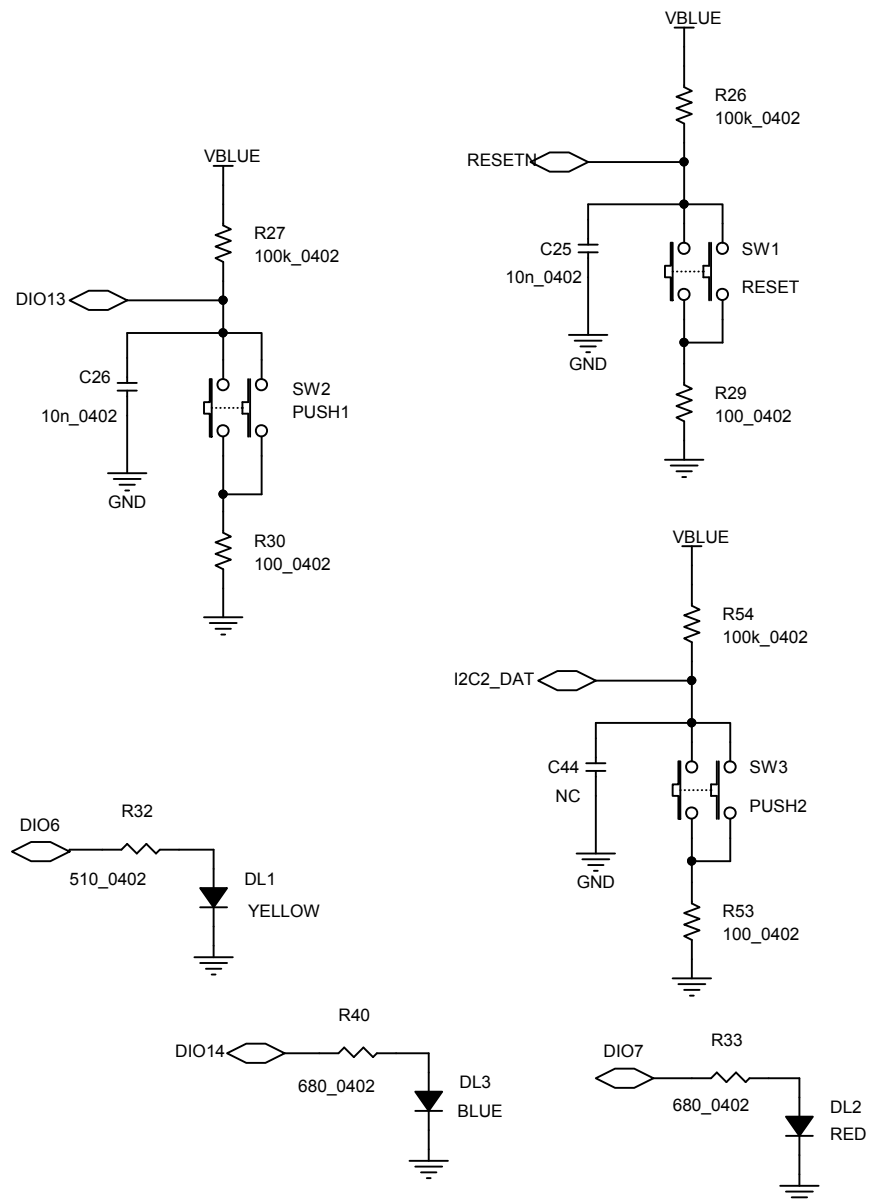
# 1 Schematic diagrams for STEVAL-IDB008V2

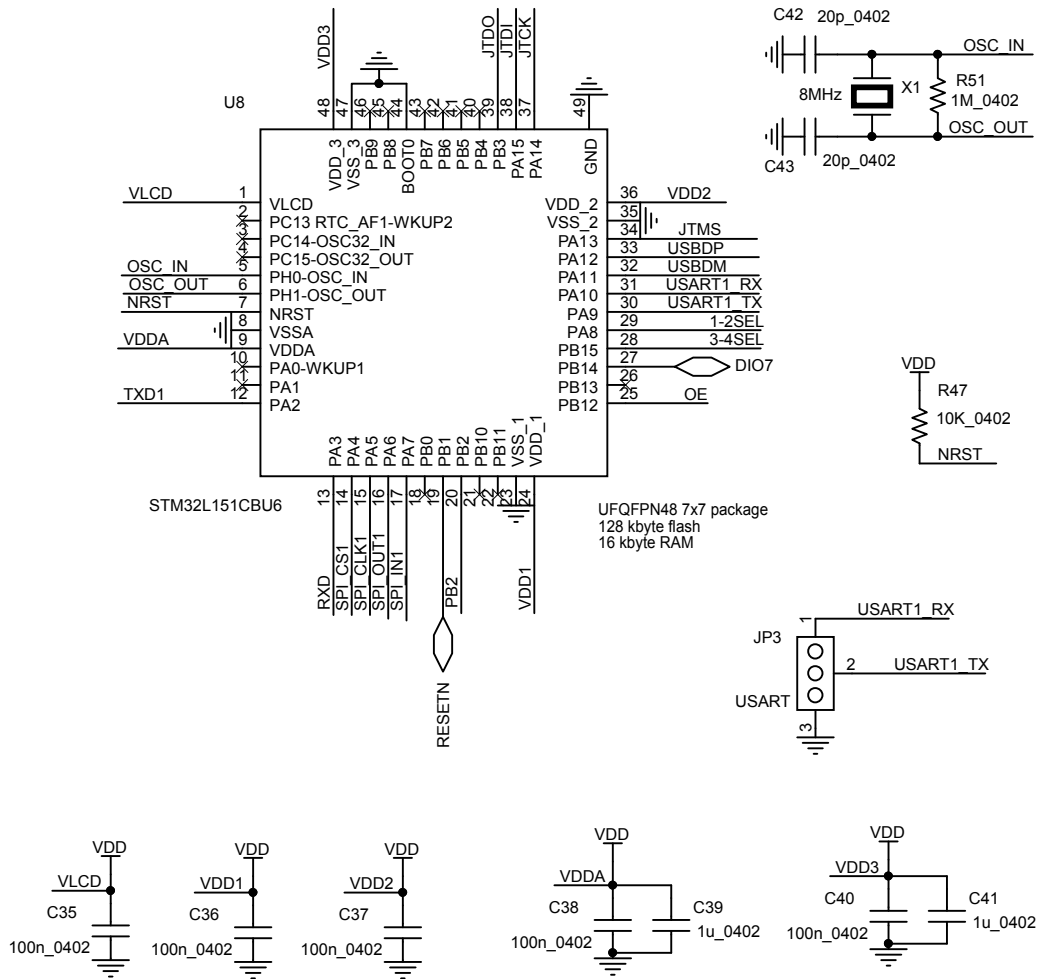
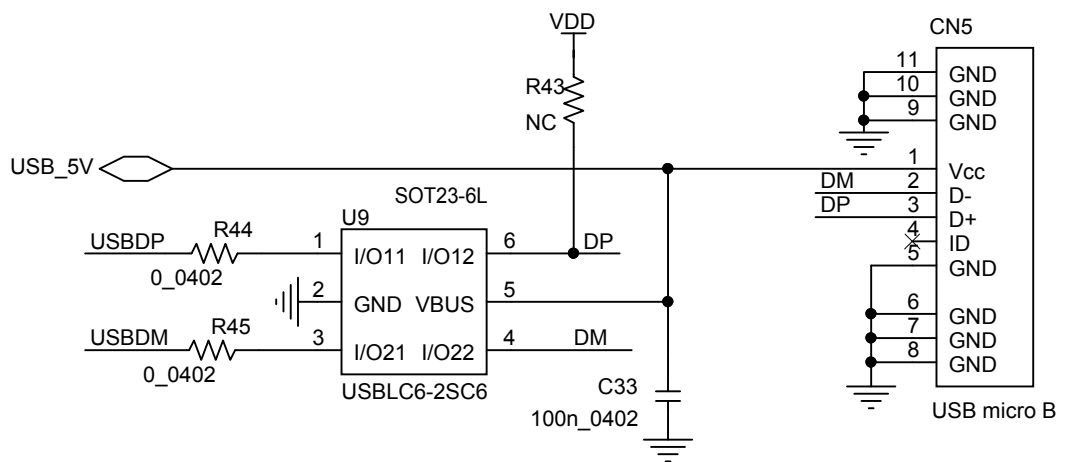
**Figure 1. STEVAL-IDB008V2 - JTAG**

**Figure 2. STEVAL-IDB008V2 - Arduino connection**


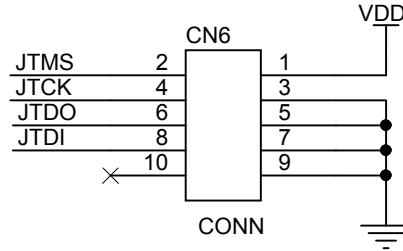
**Figure 3. STEVAL-IDB008V2 circuit schematic**

**Figure 4. STEVAL-IDB008V2 - power managements**


**Figure 5. STEVAL-IDB008V2 - SENSORS**


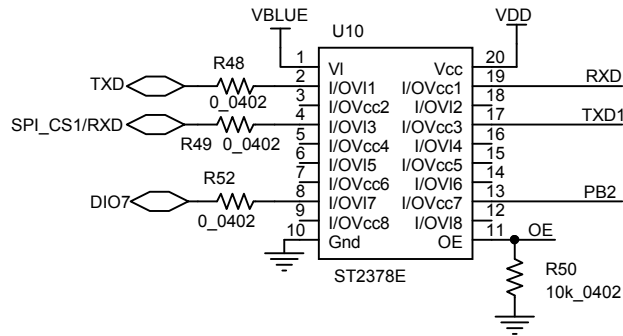
**Figure 6. STEVAL-IDB008V2 - buttons and leds**



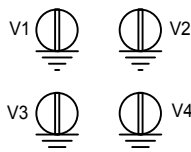
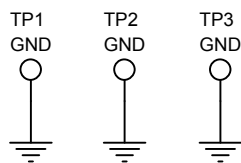
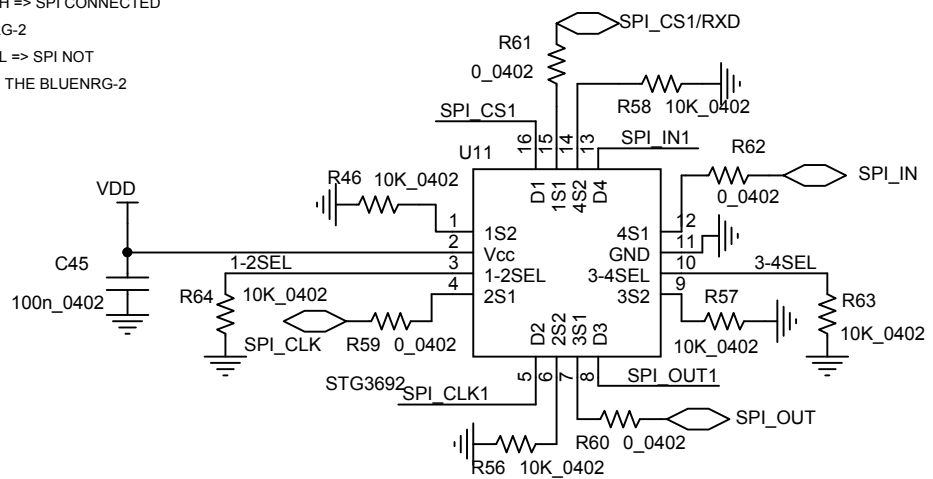
**Figure 7. STEVAL-IDB008V2 - micro**

**Figure 8. STEVAL-IDB008V2 - USB**


**Figure 9. STEVAL-IDB008V2 - JTAG for micro**


Male Connector 2x5

**Figure 10. STEVAL-IDB008V2 - level translator**

**Figure 11. STEVAL-IDB008V2 - Switch**

1-2SEL=3-4SEL=H => SPI CONNECTED  
TO THE BLUENRG-2  
1-2SEL=3-4SEL=L => SPI NOT  
CONNECTED TO THE BLUENRG-2



## Revision history

**Table 1. Document revision history**

| Date        | Version | Changes  |
|-------------|---------|--|
| 11-Jan-2018 | 1       | Initial release.   |
| 23-Jan-2018 | 2       | Updated: Section 1 Schematic diagrams for STEVAL-IDB008V2. |
| 13-Feb-2018 | 3       | Fixed figure 7   |



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