INSTALLATION AND OPERATION

QUICK GUIDE

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UC6226NIS

GNSS Positioning Chip

Evaluation Kit

Revision History

Version	Revision History	Date
R1.0	First release.	Apr., 2023
R1.1	Changed the product name from UC6226NIS EVK Suite to UC6226NIS EVK. Changed the product photos.	June, 2025

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Foreword

This document provides information of Unicore's UC6226NIS Evaluation Kit (EVK). It can be used together with *UPrecise_User Manual*.

Target Readers

This manual is written for technicians who are familiar with GNSS chips. It is not for general readers.

Contents

1 Overview

UC6226NIS Evaluation Kit (hereinafter referred to as EVK) is mainly used to test and evaluate the function and performance of UC6226NIS chip for user convenience.

The delivered package contains:

Table 1-1 UC6226NIS EVK Package

Type	Contents	Number
Main device	UC6226NIS EVK	1
Accessory	Alligator clip test leads	6
Accessory	12V power adapter GST25U12-P1J	1
Accessory	GNSS single-frequency antenna - JCA236	1
Accessory	Straight through serial cable	1
Accessory	Micro-B USB cable	1

2 EVK Introduction

The figure below shows the appearance of UC6226NIS EVK.

Figure 2-1 UC6226NIS EVK

3 Interfaces & Indicator

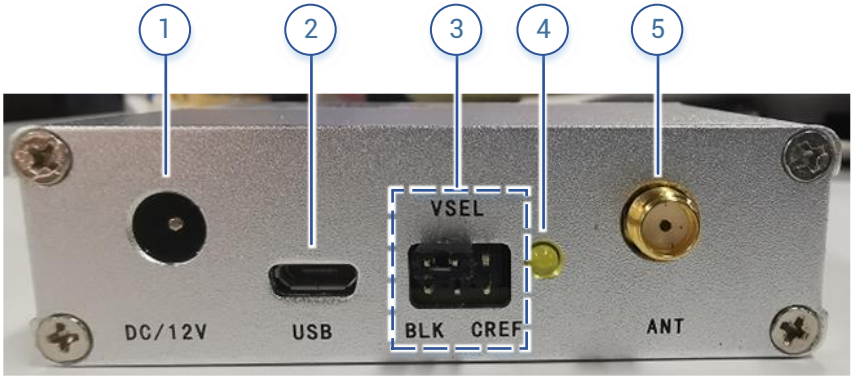


Figure 3-1 Interfaces & Indicator on UC6226NIS EVK (Front Panel)

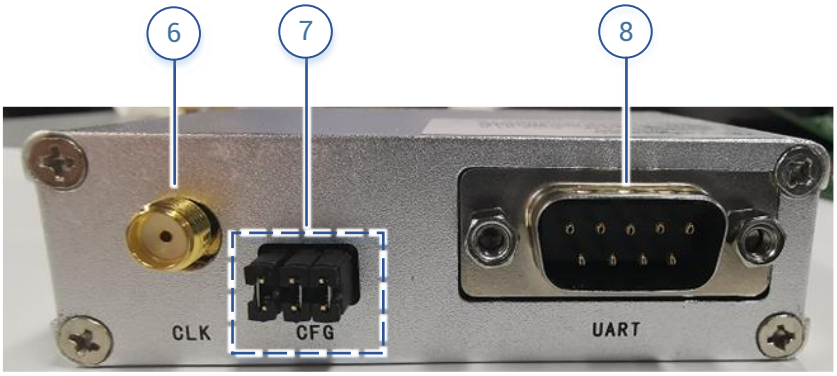


Figure 3-2 Interfaces & Indicator on UC6226NIS EVK (Rear Panel)

Table 3-1 Interfaces & Indicator on UC6226NIS EVK

No.	Interface/ Indicator	Description
1	DC/12V	+12V power adapter interface
2	USB	Power supply and data interface: use a mobile phone communication cable to connect the EVK and a computer for power supply of + 5V and data transmission

No.	Interface/ Indicator	Description
3	VSEL	Power and communication selection interface: as shown in Figure 3-3, when the jumper connects pin 2 and pin 4, the power supply is 12 V, and the communication interface is DB9-232; when the jumper connects pin 4 and pin 6, the power supply is 5 V, and you can use the USB cable for both power supply and data transmission.
4	Indicator	Power / PPS indicator, which flashes when the positioning state is effective.
5	ANT	RF signal input: this interface is connected to the antenna
6	CLK	Backup
7	CFG	VCC_IO interface: control the UC6226NIS IO power on and off using the jumper
		VCC_CORE interface: control the UC6226NIS core power on and off using the jumper; it can be used to test the chip power consumption
		V_BACK interface: control V_BACK power on and off using the jumper (recommended not to move)
8	UART	Backup

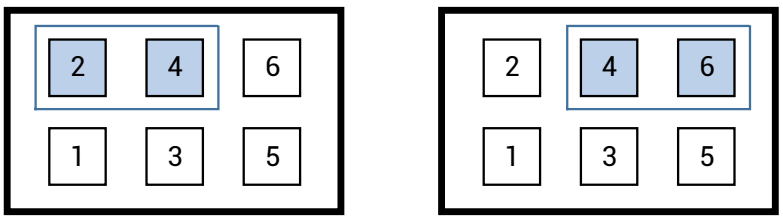


Figure 3-3 Jumper on the VSEL Interface

(Left: +12V power supply using the adapter; right: +5V power supply using the USB cable)

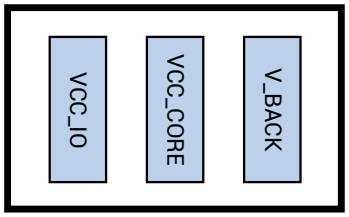


Figure 3-4 Details of the CFG Interface

4 Installation & Function Test

4.1 Installation

Step 1: Make sure to take full anti-static measures, such as wearing anti-static wrist straps and grounding the workbench.

Step 2: Select the GNSS antenna with appropriate gain (the GNSS systems and frequencies supported by the antenna should be in line with the chip), fix it in the non-blocking area, and connect the antenna to the ANT port on the EVK.

Step 3: Connect the EVK to the PC. There are two ways to supply power and transfer data:

1) If you use the USB cable, you should install the jumper on the top right-hand corner at the VSEL interface (see Figure 3-3), and connect the EVK to the PC for power supply and data transmission.

2) If you use the 12 V power adapter, you should install the jumper on the top left-hand corner at the VSEL interface (see Figure 3-3), and use the straight through serial cable to transfer data.

Step 4: Open the UPrecise software on the PC.

Step 5: Configure the receiver through UPrecise to display the constellation view, data stream, tracking status, etc. For more information, please refer to *UPrecise_User Manual*.

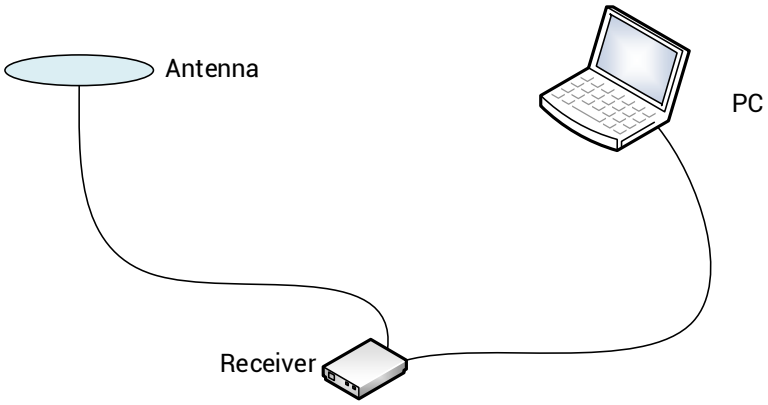


Figure 4-1 Installation of the EVK

4.2 Power Consumption Test

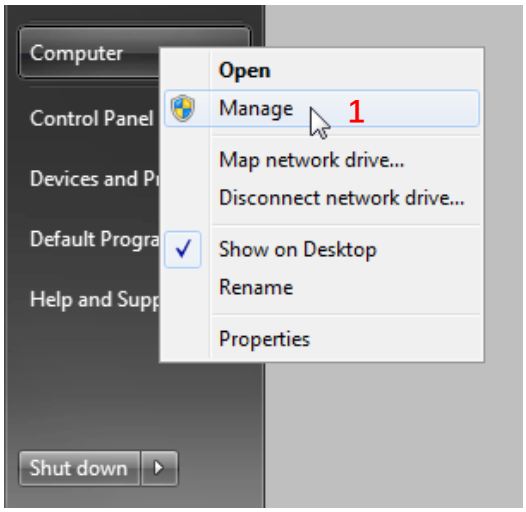
Taking the power consumption of VCC_CORE as an example, when the EVK is powered off, remove the jumper on the VCC_CORE interface (as shown in Figure 3-4), and use two alligator clip test leads; connect one end of the leads to the tested pins and the other end to a multimeter. Adjust the multimeter to the current mode, and set the gear to “A”. Power on the EVK, and check the test current of the ammeter after normal positioning, and the value of **3.3V * test value** is the chip's core power consumption.

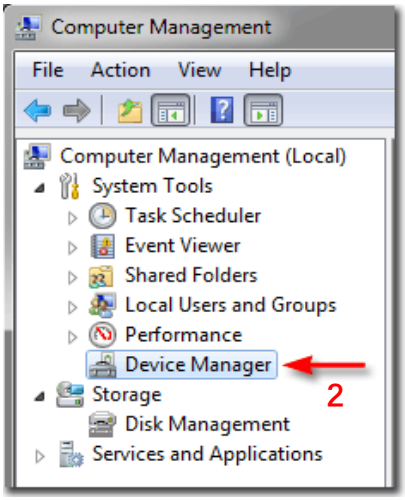
Use similar method to test the power consumption of VCC_IO and V_BACK respectively.

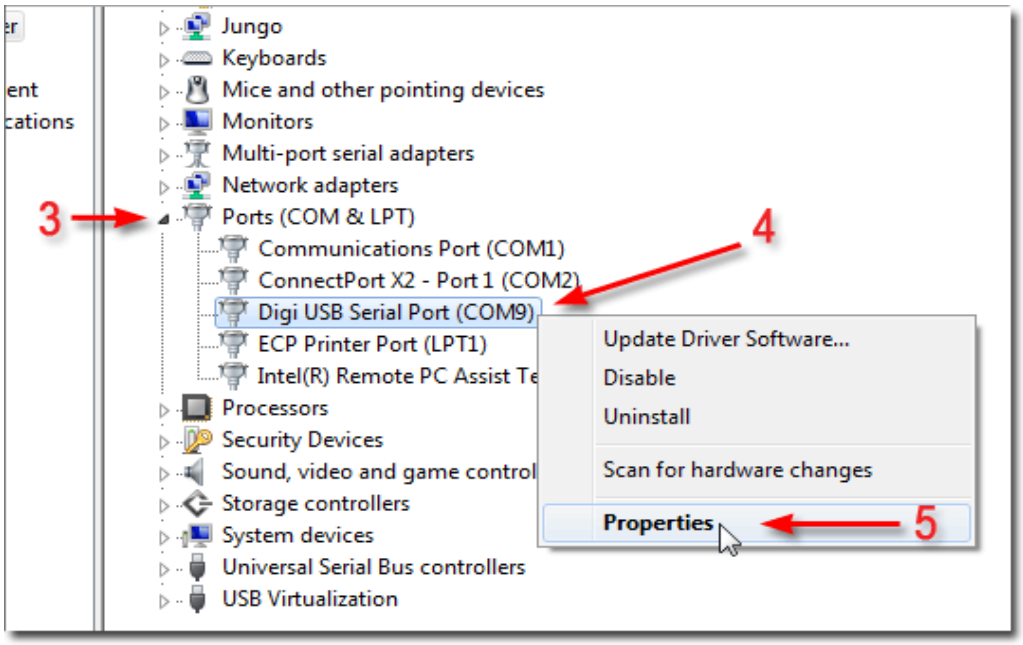
Figure 4-2 Power Consumption Test

5 Notes

When using the USB cable for power supply and communication, there may be a serial port mouse conflict. At this time, the serial enumerator needs to be removed from the serial port settings, as shown below:







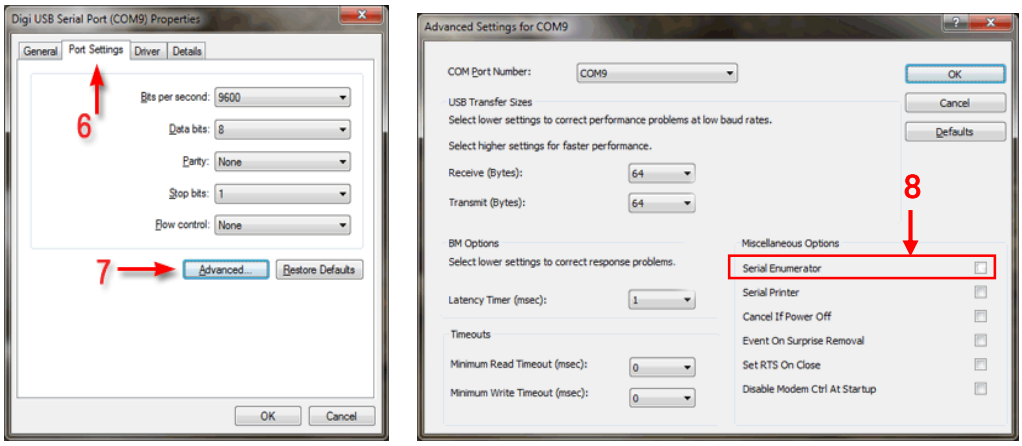


Figure 5-1 Port Settings

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