### **EMI TEST REPORT**

Report Number : KSQ-FCC040520



### Appendix B - User's Manual

Please see attached document(s).

# Document : NSA-U3 Quick Guide

- NSA-U3 GPS Receiver Driver Setup User Manual

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User Manual

•NSA-U3 is a smart GPS receiver with USB interface.

•You have to install the **USB to Serial Port driver** before using for the first time.

#### Requirements

•USB 1.1 compliant port •MS Windows98,ME,2000,XP

### **CD-ROM Contents**

•[NSAUx Driver] Setup EXE File •NSA-Ux Quick Guide PDF File

•When you first use the GPS, please make sure that you are outside with good view of the sky. It takes more 2 minutes to loc ate the satellites for the first time. Howev er, it will locate much faster during the su bsequent uses.

#### **Specifications**

 SiRFStarIIe GPS chipset L1 1575.42MHz, C/A CODE 12ch Parallel Tracking Cold start < 45s(typical)Warm start < 38s(typical) Hot start < 8s(typical) SBAS(WAAS enabled) Protocol NMEA-0183 V2.2 (GGA,GLL,GSA,GSV,RMC,VTG) 9600,NONE,8,1,no flow control Accuracy < 10meter 2DRMS Interface USB 1.1 compliant •Environment Temperature −20~+70°C Power/Consumption 5V USB power 110mA(hub not recommended) Size/Weight 55.7×45.4×16.0mm (W x D x H) 90g



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### 1. How to install driver setup utility

- 1.1 Insert NSAUx CD-ROM and run **setup.exe**.
- 1.2 Select an appropriate directory to install.
- 1.3 At the end of the installation, the USB to Serial Port Driver is automatically installed.

Name 🔺	🛃 USB to Serial Port Driver		🔂 USB to Serial Port Driver	
∰InstMsiA.Exe ∰InstMsiW.Exe ⊮NSAUx.msi	Select Installation Folder		Installation Complete	
🔁 Setup.Exe 🢁 Setup.Ini	The installer will install USB to Serial Port Driver to the following folder. To install in this folder, click "Next". To install to a different folder, enter i	it below or click "Browse".	USB to Serial Port Driver has been success Dlick "Close" to exit.	sfully installed.
	Eolder: D-VProgram Files/NAVIUS/USB to Senial Port Driver/ Install USB to Senial Port Driver for yourself, or for anyone who uses th C Everyone C Just me Cancel < Ba	Browse Disk Cost is computer:	SASetup The	X driver is installed successfully. ОК Cencel < Book Соее
If you wa Di re	ant to run the USB to S river Setup utility manu move or reinstall the d	Serial Port Jally to river,	USB to Serial Port Driver You can install or r	r Setup for WIN2000/XP remove the driver. Install
Click Start button on the desktop and select All Programs->USB to Serial Port Driver> Driver Setup				Remove Close
			USB to Serial Por	rt Driver Setup Utility

### 2. How to uninstall driver

- 2.1 Remove NSA-Ux from USB port if connected.
- 2.2 Run the USB to Serial Port Driver Setup Utility.
- 2.3 Click **Remove** button.
- 2.4 Click **OK** button.
- 2.5 Reboot your computer (must)

USB to Serial Port Driver Setup for WIN2000/XP				
🎒 USB-Serial Driver Rem	over 🔀			
Press OK to remove driver.				
Cancel	ок			



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### 3. Connect NSA-Ux to PC

- 3.1 Insert the NSA-Ux GPS to the USB Port.
- 3.2 Click Install the software automatically (at Windows XP)
- 3.3 Click Next (at Windows XP)



3.4 The Driver will assign a virtual COM port (named **NAVIUS USB to Serial Port**) to the NSA-Ux GPS.

Make sure that <u>which COM port is assigned to the NSA-Ux</u> at the device manager. To see the COM port,

My Computer->Properties, Click on Device manager button at the Hardware tab.

		System Properties	<u>?</u> ×	📮 Device Manager	
1		System Restore Automatic Updates	Remote	File Action View Help	
My Com  Explore Explore Search Manage My Net Place Create Shortcut Delete Interr Explo Properties	Add Hardware Wizard  Add Hardware Wizard  Add Hardware Wizard helps you install  Add Hardware Wizard helps you finite and the second se	Advanced	← → III III ← A III ← A III ← A IIII ← A IIIII ← A IIIII ← A IIIII ← A IIIIII ← A IIIIIIII		
	Map Network Drive Disconnect Network Drive Create Shortcut Delete Rename	Device Manager The Device Manager lists all the hardware of on your computer. Use the Device Manager properties of any device. Driver Signing Device Hardware Profiles	levices installed to change the te Manager	Keyboards     Mice and other pointing devices     Mice and other pointing devices     Mice and other devices     Other devices     Other devices     Other devices     Other devices     Mice and Serial Port (COM1)     NAVUS USB to Serial Port (COM3)     Other port (LPT)	
	Properties	Hardware profiles provide a way for you to s different hardware configurations. Hardware DK Ca	et up and store vare Profiles ncel Apply	⊕ ♥ Processors             ⊕ ♥ Sound, video and game controllers             ⊕ ♥ System devices             ⊕ ♥ Universal Serial Bus controllers	

To verify the virtual COM port

If the **NAVIUS USB to Serial Port** doesn't appear, you must remove driver and reboot computer then re-install driver using NSA-Ux Driver Setup Utility



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### 4.Test NSA-Ux

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Connected 0:00:26

ANSIW

#### 4.1 At the desktop, Click Start button

and select **All Programs**->**USB to Serial Port Driver -**>**USB to Serial test**. The following hyper terminal appears.

Image: Serial Test - HyperTerminal         File         Edit         View         Call         Transfer         Help         Image: Serial Test - HyperTerminal         Image: Serial Test - HyperTest	<ul> <li>4.2 If the virtual COM port is not COM1, click <b>Disconnect</b> button.</li> <li>4.3 Click <b>Properties</b> button on the toolbar.</li> <li>4.4 Choose the virtual COM Port which is found at 3.4</li> </ul>
Connected 0:00:15 ANSIW 9600 8-N-1 5CF	NSA-U2 Test Properties
4.5 Click <b>Call</b> button.	Connect To Settings NSA-U2 Test Change Icon Country/region: United States [1] Enter the area code without the long-distance prefix. Area code: 82 Phone number: Connect using: CDM1
	TCP/IP (Winsock)
♦ USB to Serial Test - HyperTerminal         □ ×           File         Edit         View         Call         Transfer         Help           □ ▷         ● <th>Use country/region code and area code  Redial on busy  OK Cancel</th>	Use country/region code and area code  Redial on busy  OK Cancel
\$G6000.0000,N,72000.0000, \$GPGSA,A,1,,,,,,,,,,,,50.0,50. \$GPRMC,000053.996,V,36000.0000, \$GPVTG,T,M,0.000000,N,0.00000	

# If the **USB to Serial Port Driver** installs well,

you can receive the NMEA format data from NSA-Ux GPS as the left picture shows.



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9600 8-N-1

### 5. Q&A

# 1) How do I change the virtual COM port number assigned by the USB to Seri al Port Driver?

 $\rightarrow$ After the driver is installed, it will create a virtual COM port and the default setting assigned by the OS will be COM2 or COM3 if there are two physical COM ports on your computer. If you want to change the assigned virtual COM port for the NSA-Ux to the other COM port, please follow the steps below.

-Double click My Computer, Control Panel, System

-Click Device Manger tab

-Click <u>Ports(COM&LPT)</u> and double click on the <u>NAVIUS USB to Serial Port (COM</u> <u>x</u>)

-Click Port Settings tab and click Advanced button

You can change the virtual COM port to the other one at the COM port combo box.

### 2) Is it possible to connect NSA-Ux using external Hub device?

→ NSA-Ux is bus-powered USB device. Bus-powered devices rely totally on power fro m the USB cable. The power consumption of NSA-Ux is 160~185mA. So, if notebook c omputer run short of battery power, NSA-Ux will not work properly. In addition, <u>it is r</u> <u>ecommended that NSA-Ux is directly connected to USB port of notebook or PC withou</u> <u>t extra hub or else.</u>

# 3)After disconnecting NSA-Ux from USB port, I connect NSA-Ux to USB port again. Why I cannot see any incoming data in HyperTerminal?

→When NSA-Ux is removed, Virtual COM port will be disappeared. Hyperterminal can not reconnect COM port automatically. In Hyperteminal, Simply press disconnect butto n and connect button again.

# 4) When I connect NSA-Ux, there is some delay to see incoming data. Why is that?

 $\rightarrow$ To avoid Bluescreen problem in Windows XP, NSA-Ux outputs data after 5 seconds.



### **FCC Compliance Statement**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation.

### **INFORMATION TO THE USER**

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

### WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.