



INSTALLATION AND OPERATION
QUICK GUIDE

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UM760 EVK

Navigation and Positioning Module Evaluation Kit

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Foreword

About This Document

This document provides information about Unicore's UM760 EVK (evaluation kit). It can be used together with *UPrecise_User Manual*.

Target Readers

This document is intended for technical personnel familiar with GNSS receivers.

Statement

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Revision History

Version	Revision History	Date
R1.0	First release.	Mar. 2026

Document Status

Releases	Status Descriptions	Current Status
Primary	This is a pre-release version with target specifications that are subject to revision.	
Alpha release	This is an alpha release version, which has been preliminarily tested and verified. The content may undergo minor modifications based on user feedback and further testing.	
Production release	The document contains the complete and final specifications.	√



1 Overview

UM760 evaluation kit (hereinafter referred to as EVK) is mainly used to test and evaluate the function and performance of Unicore UM760 module for user convenience.

The delivered package contains:

Table 1-1 UM760 EVK Package

Type	Contents	Number
Main device	UM760 EVK	1
Accessory	GNSS antenna supporting L1 (1561~1602MHz)	1
Accessory	USB Type-C cable	1
Accessory	FC2.54 flat cable	1

2 EVK Introduction

The appearance of the UM760 EVK is shown in the following figure.



Figure 2-1 UM760 EVK

3 Interfaces

The connectors, buttons, and indicators of the UM760 EVK are shown as below:



Figure 3-1 Interfaces of the UM760 EVK

Table 3-1 Interfaces of the UM760 EVK

Interface	Function	Description
RESET	Reset	Press the button to reset the module
ANT	RF signal input	Antenna RF signal input
RSV	Reserved	See Table Description of the Reserved Interfaces for more details.
WIFI	Reserved	/
SD CARD	SD card socket	SD card socket
SPEED	NC	This interface is not supported by the UM760 module.
FWD	NC	This interface is not supported by the UM760 module.
USB	USB Type-C connector	Power supply (+5V) and data communication
PWD	Power indicator	Upon power on, the PWD indicator stays constantly on. When positioning is not achieved, the PWD indicator flashes at 1 Hz. If a file storage error occurs or data reception times out, the PWD indicator will flash at 5 Hz.
PPS	PPS signal indicator	Upon power on, the PPS indicator stays constantly on. Once positioning is achieved, the PPS indicator starts flashing.

Table 3-2 Description of the Reserved Interfaces

PIN Number	Interface	Description
1	PPS	PPS signal
2	RSV	Reserved
3	RSV	Reserved
4	RSV	Reserved
5	BOOT0_High	BOOT0 of MCU on the board
6	GND	Ground
7	RSV	Reserved
8	RXD_F_PC	Serial port input of MCU on the board (RS232)
9	GND	Ground
10	TXD_T_PC	Serial port output of MCU on the board (RS232)
11	V_BCKP	Backup power input to the module (connected to V_BAT via a jumper)
12	V_BAT	+3 V battery output from the board (connected to V_BCKP via a jumper)
13	RSV	Reserved
14	GND	Ground

4 Instructions

4.1 Hardware Installation

[Steps]

1. Make sure to take adequate anti-static measures, such as wearing an anti-static wrist strap and grounding the workbench.
2. Open the package box and take out the UM760 evaluation kit.
3. Use the GNSS antenna in the package or another antenna with appropriate gain (the GNSS frequencies supported by the antenna should be consistent with that of the module) and fix it in a non-blocking area; connect the antenna to the ANT port on the UM760 EVK.
4. Connect the EVK to a PC through the USB Type-C cable.
5. Open the UPrecise software on the PC.
6. Control the receiver through UPrecise to display constellations view, log messages, receiver status, etc. For more information, please refer to *UPrecise_User Manual*.

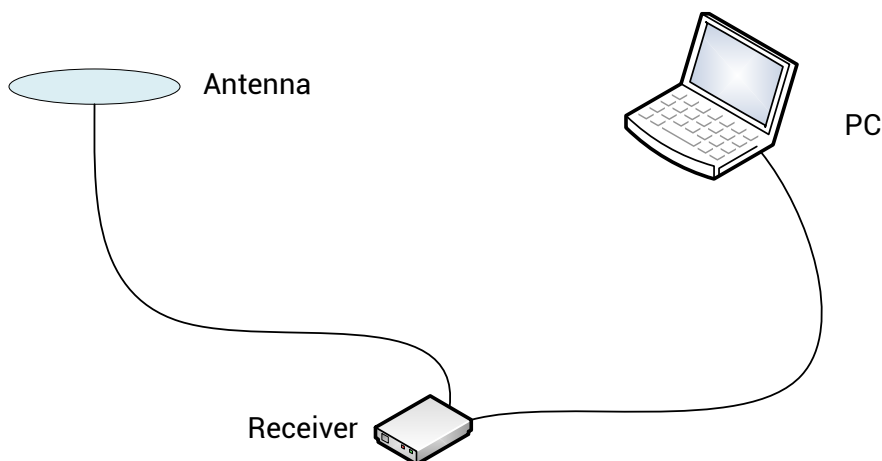


Figure 4-1 Installation of the EVK

4.2 SD Card Instructions

An SD card socket is provided on the UM760 EVK, which is used for data storage and firmware upgrade.

Note: You can also use UPrecise to store data and upgrade the firmware. For more information, see *UPrecise_User Manual*.

4.2.1 Contents in the SD Card Folder

Before using the SD card, copy the zipped folder **UM760_EVK_V2.0_sdcard** to the card. The folder contains the following items, as shown in the figure below.





Name	Type	Size
 bootloader	File folder	
 firmware	File folder	
 Log	File folder	
 config	Configuration settings	1 KB

Figure 4-2 Contents in the SD Card Folder

- The “bootloader” folder contains the loader file for firmware upgrade.
- The “firmware” folder is used for storing the firmware file.
- The “Log” folder is used for data storage.
- The “config.ini” is the configuration file. For details, see the table below.

Table 4-1 Description of the config.ini File

Contents	Description
[config]	/
Update = 0	Firmware upgrade configuration: 0 = Do not upgrade the firmware (by default) 1 = Upgrade the firmware
WorkBaudrate = 115200	The working baud rate of UM760 module ¹ . 115200 by default. The value needs to be the same as that of the module.
LogFileName = log	The name of the log file (English only)
SingleFileSize = 512000000	Max single file size (bytes): If a log file reaches the size limit, logging continues in a new file. (Note: Use decimal values only – hexadecimal is not supported.)
StartRecordStyle = new	The recording style after starting up (new or append): New = log data in a new file (by default);

Contents	Description
	Append = log data in the existing file.
BoardVersion = v2	EVK Version: Default: v2 Options: v1 or v2
ReceiveTimeOut = 30	Data receive timeout threshold (in seconds) Default value: 30 The system will trigger a timeout error if no data is received continuously for more than the specified duration.

¹ The baud rate may vary among different firmware versions.

4.2.2 Data Storage Instructions

[Steps]

1. Insert an SD card into the PC, and copy the zipped folder **UM760_EVK_V2.0_sdcard** to the card.
2. Unzip the folder and open the "config.ini" file. Set the "Update" value to 0 and set the "WorkBaudrate" the same as that of the UM760 module. Set other parameters as needed (see Table [Description of the config.ini File](#) for more information).
3. Remove the SD card from the PC, insert it into the EVK, and power on the EVK¹.
4. Wait for the SD card to record data. During the process, use a port monitor tool to check the status of data transmission.

¹ If the antenna is not connected, the EVK will only output debug information; if you need the positioning information, please connect the antenna before powering on.

4.2.3 Firmware Upgrade Instructions

[Steps]

1. Insert an SD card into the PC, and copy the zipped folder **UM760_EVK_V2.0_sdcard** to the card.
2. Unzip the folder and open "bootloader" to make sure that it contains the loader file. Then, put the firmware file¹ in the "firmware" folder.

Caution: For the bootloader and firmware folders, only one file can be stored in each folder.

3. Open the "config.ini" file, set the "Update" value to 1 and set the "WorkBaudrate" value to align with that of the new firmware.
4. Remove the SD card from the PC, insert it into the EVK, and power on the EVK.
5. Use a port monitor tool to check the status of upgrade.

¹ Please contact Unicore to get the latest firmware.

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