## **UNO-1019**

PXA 200MHZ, 64MBRAM, 2xLAN, 4xCOM Universal Network Controller

**User Manual** 

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UNO-1019 User Manual

## **Product Warranty (2 years)**

Advantech warrants to you, the original purchaser, that each of its products will be free from defects in materials and workmanship for two years from the date of purchase.

This warranty does not apply to any products which have been repaired or altered by persons other than repair personnel authorized by Advantech, or which have been subject to misuse, abuse, accident or improper installation. Advantech assumes no liability under the terms of this warranty as a consequence of such events.

Because of Advantech's high quality-control standards and rigorous testing, most of our customers never need to use our repair service. If an Advantech product is defective, it will be repaired or replaced at no charge during the warranty period. For out-of-warranty repairs, you will be billed according to the cost of replacement materials, service time and freight. Please consult your dealer for more details.

If you think you have a defective product, follow these steps:

- 1. Collect all the information about the problem encountered. (For example, CPU speed, Advantech products used, other hardware and software used, etc.) Note anything abnormal and list any onscreen messages you get when the problem occurs.
- 2. Call your dealer and describe the problem. Please have your manual, product, and any helpful information readily available.
- 3. If your product is diagnosed as defective, obtain an RMA (return merchandize authorization) number from your dealer. This allows us to process your return more quickly.
- 4. Carefully pack the defective product, a fully-completed Repair and Replacement Order Card and a photocopy proof of purchase date (such as your sales receipt) in a shippable container. A product returned without proof of the purchase date is not eligible for warranty service.
- 5. Write the RMA number visibly on the outside of the package and ship it prepaid to your dealer.

#### **Declaration of Conformity**

## CE

This product has passed the CE test for environmental specifications when shielded cables are used for external wiring. We recommend the use of shielded cables. This kind of cable is available from Advantech. Please contact your local supplier for ordering information.

## FCC Class A

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

### **Technical Support and Assistance**

- Step 1. Visit the Advantech web site at **www.advantech.com/support** where you can find the latest information about the product.
- Step 2. Contact your distributor, sales representative, or Advantech's customer service center for technical support if you need additional assistance. Please have the following information ready before you call:

- Product name and serial number

- Description of your peripheral attachments

- Description of your software (operating system, version, application software, etc.)

- A complete description of the problem
- The exact wording of any error messages

#### **Safety Instructions**

- 1. Read these safety instructions carefully.
- 2. Keep this User's Manual for later reference.
- 3. Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.
- 4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.
- 5. Keep this equipment away from humidity.
- 6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall may cause damage.
- 7. The openings on the enclosure are for air convection. Protect the equipment from overheating. DO NOT COVER THE OPENINGS.
- 8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
- 9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
- 10. All cautions and warnings on the equipment should be noted.
- 11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.
- 12. Never pour any liquid into an opening. This may cause fire or electrical shock.
- 13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
- 14. If one of the following situations arises, get the equipment checked by service personnel:
- a. The power cord or plug is damaged.
- b. Liquid has penetrated into the equipment.
- c. The equipment has been exposed to moisture.
- d. The equipment does not work well, or you cannot get it to work according to the user's manual.
- e. The equipment has been dropped and damaged.
- f. The equipment has obvious signs of breakage.
- 15. DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT WHERE THE STORAGE TEMPERATURE MAY GO BELOW -

20° C (-4° F) OR ABOVE 60° C (140° F). THIS COULD DAM-AGE THE EQUIPMENT. THE EQUIPMENT SHOULD BE IN A CONTROLLED ENVIRONMENT.

16. CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER, DISCARD USED BATTERIES ACCORD-ING TO THE MANUFACTURER'S INSTRUCTIONS.

The sound pressure level at the operator's position according to IEC 704-1:1982 is no more than 70 dB (A).

DISCLAIMER: This set of instructions is given according to IEC 704-1. Advantech disclaims all responsibility for the accuracy of any statements contained herein.

#### **Safety Precaution - Static Electricity**

Follow these simple precautions to protect yourself from harm and the products from damage.

- 1. To avoid electrical shock, always disconnect the power from your PC chassis before you work on it. Don't touch any components on the CPU card or other cards while the PC is on.
- 2. Disconnect power before making any configuration changes. The sudden rush of power as you connect a jumper or install a card may damage sensitive electronic components.

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# CHAPTER

## **Overview**

This chapter gives background information on the UNO-1019. It shows you the UNO-1019 overview and specifications.

Sections include:

- Introduction
- Features
- Hardware Specifications
- Safety Precautions
- Chassis Dimensions

## **Chapter 1 Overview**

## 1.1 Introduction

Advantech's UNO-1019 is a RISC-grade embedded platform that offers 2 LANs, 4 serial ports and 4 Digital Inputs and Outputs to fulfill user's I/O device expansion. For data storage, UNO-1019 also provides a CompactFlash for data storage.

UNO-1019 comes with a Windows CE 5.0 OS offering a pre-build image on board. Microsoft Windows CE is a compact, highly efficient, real-time operating system designed for embedded systems.

UNO-1019 could operate well under  $0 \sim 70^{\circ}$  C, its small size and light weight could fit in industrial robust environment.

With these advantage, UNO-1019 is suitable for communication gateway for converting communication protocol, IO control and data storage.

UNO-1019 is a perfect embedded ready platform that can shorten your development time and offer a rich networking interface to fulfill your diverse requirements.

## 1.2 Features

- Intel XScale PXA-255 200 MHZ Processor
- 64 MB SDRAM on board, 32 MB Flash
- 2 RS-232, 2 RS-232/422/485 serial ports
- Dual 10/100 Mbps Ethernet
- 1 compact flash for data storage
- 4 channel Digital input and output
- 3 channel LED for user define
- Ready platform for WinCE 5.0 build in flash
- Included remote display for easy configuration
- Fanless design for reliable system
- Compact size and light weight
- $0 \sim 70^{\circ}$  C wide range operation
- DIN-rail and wall mounting
- Optional serial isolation protection

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## 1.3 Hardware Specifications

## General

<ul> <li>Certifications</li> </ul>	CE, FCC Class A
• Dimensions (W*H*D)	46 x 162 x 126 mm
• Enclosure	ABS+PC with solid mounting hardware
• Mounting	DIN35 rail, wall
Power Consumption	8.5W
Power Requirement	13 W (10 ~ 30 VDC)
• Weight	400g

### System Hardware

• CPU	32 bit Intel XScale PXA255 200 MHz
• Memory	64 MB SDRAM
<ul> <li>Indicators</li> </ul>	Power, Serial (Tx,Rx), User Define (3 Led)
• Storage	Onboard 32 MB Flash memory
• SSD:	1 x internal type I/II CompactFlash slot
• Others	Real Time Clock, Watch Dog Timer

## System Software

•	OS	WinCE 5.0 (in flash memory)
•	Remote Display	Advantech DiagAnywhere

#### Communication

Serial Ports	2 × RS-232, 2 x RS-232/422/485 w/ DB9
	Automatic RS-485 data flow control
Serial Port Speed	RS-232: 300 ~ 115.2 kbps
	RS-422/485: 300 ~ 115.2 kbps
• LAN	2 x 10/100 Base-T RJ-45 ports

Digital I/O		
Digital In	2 Digital Input	
	Dry Contact	
	Logic level 0 : Open	
	Logic level 1 : Close	
	Wet Contect	
	Logic level 0: +3V max	
	Logic level 1: +10VDC to 30VDC	
Digital Out	2 Digital Output	
	Open Collect to 30V	
	200mA max Load	
	Power Dissipation 450mW	

## Environment

•	Operating	Temperature
---	-----------	-------------

- Storage Temperature
- Operating Humidity
- Storage Humidity

0 ~ 70° C (32° ~ 158° F) -20° ~ 80° C (-4° ~ 176° F) 20 ~ 95% (non-condensing) 0 ~ 95% (non-condensing)

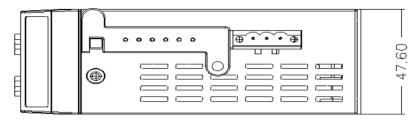


Figure 1.1: UNO-1019 Top View Dimensions

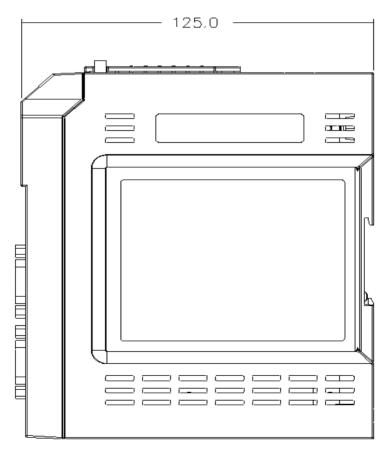


Figure 1.2: UNO-1019 Side View Dimensions

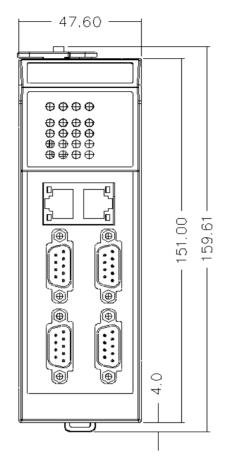


Figure 1.3: UNO-1019 Front View Dimensions

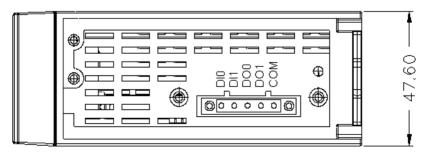


Figure 1.4: UNO-1019 Bottom View Dimensions

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## CHAPTER CHAPTER

## Installation

In this chapter, you will be given an overview of the UNO-1019 hardware installation procedures.

Sections include:

- Overview:
- LED
- Network Connections
- Serial Connections
- Power Connections
- Digital Input/Output
- CompactFlash
- Mounting

## **Chapter 2 Installation**

## 2.1 Overview



Figure 2.1: UNO-1019 Overview

ltem	Description	
1	Serial Port	
2	Networking port	
3	LED	
4	CompactFlash slot	
5	Power	
6	Digital input/output	

## 2.2 LEDs

LEDs to display the power, network, serial and programmable LED status are located on the front panel of UNO-1019, and each of them has its own specific meaning, as shown in the table below.

Table 2.1: UNO-1019 LED Definitions			
LED	Color	Status	Description
PWR	RED	On	System power is on
		Off	System power is off
D1~D3	Green	User pro	ogrammable
Serial TX	Yellow	On	Serial port is transmitting data
		Off	Serial port is not transmitting data
Serial RX	Green	On	Serial port is receiving data
		Off	Serial port is not receiving data
Networking	Green	On	Connected to network
Link		Off	Not connected to network
		Flash	Data is transmitting/receiving
Networking	Yellow	On	Link to 100 Mbps network
Speed		Off	Link to 10 Mbps network

## 2.3 Network Connections

UNO-1019 is equipped with 2 x 10/100 Mbps TX Ethernet ports. The Ethernet ports provide standard RJ-45 jack, and LED indicator on front panel shows link (green) and network speed (yellow).

## 2.4.1 Serial Type Selection

UNO-1019 provides 4 serial Com ports, COM1 & COM2 provide RS-232, and COM3 & COM4 provide RS-232/422/485. The default settings of COM3 & COM4 is RS-422/485, and the UNO-1019 could identify RS-422 or RS-485 automatically according to your wiring. If users want to change the serial type, the chassis can be opened and modified.

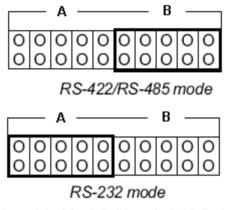


Figure 2.2: COM3 & COM4 Serial Selection

## 2.4.2 Enable Mode

You could set the Enable mode by using DIP switches (S10). If the switches are set to "Off", the driver automatically senses the direction of the data flow and switches the direction of transmission. No handshaking is necessary. If DIP switches are set to "On," the driver is always enabled, and always in high or low status. Please must select a mode before beginning RS-422 applications.

### Default Setting is "Off"



Switch position	Description
On	RS-422 master
Off	RS-422 slave or RS-485 Automatic Direction Control

## 2.4.3 Terminal Resistor

You can install terminator resistors if necessary to match impedance. Each signal line (Tx+/Tx-/Rx+/Rx-/Data+/Data-). Especially in fields with electric noise, installing terminal resistors is helpful to stabilize communications. Make sure that both sides of the RS-422 or RS-485 communication ports are installed on BUS.

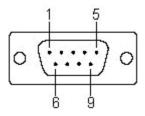
You could install jumpers on JP8 and JP10 to enable terminal resistor (1200hms) for RS-422 or RS-485 of COM3 and COM4. The detail jumper setting shows as following figure.





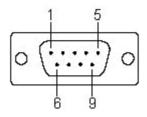
Figure 2.3: COM3& 4 Terminal Resistors (JP8& 10)

Refer to the figure and table below for COM1 & COM2 descriptions.



COM1 & COM2 Pin Assignments	
Pin	RS-232
1	DCD
2	RxD
3	TxD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI

Refer to the figure and table below for COM3 & COM4 descriptions.



COM3 & COM4 Pin Assignments				
Pin	RS-232	RS-422	RS-485	
1	DCD	TxD-	Data-	
2	RxD	TxD+	Data+	
3	TxD	RxD+	-	
4	DTR	RxD-	-	
5	GND	GND	GND	
6	DSR	-	-	
7	RTS	-	-	
8	CTS	-	-	
9	RI	-	-	

## 2.5 Power Connections

UNO-1019 supports  $+10 \sim 30 \ V_{DC}$  power inputs. A detailed power pin image is shown below

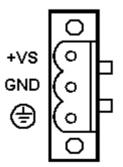


Figure 2.4: Power Pin Assignments

## 2.6 Digital Input/Output

There are two digital inputs and outputs for UNO-1019.

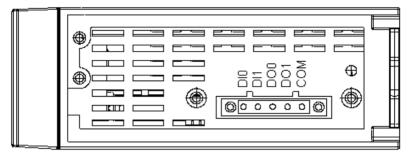


Figure 2.5: Digital I/O Pin Assignments

You can refer to Figures 2.6 & 2.7 for the digital input connection.

UNO-1019 provides 2 ways to use digital inputs function, please refer below figure shows how to connect digital input function.

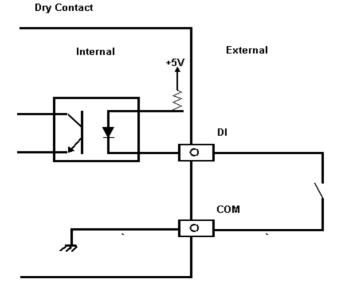


Figure 2.6: Digital Input Connection (Dry Contact)

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Wet Contact

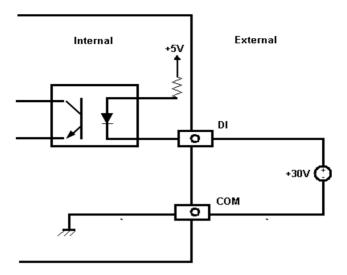


Figure 2.7: Digital Input Connection (Wet Contact)

UNO-1019 also provides digital outputs connection, please refer below figure shows how to connect digital output function. (The default DO status is high)

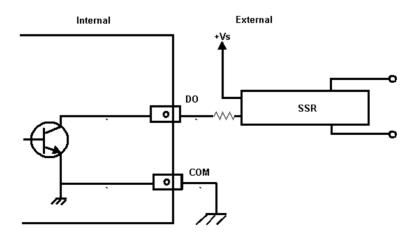


Figure 2.8: Digital Output Connections (Wet Contact)

## 2.7 CompactFlash

The procedure for installing a CompactFlash card into the UNO-1019 is detailed below, please follow these steps carefully

- 1. Make sure system power is off
- 2. Remove the power cord
- 3. Remove CompactFlash the card door on the top panel of UNO-1019
- 4. Plug a CompactFlash card into a CompactFlash card slot.

## 2.8 Mounting

UNO-1019 supports two different mounting methods: Panel & DIN-rail.

## 2.8.1 Panel Mounting

UNO-1019 can be wall mounted by using the included mounting kit.

First, use the screws included in the package to combine the UNO-1019 and metal mounting kit.

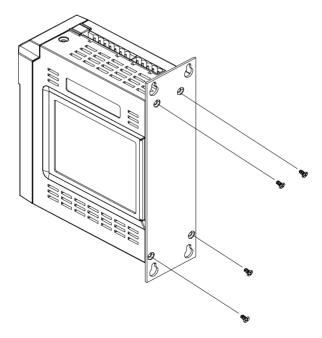


Figure 2.9: Combine the Metal Mounting Kit

Then, screw the whole device to the wall.

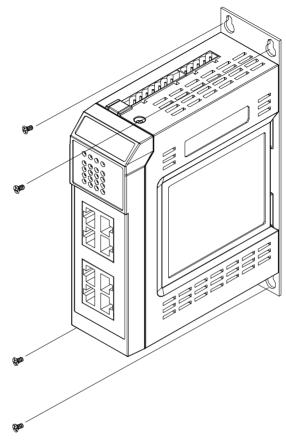


Figure 2.10: Attach UNO-1019 to the Wall

## 2.8.2 DIN-rail Mounting

You can also mount UNO-1019 on a standard DIN-rail by below steps. First, pull down the kit in the back of UNO-1019

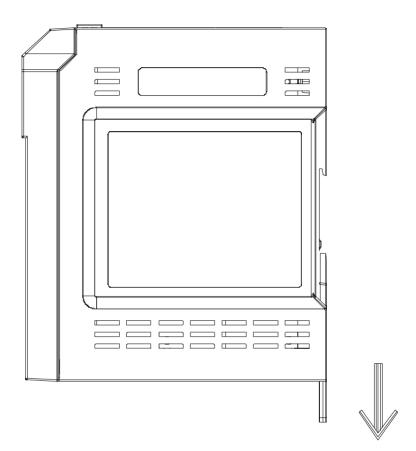


Figure 2.11: Installation to DIN-rail Step 1

Then, hang the UNO-1019 to the DIN-rail with angle of inclination.

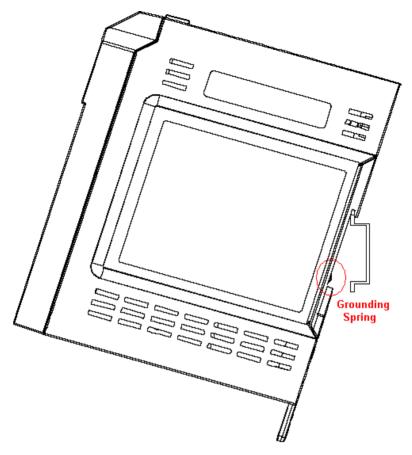


Figure 2.12: Installation to DIN -rail Step 2

Put the UNO-1019 at a right angle with the Din-rail. The grounding spring in the back should be flush with the aluminum rail. Then pull up the kit to wedge the UNO-1019 firmly into place.

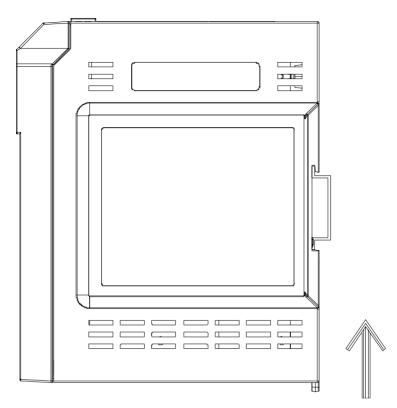


Figure 2.13: Installation to DIN-rail Step 3



## **Initial Setup**

This chapter shows how to initialize the UNO-1019, sections include:

Sections include:

- Initial Procedure
- Configure UNO-1019

## **Chapter 3 Initial Setup**

## 3.1 Initial Procedure

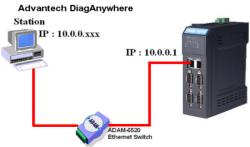
The UNO-1019 offers an easy setup feature: it takes four easy steps for your initial setup before use. Take out the UNO-1019 from the package and follow the steps below for initial setup:

- 1. Connect all peripheral devices, such as RJ-45 connector of Ethernet connection, RS-232 (Male DB9 connector) and RS-485 connectors.
- 2. Connect the power cord to the UNO-1019 and plug the other end of the cord into the power outlet, and then UNO-1019 boots up immediately. (IP Default setting : LAN1 is 10.0.0.1, LAN2 is 10.0.0.2)
- 3. The UNO-1019 default IP is set as 10.0.0.1. Please set the IP of your host computer to be static IP : 10.0.0.XXX for connection with UNO-1019.
- 4. Using the Advantech DiagAnywhere remote display tool to re-configure the IP of UNO-1019 to meet your network configuration. The path of Advantech DiagAnywhere remote display tool in UNO-1019 CD is "\Advantech DiagAnywhere".

## Note: Please refer Advantech DiagAnywhere detail manual in "\Advantech DiagAnywhere" folder

### Advantech DiagAnywhere Remote Display Tool

This tool works only with Ethernet connection. It requires that both the computer and the UNO-1019 have the same Subnet Mask. The default IP address for LAN1 is : 10.0.0.1 and the default Subnet mask is: 255.255.255.0. So you can set your computer IP address to 10.0.0.3 and set the Subnet mask to 255.255.255.0.



\*actually you can set any IP address other than 10.0.0.1 and 10.0.0.2 from 10.0.0.3 to 10.0.0.255. If you connected you computer and UNO-1019 to a router, don't set your computer IP address the same as the Router's.

Connect UNO-1019 with your computer by using a **crossover** Ethernet cable. Or connect both UNO-1019 and your computer into a hub.

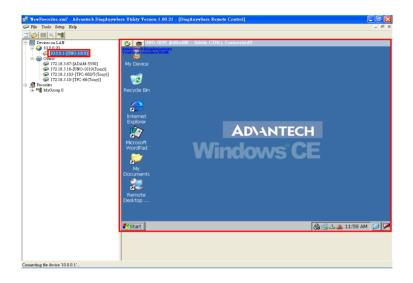
After UNO-1019 boot up, it will broadcast it's IP to the network.Advantech DiagAnywhere remote display tool running on you computer will detect the UDP message that send out by UNO-1019 and show the device name and IP in it's device list. You can select and connect to the device (UNO-1019) in the list as you want.

Execute the Advantech DiagAnywhere tool in configuration computer:

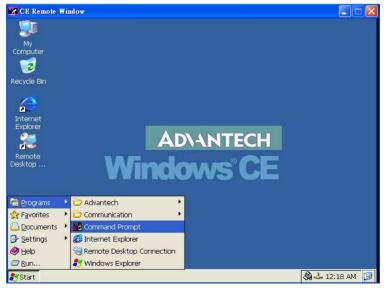
Execute "Search the LAN" function in Advantech DiagAnywhere tool

📴 NewFavorites.xml' - Advantech Diag&nywhere Utility Yersion 1.00.21 - [LAN]					
🚇 File Tools Setup Help					
Devices on LAN     100020     Solution     10.0.0.1-[UNO-1019]	Host name:	nb940902			
🖹 🥑 Others 🥩 172.18.3.67-[ADAM-5550]	Adapter:	10.0.0.20			
- Signa 172.18.3.16-[UNO-1019(Tony)] - Signa 172.18.3.103-[TPC-66S/T(Tony)] - Signa 172.18.3.10-[TPC-66(Tony)]	Connect Timeout:	2000 ms (1000~10000)			
i⊟- 💁 Favorites 😥 📽 📲 MyGroup 0	Remote Agent IP Starting:				

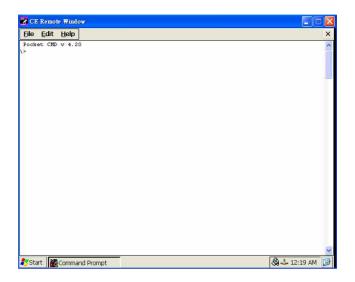
You could see the 10.0.0.1 IP, and then click it, it will connect with UNO-1019. The UNO-1019 desktop will be shown in right part in Advantech DiagAnywhere remote display tool :



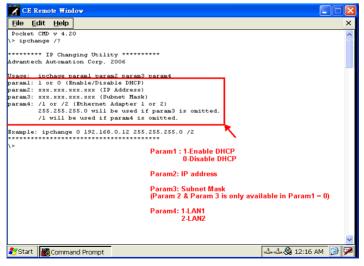
### Please go to the "Command Prompt" for network IP setting



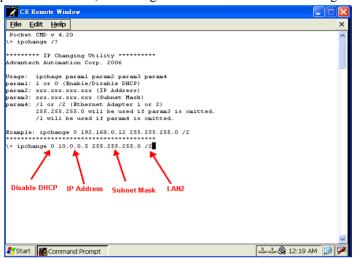
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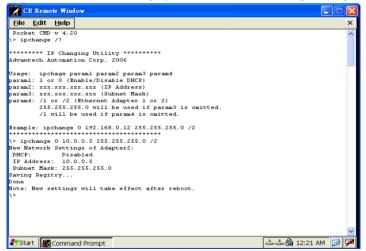
User can use "ipchange" command for IP change setting in command prompt mode. Please type "ipchange /?" for command reference.



If LAN1 of UNO-1019 will be set as DHCP, the ipchange 1/1 will be used as set up command. If LAN2 of the UNO-1019 will be set as the specific IP address, the setting command should be as following :



Press "Enter", the remote display will show the following message.



Wait for the "Saving Registry Done" to make sure the IP change setting work is successfully done.

Power on the UNO-1019 module again to reboot the WinCE for new IP address implement.

- Note: The Advantech DiagAnywhere remote display tool is only used for the configuration work. It wasn't design to run a long time to be used as the remote monitoring tool.
- Note: The Advantech DiagAnywhere in UNO-1019 driver CD is only trail version, which has 5 minutes limitation, you could re-execute Advantech DiagAnywhere for another 5 minutes or contact Advantech Local sales representative for puchasing a formal Advantech DiagAnywhere remote display tool.

UNO-1019 User Manual



# **Advanced Applications**

This Chapter will provide detailed explanations of the UNO-1019's Advanced Applications

Sections include:

- Inserting a CompactFlash Card
- ActiveSync Connection
- Remote Access Configuration
- Autorun Configuration
- Application Development Procedure
- Saving Your Settings
- Network Administration User Guide

# **Chapter 4 Advanced Applications**

## 4.1 Inserting a CompactFlash Card

The procedure for installing a CompactFlash card into the UNO-1019 is as follows, please follows these steps carefully.

- 1. Remove the power connector to power off the UNO-1019
- 2. Remove the CF slot cover.
- 3. Plug a CompactFlash card with user's OS and application program into a CompactFlash card slot on board.
- 4. Plug in the CD slot cover for protecting the CF card.
- 5. Connector the power connector to re-power on the UNO-1019
- Note: How to update the WinCE 5.0 Image for UNO-1019? Please follow the above steps to plug in the CF card with image (the image file is put in the path:\UNO-1019\Image of UNO-1019 CD. please copy the image file from CD to CF card and please be noticed the format of the CF card must be FAT16) then wait for 5 minutes for rebooting the UNO-1019 with new image.

# 4.2 ActiveSync Connection

- Using a null-modem cable connect UNO-1019 COM1 with one of COM port on your computer
- Install Microsoft ActiveSync software on your computer and make the serial port you want connect with UNO-1019 available for ActiveSync (see ActiveSync help for details).
- Note: UNO-1019 will use 115200 as it default BaudRate for the ActiveSync connection. If your ActiveSync program never accept a connection at this BaudRate before, you' might get a timeout. Since it needs to scan from low to high BaudRate, if that takes too long, UNO-1019 will stop trying connect to your computer. So, its better to use another CE device which has a display to connect to you Desktop through ActiveSync at 19200 BaudRate first. Thus ActiveSync on your desktop PC will remember this Baud Rate, and next time when UNO-1019 try to connect to it at this Baud Rate, it'll connect easily.

## ActiveSync Connection

The tool is used for the application program on-line programming/debug requirement. User has to install the Microsoft ActiveSync program in configuration computer first. For the detail operating procedure of ActiveSync, please follow the steps by steps operating guide.

#### Step 1 : Setting Up ActiveSync in a Configuration Computer

- 1. Insert UNO-1019 CD into the configuration computer.
- 2. Install UNO-1019 Software Development Kit for eVC++ from below path: \UNO-1019\SDK
- 3. Install Microsoft ActiveSync 4.1 from below path: \ActiveSync
- 4. Please connect the ActiveSync cable (Null Modem cable, Advantech part no. : 1703093000) to COM1 of UNO-1019 and the COM port of configuration computer for ActiveSync communication.

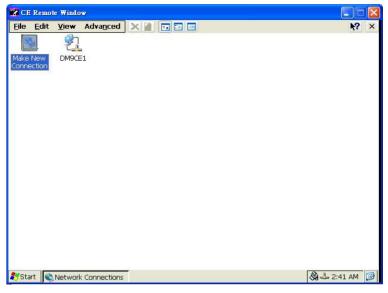
#### Step 2 : Connect the UNO-1019 via uScope through Ethernet.

#### Step 3 : Configure COM1 of UNO-1019

Press Start of task bar of window system and select "Settings" / "Net-work and Dial-up Connections".



1. Click the icon "Make New Connection"



Select the connection type: Direct Connection, then press Next

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93.	<u>2</u>		
Make New [ Connection	DM9CE1		
	Mak	e New Connection	
	Тур	pe a name for the connection:	
		My Connection	
	Sel	ect the connection type:	
		O Dial-Up Connection	
		Direct Connection	
		Virtual Private Network (PPTP)	
		Virtual Private Network (L2TP)	
		OPPP over Ethernet [PPPoE]	
		< Back Next >	
		-	

2. Choose the COM port of UNO-1019.

Device	×
My Connection	
Select a device:	
Serial Port on COM1: 🗸 🗸	Ĩ
Serial Port on COM1:	
Serial Port on COM2:	
TCP/IP Settings Security Settings	]
< <u>B</u> ack Finish	

3. Press Start / Settings / Control Panel, and then "PC Connection".

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Certificates	Date/Time	Dialing	Display	Internet Options	Keyboard	Mouse	Network and Dial-up Co	
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Owner	Password	PC Connection	RAS Server	Regional Settings	Remove Programs	Storage Manager	System	

4. Click Change button to choose your network communication. In this example, change the network to "**My Connection**".



#### Step 4 : Setting Up the Communication Environment of the Host

1. Double click the icon ActiveSync.



2. Select File/Connection Settings

😌 Microsoft Activ	/eSync	
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<u>S</u> ynchronize Stop		
<u>M</u> obile Device <u>E</u> xplore <u>D</u> elete Partnership	•	<b>35</b>
<u>G</u> et Connected <u>C</u> onnection Settin	gs	
Close mioimation type	518	atus

3. Configure the connection settings as below.

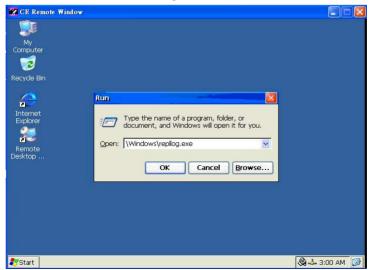
Connect	tion Settings 🛛 🗙				
Click Get Connected to connect your mobile device to the computer.					
	Status: Waiting for device to connect Get Connected				
🔽 Allo	w serial cable or infrared connection to this COM port;				
	DM1				
Stal	tus: COM port is not available				
	w USB connection with this desktop computer.				
	tus: Not Supported				
	w <u>n</u> etwork (Ethernet) and Remote Access Service (RAS) ver connection with this desktop computer.				
Stal	tus: Network is available				
– Statu:	sicon				
<b>⊽</b> s	how status jeon in Taskbar.				
	OK Cancel Help				

4. After you configure the connection setting, it will show the below dialog window when you press Get Connected

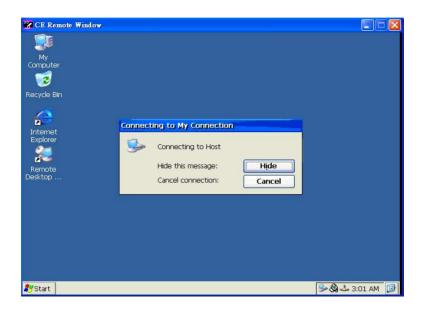


Note: Don't click Next button at this time.

5. Press Start/ Run of UNO-1019; enter the \windows\repllog.exe in the command line of and press OK button



UNO-1019 User Manual



6. Now, press the Next button in the "Get Connected" dialog in the host. It will build the connection between UNO-1019 and host.

Get Connected	×
Checking COM Ports Please wait while Setup locates your mobile device.	ζŤ.
Progress	
Looking for a mobile device Checking on COM Port 1	
< Back Next > Cance	Help

7. If the connection between UNO-1019 and the host has been established, you will see below message in UNO-1019.

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Certificates	Date/Time	Device Management	Dialing	Display	Input Panel	Keyboard	Mouse
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Network and Dial-up Co	Owner	Password	PC Connection	Power	RAS Server	Regional Settings	Remove Programs
0	Con	nected to My	Connection	n			anna an t <del>a</del> saos a 1993.
Storage Manager	Style 🧕	Connect	ted				
-		Hide thi	s message:	H	lide		
				Disco	onnect		
					<u></u> ()		

8. If the connection between UNO-1019 and the host has been established, you will see below message in the host.



Select No, then press Next button.

After the New partnership setting, it will show the below dialog window in the host.

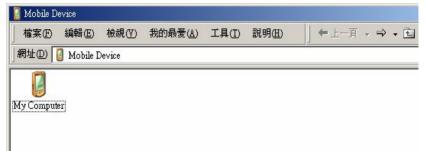
😌 Microsoft ActiveSync	_ 🗆 🗵
<u>F</u> ile ⊻iew <u>T</u> ools <u>H</u> elp	
Sync         Stop         Details         Explore         Options	
Guest	
Connected	
Information Type Status	

9. Press Explore button in Microsoft ActiveSync window, it will pop up the Mobile Device window to display the file resources and information of UNO-1019 as below:

For example, if you click the icon "My Documents", you will see the content of storage in UNO-1019.

🚺 Mobile Device	
檔案(F) 編輯(E) 檢視(Y) 我的最愛(A) 工具(I) 説明(H)	
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Mobile Device       My Computer       Excel Viewer       Image Viewer       Inbox       Internet         諸選擇導自未檢親它的說明。       My Computer       Excel Viewer       Image Viewer       Image Viewer       Imbox       Internet         My Computer       Excel Viewer       Image Viewer       Image Viewer       Imbox       Internet         My Computer       My Documents       PDF Viewer       PowerFoint       Remote         Word Viewer       Word Viewer       Word Viewer       Nord Viewer	
11 object(s)	1.

Begin Transferring Files from the PC to UNO-1019



Double click "My Computer" in "Mobile Device" for file translation.



# 4.3 Remote Access Server Configuration

UNO-1019 provides "Remote Access Services" which offers the possibilities for remote network and user to have TCP/IP access local mail servers, access to database, web servers or other Intranet services.

The following description introduces how to set the dial-up and dial-in configuration.

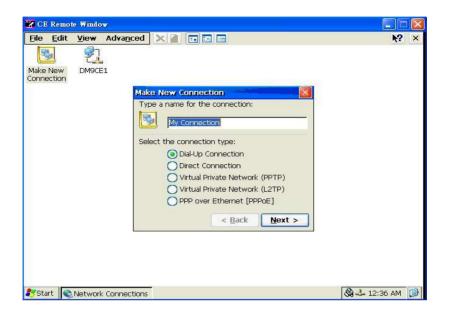
#### **Dial-up Configuration**

1. Press start of task bar of window system and select "Settings" / "Networking and Dial-up Connections"



2. Double click "Make New Connection", then a dialog window will pop out. Select Dial-Up Connection and press Next >.





3. Setup the device according to the specification of the modem and press Next >.

🖌 CE Remo	te Window	
File Edit	View Advanced X I .	<b>№?</b> ×
	2.	
Make New Connection	DM9CE1	
	Modem 🛛	
	My Connection	
	Select a modem:	
	Hayes Compatible on COM1:	
	Haves Compatible on COM1:	
	TCP/IP Settings Security Settings	
	< Back Next >	
	COCK MEAL >	
_		
🏷 Start 🛛 🜊	Network Connections	🔕 🕹 12:37 AM 😼

Enter the telephone number in the "Phone Number" window. Press Finish button to complete the dial-up configuration.

🔀 CE Remote Window		
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Make New Connection	Phone Number       Image: Second stance       Country/region code:       1       Area code:     425       Phone number:     4125678       Force long distance       Force local	
🍠 Start 🔹 Network Conne	ctions	🔕 🕹 12:38 AM 🔯

4. Press start of task bar of window system and select "Setting" ‡ "Networking and Dial-up connections". Double click the new connection that you made previously (it is RAS Connection in this case), and it will pop out the "Dial-Up Connection" dialog window. Enter your user name / password, then press Dial Properties.

📸 CE Remote Window			
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Make New My DM Connection Connection	19CE1		
Dial-Up Conner	tion		
S My	Connection		
User Name:	liweilee	Phone: 9,4125678	
Password:	*****	Dial from: Work	
D <u>o</u> main:	<u> </u>	Dial Properties	
	Save password	<u>Connect</u> Cancel	
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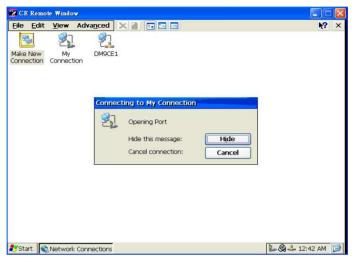
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1ake New onnection	My DM9CE1 Connection	
	Dialing Properties 🛛 🕐 🔀	
	When dialing from: Work Remove	
	Local settings are: The local area code is: 425 Dialing Patterns	
	The local <u>c</u> ountry/region code is:	
	Dial using: <u>Diane</u> Disable call waiting by dialing:	

5. Press Dialing Patterns button in the Dialing Properties window. Edit the dialing pattern for each type of call to change how the phone is dialed.

Note: Country/Region Code, please enter "E" or "e" Area Code, please enter "F" or "f" Number, please enter "G" or "g"

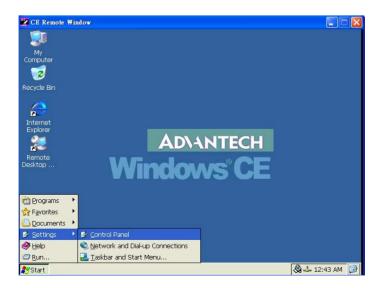
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Make New Connection	My DM9CE1 Connection	
	Dialing Patterns     Image: Constraint of the second state of the phone is dialed.       When dual     Edit the dialing pattern for each type of call to change how the phone is dialed.       Local set     Second calls dial:       For Local calls dial:     For Local calls dial:       Their     19.1FG       For Long Distance calls dial:     19.1FG       For Long Distance calls dial:     19.1FG       For Long Distance calls dial:     19.11,EFG       (E,e = Country/Region Code; F,f = Area Code; G,g = Number)	
🏞 Start 🔍	Network Connections	:41 AM 🞯

6. Double click My Connection and press Connection button to build a PPP connection.



#### **Dial-in Configuration**

1. Press start of task bar of window system and select "Setting" / "Control Panel".



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Owner	Password	PC Connection	RAS Server	Regional Settings	Remove Programs	Storage Manager	System	
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Start	Control Pane	el				<	🕲 🕹 12:44 AM	Ø

3. Select the "General" tab under "Advantech RAS Server Configuration". Select "Enable RAS", "Use Static IP Address" and enter a specified IP in Static IP Address blank.

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	-	-						
		Enable RAS						
		🖊 Use Static I	P Addresses					
		Static IF	Address:	192.168.254.	1			
					ancel	Apply		
	12					denno fo		
Start 🔂	Control Panel	A	lvantech RAS	Server			😪 🕹 12:45 AM	C

2. Double click the RAS Server icon from Control Panel.

4. Select the "Input Lines" tab under "Advantech RAS Server Configuration". Click Add button to setup the input line according to the available RAS device.

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ಶ Start 🛛	Control Panel	A	dvantech RAS	Server			🕲 🕹 12:55 AM 🚺	Ð

5. Select the "Logon Security" tab under "Advantech RAS Server Configuration". Select security protocol if necessary.

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18.000		eral   Input Lin	nes Logon Sec	curity Users				
	Ena	abled Protocols	5					
	5	🗾 Unencrypte	ed Password (P4	AP)				
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6. Select the "Logon Security" tab under "Advantech RAS Server Configuration". Add a new account for remote access services.

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		eral   Input Lir MIN	nes   Logon Sec					
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7. After all settings are completed, press Apply button and then it will pop up the RasConfig dialog window. Press Yes button to save registry setting to storage card.

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RAS configuration procedure is completed and you can access UNO-1019 via remote device.

## 4.4 Autorun Configuration Note

This document introduces how to execute applications automatically when you boot UNO-1019 up.

#### **Autorun Configuration Procedure**

1. Execute the "UNO Configuration Utility"



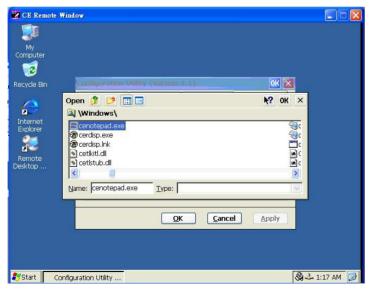
2. Go to the "Misc" page in UNO Configuration Utility.

My omputer					
🥑 cycle Bin	Configuration U	tility (Version :	1.1)	ÖK	
	General	Network	Watchdog	Misc	
a hternet xplorer	OS Image Ver Boot Loader V CPU Type: CPU Temperat	ersion: V1.12 Intel(R) F	420 V1.13 Buil 1XA255	d 002	
emote sktop	Disk & Memor Total		ie	Free	
	FLASH 5,773 DRAM 35,66		KB 18 KB	5,270 KB 31,316 KB	
		ОК	<u>C</u> an	cel Apply	
📕 desktop					

🙀 CE Remote Wind	low	
My Computer	Configuration Utility (Version 1.1)	<b>5</b> 1
Recycle Bin	General Network Watchdog Misc	
Internet	CF Disk CF Disk CF Disk Name: ELASH Reboot	
Explorer	Startup Programs     Registry       Program Path:      Add     Delete       View     View	
Desktop	Web & Ftp Servers       Web Server Root:     Ftp Server root:       \windows\www\wwwpub\     \Temp\	
	<u>QK</u> <u>Cancel</u> Apply	)
🎝 Start Config	uration Utility	🔕 🕹 1:04 AM 📝

3. Click on the "Program Path" bottom for selecting the program for Auto-Run setting..

🔐 CE Remote Wind	low	
My Computer		
Recycle Bin	Configuration Utility (Version 1.1)	
	General Network Watchdog Misc	
	CF Disk CF Disk Name: FLASH	
Internet Explorer	Startup Programs Registry	
90	Program Path: Add Delete Save	
Remote	View	
Desktop	Web & Ftp Servers	
	Web Server Root: Ftp Server root:	
	\windows\www\wwwpub\ \Temp\	
	OK Cancel Apply	
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Please choose the program then press "OK".

Δ	Click on	the	"Add"	hottom	to set	the	nrogram	for	$\Delta uto R$	un e	action
4.	CHCK OII	uic	Auu	Douom	to set	une	program	101	Auto-K	un	action.

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My Computer					
Recycle Bin	Configuration U	and the second second second second		OK 🔀	
1	General	Network	Watchdog	Misc	
2	CF Disk	r		Reboot Machine	
Internet	CF Disk Name:	FLASH	*	Reboot	
Explorer	Startup Prog			Registry	
Remote Desktop	Program Path:	Add	Delete	Save	
	\Windows\cer	iotepad.exe	~	View	
	Web & Ftp S Web Server Ro	oot:	Ftp Server ro	oot:	
	\windows\ww	w\wwwpub\	\Temp\		
		Ōk		cel Apply	
	n.				*
🀉 Start 🛛 Configu	uration Utility				🔕 🕹 1:18 AM []

🜌 CE Remote Wind	ow				
My My					
Computer					-
Recycle Bin		Atility (Mersion	L1)	OK 🛛	
	General	Network	Watchdog	Misc	-
2	CF Disk			Reboot Machine	
Internet	CF Disk Name		×	Reboot	
Explorer	Startur Info	mation		OK X	
	Program	tup.ini was create	d under \ELASH	Astartun	
Remote	Trundo		и иниен (гсман		
Desktop	Web & rep :		-		
	Web Server R		Ftp Server ro	ot:	
	\windows\ww	/w/wwwpub/	\Temp\		
					-
		0	Cano	el <u>A</u> pply	
ಶ Start 🛛 Config	uration Utility				🔕 🕹 1:19 AM 🔯

The UNO Configuration Utility will add the selected program in Auto-Run requirement. Please press "OK" to finish the configuration.

# 4.5 Application Development Procedure

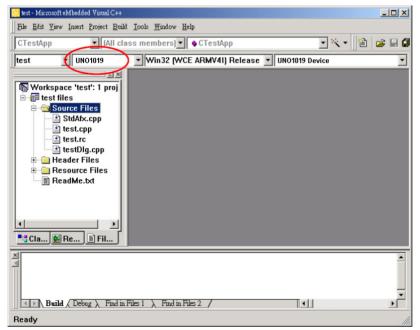
UNO-1019 provides Software Development Kit (SDK) and a built-in runtime library; you can use your existing windows-based programming skills to develop applications easily and rapidly through those tools. This document introduces how to develop custom application step by step.

## 4.5.1 Application Development Procedure

- Install Microsoft eMbedded Visual C++ V4.00 with Service Pack 2 The Microsoft eMbedded Visual C++ tool is a desktop development environment for creating applications and system components for Windows CE .NET-powered devices. This version features new capabilities such as C++ exception handling, Run Time Type Information (RTTI), and a plethora of new debugger functionalities. Before you begin to develop your application, you must install Microsoft eMbedded Visual C++ first.
- 2. Insert UNO-1019 CD into the CD-ROM in the host PC.
- Install UNO-1019 Software Development Kit for eMbedded Visual C++ from below path: \UNO-1019\SDK
- 4. Install Microsoft ActiveSync 4.1 from below path: \ActiveSync
- Build the connection between the host and UNO-1019 via Active-Sync. Further information about ActiveSync, please refer to "ActiveSync Connection".
- 6. Execute eMbedded Visual C++.
- 7. Select "File" ‡ "New" to open a new project. Select your project type in the left blank of window and enter the new project name / location in the right side of window. Please note that CPU type must select Win32 (WCE ARMV4I).

New	<u>? ×</u>
Files Projects Workspaces	
alWCE Application 	Project <u>n</u> ame: test Logation: C:\TEMP\test C:\TEMP\test C <u>feate new workspace</u> Add to current workspace Dependency of:
	CEUs: VWin32 (WCE ARMV4) VWin32 (WCE ARMV4I) VWin32 (WCE ARMV4I) VWin32 (WCE MIPS16) VWin32 (WCE MIPS16) VWin32 (WCE MIPS11] VWin32 (WCE MIPS11_FP)
	OK Cancel

8. Select "UNO-1019" in the main window of Visual C++ .



9. After you complete above configuration procedure, you can start to develop your application. Press "Build"/ "Build xxx.exe" to compile your program to .exe file and download it to UNO-1019.

😥 test - Microsoft eMbedded Visual C++	
File Edit View Insert Project Build Tools Window Help	
CTestApp (A Ctrl+F7	Карр 💽 🔍 🕶 🔛 🗊
Build test.exe F7	41) Release VINO1019 Device V
Batch Byild	
Workspace 'test': 1 p	
E T test files Start Debug	
Update Remote Output File(s)	
test.cpp Execute test.exe Ctrl+F5	
test.rc Set Active Configuration	
testDlg.cpp Configurations      Header Files Statistics Blatform	
Header Files     Set Active Platform	
■ ReadMe.txt	
■: Cla ) 🔐 Re ) 🖹 Fil	
×	▲
$\blacksquare \blacksquare $	
Builds the project	

10. If you want to execute your program, press "Build" / "Execute xxx.exe" and then the program will be executed in UNO-1019.

## 4.5.2 Watchdog Timer

There is a built-in watchdog timer in UNO-1019. Users can utilize the WDT driver with standard WIN32 API to implement the watchdog function in their applications. To use the watchdog driver, firstly user must open it via the name, "WDT1:", then use DeviceIOControl function to access the watchdog hardware. The introduction below includes the definition of DeviceIOControl and its parameters as well as an example.

#### How to Use the Control Code

There are 6 control codes for the operation codes in the WDT driver.

## 1. IOCTL \_WDT\_ENABLE:

Enable the Watchdog timer on your application. By default, if the Watchdog timer is enabled, the WDT driver will automatically reload the timeout counter after a specified period and your application does not need to trigger the strobe periodically for masking the timeout, unless use IOCTL\_WDT\_REBOOT to stop this automatic strobe triggering.

lpInBuffer : unused.

nInBufferSize: unused.

lpOutBuffer: unused.

nOutBufferSize: unused.

## 2. IOCTL \_WDT\_DISABLE:

Disable the Watchdog time on your application. lpInBuffer : unsed. nInBufferSize: unused.

lpOutBuffer: unused.

nOutBufferSize: unused.

## 3. IOCTL\_WDT\_STROBE:

Trigger strobe signal to reload watchdog timeout counter. If your application uses IOCTL\_WDT\_ENABLE to enable the Watchdog first and then sends IOCTL\_WDT\_REBOOT to the WDT driver, your application must trigger the Watchdog once during the Watchdog timer period. If your application has not triggered at the specified period, the device will reboot automatically.

lpInBuffer: unused.

nInBufferSize: unused.

lpOutBuffer: unused.

nOutBufferSize: unused.

## 4. IOCTL\_WDT\_GETTIMEOUT:

Get the Watchdog timeout value.

lpInBuffer: unused.

nInBufferSize: unused.

lpOutBuffer: The DWORD pointer to your Watchdog timeout setting. The Watchdog timeout setting is just a number. 0 means 2 seconds, 1 means 5 seconds, 2 means 10 seconds, 3 means 15 seconds, 4 means 30 seconds, 5 means 45 seconds, 6 means 60 seconds, 7 means 120 seconds, 8 means 300 seconds, 9 means 600 seconds, 10 means 900 seconds, others means the maximum 1140 seconds. The default setting is 5 seconds.

nOutBufferSize: unused.

## 5. IOCTL\_WDT\_SETTIMEOUT:

Set the Watchdog timeout value.

lpInBuffer : The DWORD pointer to your Watchdog timeout setting. The Watchdog timeout setting is just a number. 0 means 2 seconds, 1 means 5 seconds, 2 means 10 seconds, 3 means 15 seconds, 4 means 30 seconds, 5 means 45 seconds, 6 means 60 seconds, 7 means 120 seconds, 8 means 300 seconds, 9 means 600 seconds, 10 means 900 seconds, others means the maximum 1140 seconds. The default setting is 5 seconds.

nInBufferSize:.unused.

lpOutBuffer: unused.

nOutBufferSize: unused.

## 6. IOCTL\_WDT\_REBOOT:

If you want your application to trigger the Watchdog by itself, please use IOCTL\_WDT\_REBOOT to notify the WDT driver. Otherwise, the WDT will trigger itself automatically.

lpInBuffer :unused.

nInBufferSize: unused.

lpOutBuffer: unused.

nOutBufferSize: unused.

#### **DeviceIOControl**

This function sends a control code directly to a specified device driver, causing the corresponding device to perform the specified operation.

BOOL DeviceIoControl( HANDLE hDevice, DWORD dwIoControlCode, LPVOID lpInBuffer, DWORD nInBufferSize, LPVOID lpOutBuffer, DWORD nOutBufferSize, LPDWORD lpBytesReturned, LPOVERLAPPED lpOverlapped );

#### **Parameters:**

. hDevice

[in] Handle to the device that is to perform the operation. Call the Create-File function to obtain a device handle.

. dwIoControlCode

[in] Specifies the control code for the operation. This value identifies the specific operation to be performed and the type of device on which the operation is to be performed. No specific values are defined for the dwIo-ControlCode parameter. However, the writer of a custom device driver can define IOCTL\_XXXX control codes, per the CTL\_CODE macro. These control codes can then be advertised, and an application can use these control codes with DeviceIoControl to perform driver specific functions.

. lpInBuffer

[in] Long pointer to a buffer that contains the data required to perform the operation. This parameter can be NULL if the dwIoControlCode parameter specifies an operation that does not require input data.

. nInBufferSize

[in] Size, in bytes, of the buffer pointed to by lpInBuffer.

. lpOutBuffer

[out] Long pointer to a buffer that receives the output data for the operation. This parameter can be NULL if the dwIoControlCode parameter specifies an operation that does not produce output data.

. nOutBufferSize

[in] Size, in bytes, of the buffer pointed to by lpOutBuffer.

. lpBytesReturned

[out] Long pointer to a variable that receives the size, in bytes, of the data stored into the buffer pointed to by lpOutBuffer. The lpBytesReturned parameter cannot be NULL. Even when an operation produces no output data, and lpOutBuffer can be NULL, the DeviceIoControl function makes use of the variable pointed to bylpBytesReturned. After such an operation, the value of the variable is without meaning.

. lpOverlapped

[in] Ignored; set to NULL.

. Return Values

Nonzero indicates success. Zero indicates failure. To get extended error information, call GetLastError.

## Examples

#define IOCTL\_WDT\_ENABLE CTL\_CODE(FILE\_DEVICE\_UNKNOWN, 0x900, METHOD\_BUFFERED, FILE\_ANY\_ACCESS) #define IOCTL\_WDT\_DISABLE CTL\_CODE(FILE\_DEVICE\_UNKNOWN, 0x901, METHOD\_BUFFERED, FILE\_ANY\_ACCESS) #define IOCTL\_WDT\_STROBE CTL\_CODE(FILE\_DEVICE\_UNKNOWN, 0x902, METHOD\_BUFFERED, FILE\_ANY\_ACCESS) #define IOCTL\_WDT\_GET\_TIMEOUT CTL\_CODE(FILE\_DEVICE\_UNKNOWN, 0x903, METHOD\_BUFFERED, FILE\_ANY\_ACCESS) #define IOCTL\_WDT\_SET\_TIMEOUT CTL\_CODE(FILE\_DEVICE\_UNKNOWN, 0x904, METHOD\_BUFFERED, FILE\_ANY\_ACCESS)

## #define IOCTL\_WDT\_REBOOT CTL\_CODE(FILE\_DEVICE\_UNKNOWN, 0x905, METHOD\_BUFFERED, FILE\_ANY\_ACCESS)

HANDLE m\_hWDT=NULL; TCHAR szClassName[60];

```
// assign the WDT driver name
wsprintf(szClassName, TEXT("WDT1:"));
// Open the WDT driver
m_hWDT = CreateFile(szClassName,
GENERIC_READ|GENERIC_WRITE, 0, NULL, OPEN_EXISTING,
FILE_ATTRIBUTE_NORMAL, NULL);
if ( m_hWDT == INVALID_HANDLE_VALUE ) {
DebugMsg(CString("WDT driver fail"));
return;
}
```

DWORD dwTemp; DWORD nIndex=2;

// Set the Watchdog Timer as 10 seconds. Number 2 means 10 seconds. DeviceIoControl(m\_hWDT, IOCTL\_WDT\_SET\_TIMEOUT, &nIndex, sizeof(nIndex), NULL, 0, &dwTemp, NULL);

// Enable the Watchdog timer

```
DeviceIoControl(m_hWDT, IOCTL_WDT_ENABLE, NULL, 0, NULL, 0, &dwTemp, NULL);
```

// Activate timeout reboot

DeviceIoControl(m\_hWDT, IOCTL\_WDT\_REBOOT, NULL, 0, NULL, 0, &dwTemp, NULL);

```
While (1) {
// do your job here.
Sleep(8000);
DeviceIoControl(m_hWDT, IOCTL_WDT_STROBE, NULL,0, NULL,
0, &dwTemp, NULL);
}
```

DeviceIoControl(m\_hWDT, IOCTL\_WDT\_DISABLE, NULL, , NULL, 0, &dwTemp, NULL);

CloseHandle(m\_hWDT);

## 4.5.3 DIO, LED and Buzzer

UNO-1019 has 2 DI(Digital Input), 2 DO(Digital Output), 3 LED and a Buzzer. Users can access these resources via the built-in Advantech IO Service driver named "ADV1:".The follows are the descriptions and examples of the usable DeviceIoControl codes in this driver:

How to Use the Control Code

There are 11 control codes for the operation codes in DIO, LED, and Buzzer (driver).

## 1. ADV\_IOCTL\_READ\_DI:

Read the Digital Input value.

lpInBuffer : unsed.

nInBufferSize: unused.

lpOutBuffer: The BYTE pointer to the current DI value. BIT0 indicates DI\_0 state; BIT1 indicates DI\_1 state.

nOutBufferSize: User provided output buffer size.

## 2. ADV\_IOCTL\_WRITE\_DO:

Write value out the Digital Output.

lpInBuffer : The BYTE pointer to the DO value that is requesting to write out. BIT0 indicates DO\_0 state; BIT1 indicates DO\_1 state.

nInBufferSize: User provided input buffer size.

lpOutBuffer: unsed.

nOutBufferSize: unsed.

## 3. ADV\_IOCTL\_READ\_DO:

Read the written Digital Output value.

lpInBuffer : unsed.

nInBufferSize: unsed.

lpOutBuffer: The BYTE pointer to the current DO value. BIT0 indicates DO\_0 state; BIT1 indicates DO\_1 state.

nOutBufferSize: User provided input buffer size.

## 4. ADV\_IOCTL\_TURN\_ON\_LED1:

Turn LED1 on. lpInBuffer :unused. nInBufferSize: unused. lpOutBuffer: unused. nOutBufferSize: unused.

## 5. ADV\_IOCTL\_TURN\_OFF\_LED1:

Turn LED1 off. lpInBuffer :unused. nInBufferSize: unused. lpOutBuffer: unused. nOutBufferSize: unused.

## 6. ADV\_IOCTL\_TURN\_ON\_LED2:

Turn LED2 on. lpInBuffer :unused. nInBufferSize: unused. lpOutBuffer: unused. nOutBufferSize: unused.

7. ADV\_IOCTL\_TURN\_OFF\_LED2: Turn LED2 off. lpInBuffer :unused. nInBufferSize: unused. lpOutBuffer: unused. nOutBufferSize: unused.

#### 8. ADV\_IOCTL\_TURN\_ON\_LED3:

Turn LED3 on. lpInBuffer :unused. nInBufferSize: unused. lpOutBuffer: unused. nOutBufferSize: unused.

## 9. ADV\_IOCTL\_TURN\_OFF\_LED3:

Turn LED3 off. lpInBuffer :unused. nInBufferSize: unused. lpOutBuffer: unused. nOutBufferSize: unused.

## 10. IOCTL\_PLAY\_BUZZER:

Make the buzzer start beeping. lpInBuffer : The DWORD pointer to the number of mini-seconds to play. nInBufferSize: User provided input buffer size. lpOutBuffer: unsed. nOutBufferSize: unsed.

#### 11. IOCTL\_STOP\_BUZZER:

Stop the buzzer that is playing. lpInBuffer :unused. nInBufferSize: unused. lpOutBuffer: unused. nOutBufferSize: unused.

#### DeviceIOControl

This function sends a control code directly to a specified device driver, causing the corresponding device to perform the specified operation.

BOOL DeviceIoControl( HANDLE hDevice, DWORD dwIoControlCode, LPVOID lpInBuffer, DWORD nInBufferSize, LPVOID lpOutBuffer, DWORD nOutBufferSize, LPDWORD lpBytesReturned, LPOVERLAPPED lpOverlapped );

## **Parameters:**

. hDevice

[in] Handle to the device that is to perform the operation. Call the Create-File function to obtain a device handle.

. dwIoControlCode

[in] Specifies the control code for the operation. This value identifies the specific operation to be performed and the type of device on which the operation is to be performed. No specific values are defined for the dwIo-ControlCode parameter. However, the writer of a custom device driver can define IOCTL\_XXXX control codes, per the CTL\_CODE macro. These control codes can then be advertised, and an application

can use these control codes with DeviceIoControl to perform driver specific functions.

. lpInBuffer

[in] Long pointer to a buffer that contains the data required to perform the operation. This parameter can be NULL if the dwIoControlCode parameter specifies an operation that does not require input data.

. nInBufferSize

[in] Size, in bytes, of the buffer pointed to by lpInBuffer.

. lpOutBuffer

[out] Long pointer to a buffer that receives the output data for the operation. This parameter can be NULL if the dwIoControlCode parameter specifies an operation that does not produce output data.

. nOutBufferSize

[in] Size, in bytes, of the buffer pointed to by lpOutBuffer.

. lpBytesReturned

[out] Long pointer to a variable that receives the size, in bytes, of the data stored into the buffer pointed to by lpOutBuffer. The lpBytesReturned parameter cannot be NULL. Even when an operation produces no output data, and lpOutBuffer can be NULL, the DeviceIoControl function makes use of the variable pointed to bylpBytesReturned. After such an operation, the value of the variable is without meaning.

. lpOverlapped

[in] Ignored; set to NULL.

. Return Values

Nonzero indicates success. Zero indicates failure. To get extended error information, call GetLastError.

## Examples

#define ADV\_IOCTL\_READ\_DI CTL\_CODE(FILE\_DEVICE\_UNKNOWN, 0x900, METHOD\_BUFFERED, FILE\_ANY\_ACCESS) #define ADV\_IOCTL\_READ\_DO CTL\_CODE(FILE\_DEVICE\_UNKNOWN, 0x902, METHOD\_BUFFERED, FILE\_ANY\_ACCESS) #define ADV\_IOCTL\_WRITE\_DO CTL\_CODE(FILE\_DEVICE\_UNKNOWN, 0x904, METHOD\_BUFFERED, FILE\_ANY\_ACCESS)

#define ADV IOCTL TURN ON LED1 CTL CODE(FILE DEVICE UNKNOWN, 0x930, METHOD BUFFERED, FILE\_ANY\_ACCESS) #define ADV IOCTL TURN OFF LED1 CTL CODE(FILE DEVICE UNKNOWN, 0x931, METHOD BUFFERED, FILE ANY ACCESS) #define ADV IOCTL TURN\_ON\_LED2 CTL CODE(FILE DEVICE UNKNOWN, 0x932, METHOD BUFFERED, FILE ANY ACCESS) #define ADV IOCTL TURN OFF LED2 CTL CODE(FILE DEVICE UNKNOWN, 0x933, METHOD BUFFERED, FILE ANY ACCESS) #define ADV IOCTL TURN ON LED3 CTL CODE(FILE DEVICE UNKNOWN, 0x934, METHOD BUFFERED, FILE ANY ACCESS) #define ADV IOCTL TURN OFF LED3 CTL CODE(FILE DEVICE UNKNOWN, 0x935, METHOD BUFFERED, FILE ANY ACCESS) #define IOCTL PLAY BUZZER

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# CTL\_CODE(FILE\_DEVICE\_UNKNOWN, 0x950, METHOD\_BUFFERED, FILE\_ANY\_ACCESS) #define IOCTL\_STOP\_BUZZER CTL\_CODE(FILE\_DEVICE\_UNKNOWN, 0x951, METHOD\_BUFFERED, FILE\_ANY\_ACCESS)

HANDLE hDev; DWORD i, dwGot, dwNumReturned;

// LED & IO Test Program.

hDev = CreateFile(\_T("ADV1:"), // Pointer to the name of the port

GENERIC\_READ | GENERIC\_WRITE, //Access (read-write) mode

0,	// Share mode
NULL,	// Pointer to the security attribute
OPEN_EXISTING,	// How to open the serial port
0,	// Port attributes
NULL );	// Handle to port with attribute

```
if (!hDev)
{
    printf("Can't load ADV1 driver properly!\r\n");
    return 0;
}
for(i=0; i<20; i++)
{
    if( i & 0x01 )</pre>
```

{

```
dwGot = 0x01; // set Dout 0 high
    dwGot = 0x02: // set Dout 1 high
    printf("Set Dout 0 high, Set Dout 1 high ...\r\n");
  }
  else
  ł
    dwGot &= \sim 0x01; // set Dout 0 low
    dwGot &= \sim 0x02; // set Dout 1 low
    printf("Set Dout 0 low, Set Dout 1 low ...\r\n");
  }
  if( !DeviceIoControl (hDev, ADV IOCTL WRITE DO, &dwGot, 4,
NULL, 0, &dwNumReturned, NULL))
  ł
    printf("ADV IOCTL WRITE DO failed! exit.\r\n");
    break:
  }
  if( !DeviceIoControl (hDev, ADV IOCTL READ DI, NULL, 0,
&dwGot, 4, &dwNumReturned, NULL))
  ł
    printf("ADV IOCTL READ DI failed! exit.\r\n");
    break:
  }
  if( dwGot & 0x01 )
  ł
    DeviceIoControl(hDev, ADV IOCTL TURN ON LED1, NULL,
0, NULL, 0, NULL, NULL);
  }
  else
  ł
```

```
DeviceIoControl(hDev, ADV_IOCTL_TURN_OFF_LED1, NULL,
0, NULL, 0, NULL, NULL);
}
if( dwGot & 0x02 )
{
DeviceIoControl(hDev, ADV_IOCTL_TURN_ON_LED2, NULL,
0, NULL, 0, NULL, NULL);
}
else
{
DeviceIoControl(hDev, ADV_IOCTL_TURN_OFF_LED2, NULL,
0, NULL, 0, NULL, NULL);
}
Sleep(1000);
}
```

```
CloseHandle(hDev);
```

# 4.6 Saving Your Settings

Once you made changes for UNO-1019, you may need run RegSave.exe to save Windows CE system Registry to CF card or on-board flash disk to keep your settings. See Registry Saving section for detail.

## **Registry Saving**

Running RegSave.exe to save system Registry to CF card or on-board Flash. you can specify command line parameter for RegSave.exe shown as below:

RegSave [-f] [-s] [-fs]

- [-f] : Save Registry to Flash and CF card
- [-s]: RegSave will not display any message despite whether the action is succeeded or not.

[-fs]: combination of [-f] and [-s]

If you're running RegSave.exe without parameter, it will only save Registry to CF card and it will display message to notify you whether the Registry has been successfully saved.

# 4.7 UNO-1019 Network Administration User Guide

Advantech's UNO-1019 series is a built-in Windows CE solution offering a pre-configured image with optimized onboard device drivers. WinCE is a compact, high-efficient and hard real-time operating system that is designed for embedded systems without HDD limitation.

UNO-1019 remote administration is a powerful function, which allow users connect to filed-site UNO-1019 by standard browser and configure UNO-1019's network and system settings remotely.

UNO-1019 remote administration includes two major functions; network administration and system administration.

Network administrationWith UNO-1019 well-configured, user can connect to local network or public network (Internet).

# 4.7.1 Network Administration

Following steps introduces how to connect the UNO-1019 by standard browser, and configure the field-site UNO-1019's network setting remotely.

1. Execute standard browser (for instance, Internet Explorer), and enter UNO-1019 (which you would like to connect)'s IP address as below,

IP address/networkadmin

Instance: 172.18.3.89/networkadmin

2. System will ask you to enter password when you login UNO-1019 first time.

🚰 Welcome to the ICS Admin Utility - Microsoft Internet Explorer		. 6 🗙
檔案 E 編輯 E 檢視 Y 我的最爱 (A) 工具 (I) 說明 (II)		1
③上-頁 · ③ · ▲ ②	🗹 - 🔜 🏭 🦓	
網址 D) 🍓 http://172.18.3.89/Network&dmin/	💙 🛃 移至	連結 >>
msn • 🖉 🔎 按尋 • 🥒 醒目提示 🕅 遵項 🔍 封鎖	快顯視窗 (23) 🔹 🔛 Hotmail 🎎 Messenger 👔 我的 MSN	
Home I Network I Features I Advanced I User Accounts		^
Welcome to the Windows CE networking configuration page! With this device properly configured you on network to the Internet. Please carefully consider the following configuration options before continuing.	an connect your local	
Admin password setup		
Please set a password for your device. Choose something that is both easy to remember and is a strong pr contains numbers, letters, and punctuation). <b>The username for your gateway is ADMIN</b> .	ssword (such as one that	
Enter new password		
Confirm new password		
Compatibility Mode		
Choose the level of compatibility and security required when configuring the device. Once this option be changed.	is selected, it can never	
The compatibility mode applies to whether clients will be able to configure the device, such as being allow Networkhedmin page. It does not affect their ability to use most of the device's features. For instance, even Scoutty Mode', Windows 95, Windows 98, Windows ME, and other operating systems will be able to a functionality.	if you select Highest	
The compatibility mode you chose will also affect which clients can access files and/or printers shared fro Security Mode' will block Windows 95/98/ME from accessing password protected resources.	n this device. Setting High	
	•	
Highest Security Mode (Windows 2000, XP, and above)		
Highest Security Mode (Windows 2000, XP, and above) The gateway will use a more secure protocol when authenticating client requests. This mode is not suppo Windows 50, Windows 98, Windows ME, or browsers other than internet Explorer.		

Note: The default user name is ADMIN

 Connect to the UNO-1019 again, and the system will ask you to enter user name and password. After authorization, you will enter Windows CE networking setup page.

Enter Netv	vork Passwor	d	? ×
<b>?</b> >	Please type yo	ur user name and password.	
2	Site:	172.18.3.89	
	<u>U</u> ser Name	ADMIN	
	<u>P</u> assword	×	
	<u>D</u> omain		
	🔲 <u>S</u> ave this p	assword in your password list	
		OK Can	cel



## **Network Settings**

Change IP information about the UNO-1019.

## 1. Change device name

Enter proper device name and press Submit button.

Please MUST change UNO-1019's device name at your first usage.

But after you change UNO-1019's device name, please don't ever change device name back to UNO-1019, it's not permitted for WinCE OS

Home	Network	Features	Advanced	User Accounts	
No Interface There are no i		figured. Please	use Advanced S	Settings.	
Device Name Note: Setting 1	Sector State Street	ne may take se	veral seconds.		
Device Name	UNO-1019		Submit		
IPV6 Config					
<b>⊠</b> Enable IPV€	3 Submit				

Note: When you change the device name, UNO-1019 will need some time to register to DNS (Domain Name Server) automatically. If you would like to search this UNO-1019 next time, you can search it by device name instead of IP address.

C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [版本 5.1.2600] <c> Copyright 1985-2001 Microsoft Corp.</c>
C:\Documents and Settings\Daniel.Hsu>ping uno1019v1
Pinging uno1019v1 [172.18.3.75] with 32 bytes of data:
Reply from 172.18.3.75: bytes=32 time=1ms TTL=128 Reply from 172.18.3.75: bytes=32 time=1ms TTL=128 Reply from 172.18.3.75: bytes=32 time=1ms TTL=128 Reply from 172.18.3.75: bytes=32 time=1ms TTL=128
Ping statistics for 172.18.3.75: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 1ms, Maximum = 1ms, Average = 1ms
C:\Documents and Settings\Daniel.Hsu>

Note: You also could find device name in WinCE's "setting" / "Control Panel" / "System" 's device name tag. You could see below picture for referrence.



## IPV6

If you want to enable "IPV6", please check "Enable IPV6" and press Submit button.

System will ask you to restart UNO-1019, the UNO-1019 will support IPV6 after restarting.

```
🔽 CE Remote Window
 File Edit Help
 Pocket CMD v 4.20
\> ipconfig
Windows IP configuration
Ethernet adapter [DM9CE1]:
        IP Address ..... : 172.18.3.89
        Subnet Mask ..... : 255.255.255.0
        IP Address ...... : fe80::2d0:c9ff:feal:7834%5
Tunnel adapter []:
        Interface Number .. : 4
Tunnel adapter [6to4 Pseudo-Interface]:
        Interface Number .. : 3
Tunnel adapter [Automatic Tunneling Pseudo-Interface]:
        Interface Number .. : 2
        IP Address ...... : fe80::5efe:172.18.3.89%2
```

## **Advanced Setting**

"Advanced setting" allows ports to be statically reserved and mapped.

System will list all of the adapters present on the UNO-1019. You can configure the adapter bindings as public, private, bridged, or default to simply bind it to TCP/IP.

Caution: Incorrect settings may render the UNO-1019 inoperable.



#### Network Adapter Configuration:

This is a list of all the adapters present on your system. You can configure the adapter bindings as public, private, bridged, or default to simply bind it to TCP/IP.

Use extreme caution - incorrect settings may render your device inoperable

Adapter(s)	Bindings			
DM9CE1	🔿 Public	O Private	○ Bridged	💿 Default
DM9CETWO1	🔵 Public	🔿 Private	◯Bridged	💿 Default

Submit

## **User Accounts**

"User Accounts" function allows you to add, modify and delete user accounts on this UNO-1019. "ADMIN" is the only account allowed to manage account information

## Note: The account we manage here is for network service such as File server ,FTP,Telnet and Web server, but NOT "ACCESS THIS ADMIN WEBPAGE"

1. Create a User Account

<1-A> Enter a user name in the "Create a new ..." field, and press Create.

<1-B> Enter a password, and press Create Account button.

檔案(F) 編輯(E) 檢視(Y)	) 我的最愛(A)	工具(T)	説明(H)			
	A MARGAN AND AND A	2233927	100 CONTRACTOR	00	· 🍓 🖬 · 🗖 🏭 🦓	
周址(D) 🕘 http://172.18.3.89						
msn <sup>N</sup> ·	~	,◎ 搜尋	• 🥒 醒目提示	₩ 選項	🔀 封鎖快顯視窗 (23) 👻 🔛 Hotma	l 🚜 Messenger
Home   Netwo	k   Featu	ures	Advanced	User	Accounts	
User Configuration Create an account for G						
Logon Name	Guest					
Logon Name Password	Guest					

<1-C> System will create a user account according to your information.

If you would like to change the password of this user account, please press Modify button behind the user name.

If you would like to delete the user account, please press Delete button behind the user name.

Home	Network	Features	Advanced	User Accounts	
User Mana	iger Setup				
Configure use	r information on th	is device.			
Logon N Guest	ame Modify	Delete			
ADMIN	Modify				
Create a new	v user Create				

User Group Setup Configure which members are part of groups.

Group Name		
PowerUsers	Modify	Delete
PowerUsers	Modify	Delete
Create a new group.	Greate	

#### Create a Group 2.

<2-A> Enter a group name in the "Create a new" field, and press Create.

Logon Name uest Modify Delete DMIN Modify	Home	Network	Features	Advanced	1	User Accounts
nfigure user information on this device.          Logon Name         iuest       Modify         DMIN       Modify	(					
Logon Name iuest Modify Delete		and the second	2.002.002.000			
iuest Modify Delete	onfigure user	information on th	is device.			
iuest Modify Delete	Logon No.	<b>m</b> .o				
DMIN Modify			Delete			
			Delete			
reate a new user Create	ADMIN	Modify				
	Oreate a new u	iser Create				
			rt of groups			
ser Group Setup		internetie dre pa	it of groups.			
ser Group Setup onfigure which members are part of groups.	Group Na	me				
	PowerUsers	Modify	Delete			
onfigure which members are part of groups. Group Name	Baelleere	Modify	Delete			
on figure which members are part of groups. Group Name owerUsers Modify Delete			Delete			
onfigure which members are part of groups. Group Name owerUsers Modify Delete AsUsers Modify Delete	Create a new e	roun Create				

<2-B> If you want to choose which users are members of group, please press Modify button behind the group name.

Set the box next the user's name to have them be part of this group.

Home	Network	1	Features	Ē	Advanced	1	User Accounts
Group Conf Chose which us part of this grou	ers are mem	bers o	f group <b>Pow</b>	er Us	<b>ers</b> . Set the I	ox ne	ext to the user's name to have th
User Name		Me	mber of į	grou	p?		
Guest							
ADMIN Submit							

<2-C> If you want to delete a group, please press Delete button behind the group name.

## Features

Allows configuration of advanced gateway features. You can configure the File server, FTP server, Telnet server and Web Server Administration accordingly.

#### Home | Network | Features | Advanced | User Accounts

#### File Server

A configured file server will allow for sharing file on your private network <u>Click here to configure your file server</u>

### FTP Server

A configured ftp server will allow for transmitting files to and from your gateway <u>Click here to configure your ftp server</u>

#### **Telnet Server**

A configured telnet server will allow you to telnet into your gateway <u>Click here to configure your telnet server</u>

#### Web Server Administration

Configure basic settings of your Web Server Click here to configure your web server

# 4.7.2 File Server

<A-1> Choose the folder in UNO-1019 you wish to share and then enter a share name then press "Submit".

Compatibility Notice This device has been configured to run in highest secur clients.	ity mode. It will not accept authenticated sessions fro	om Windows 95/98/ME
Shared Folders		
Please choose the folder you wish to share and then ent	êr â Shârê nâmê.	Submit
✓ \FLASH	FL	Submit
□ \Application Data		Submit
□ \Recycled		Submit
□ \My Documents		Submit
🗆 \Program Files		Submit
□ \Temp		Submit
□ \Windows		Submit

<A-2> Press "Modify" to set up share permissions, choose the account who will use file server function, then click "Allowed" then press "Modify".

#### Share Permissions

Please choose the share you wish to modify.

FL

Permissions for	Share FL	
danielhsu	<ul> <li>Allowed</li> </ul>	🔘 Denied
ADMIN	<ul> <li>Allowed</li> </ul>	🔘 Denied
Modify	Return To Features	Add User

<A-3> You could use browser to access device name and test file server function

Modify

😼 UNO1	019¥1 (u	no1019v1	) - Microsoft	Internet E:	xplorer	
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其他	位置		۲			

Note: If you want to use password to protect UNO file server, please key in your ADMIN password, chossing "PWD Enabled" and click "Submit", every time you access file server, UNO file sever will ask you a password of account to enable file accessing.

#### Disable ALL Passwords

If you disable passwords \*ALL\* shares (file and print) will be available to anyone on the network.

ADMIN Password:		
⊙ PWD Enabled ○ PWD Disabled	Submit	

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	連線到 uno1019v1.	ADVANTECH.CORP
		GP
	正在連線到 uno1019	9v1
	使用者名稱(U):	£
	密碼(P):	
		記憶我的密碼(R)
		確定 取消

## **Creating a Network Disk**

Windows CE provides the command to enable remote network disk as a local disk.

## <Command>

Usage:

```
net use [<local name of folder on UNO-1019>|*] [<remote name>] [/ user:<username>] [/d]
```

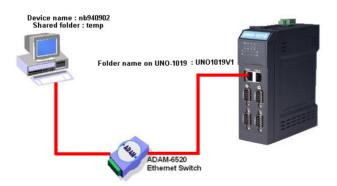
or

```
net view <computername> | /DOMAIN:<domainname>
```

## <Description>

[/d] Disable network disk

## <Instance>



1. Share the "temp folder" in the remote site (nb940902) to authorized users, and set the permissions (read/write).

<EX> Remote Windows PC: <Computer name> = nb940902 <Shared folder name> = temp <Authorized user name> = daniel.hsu

- 2. Execute the blow command by local UNO-1019's command prompt, and system will ask you to enter your user name, password and domainif you would like to save your user name and password as "default user", please check "Update Default Credentials".
- <EX> net use UNO1019V1\\nb940902\temp /user:daniel.hsu

File Edit Help Pocket CKD v 4.20	×
Bashat CND at 4 20	
> net use uno1019v1 \\nb940902\temp /user:daniel.hsu	^
Logon failed 🛛 🦳 🔀	
Resource: \\NB940902\TEMP	
User Name daniel.hsu	
Password ******	
Domain advantech	
Update Default Credentials	
🐉 Start 📓 Command Prompt 🛛 Logon failed 🛛 🕹 🍛 6:54 PM	<u>×</u>

📴 CE Remote Windo	שו
<u>File E</u> dit <u>H</u> elp	
	) 9vl \\nb940902\temp /user:daniel.hsu fully mapped to \\nb940902\temp

3. The remote network disk (Ex:\\nb940902\temp) will launch in the local UNO-1019's "Network" folder.

CE Remote Window						
<u>Eile E</u> dit <u>V</u> iew (	<u>G</u> o F <u>a</u> r	vorites	4 🔹 🦻 🗙 🛃			
Address \Network						
Name		Size	Туре			
🗁 uno1019v1			Folder			

If you want to delete this folder on UNO-1019 , you could execute the command as below

<EX> net use UNO1019V1 \\nb940902\temp /user:daniel.hsu /d

# 4.7.3 FTP Server

The FTP server accepts ftp connections and allows the UNO-1019 to be configured remotely.

## **Basic Configuration**

You can set following items in Basic Configuration field..

- Server Enabled- Will the FTP server accept incoming connections?
- *Require Authentication* Will the FTP server prompt for user name and password?
- *Allow Anonymous Users* Allow users without an account on the server to login to the server?
- *Allow Anonymous Uploads* Allow anonymous users to upload and change files?
- *Allow Anonymous User to Virtual Roots* Allow anonymous users to view and access files in virtual roots?
- *Default Directory* The default directory that anonymous FTP users will log in to.

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Home I Netwo	rk   Features   Advanced   User	r Accounts
Ftp Server Config	utation	
	connections and allows the device to be configured ren	notely.
	-	
		server be misconfigured, a malicious user could gain complete control of the files on
	er is intended for advanced users only.	
The Ptp server will be rest	arted after any changes to the the basic configuration c	r the virtual roots. That will terminate any Ftp connections currently active.
Panic Configurati	07	
	on	
Server Enabled		O Yes
Basic Configurati Server Enabled Will the ftp server accept		⊙ Yes ⊛ No
Server Enabled Will the ftp server accept	incoming connections?	
Server Enabled Will the ftp server accept Require Authenti	incoming connections?	© No ⊛ Yes
Server Enabled Will the ftp server accept Require Authenti Will the ftp server promp	incoming connections? ication for user name and pass word?	⊙ No ⊙ Yes ○ No
Server Enabled Will the ftp server accept Require Authenti Will the ftp server promp Allow Anonymou	incoming connections? cation t for user name and password? 18 Users	<ul> <li>⊙ No</li> <li>⊙ Yes</li> <li>○ No</li> <li>⊙ Yes</li> </ul>
Server Enabled Will the ftp server accept Require Authenti Will the ftp server promp Allow Anonymou	incorning connections? ication for user name and pass word?	⊙ No ⊙ Yes ○ No
Server Enabled Will the ftp server accept Require Authenti Will the ftp server promp Allow Anonymou	incoming connections? cation f for user name and password? 18 Users ccount on the server to login to the server?	<ul> <li>⊙ No</li> <li>⊙ Yes</li> <li>○ No</li> <li>⊙ Yes</li> </ul>
Server Enabled Will the ftp server accept Require Authenti Will the ftp server promp Allow Anonymou Allow users without an ac Allow Anonymou	incoming connections? cation f for user name and password? 18 Users ccount on the server to login to the server?	<ul> <li>⊙ No</li> <li>⊙ Yes</li> <li>⊙ No</li> <li>⊙ Yes</li> <li>○ No</li> </ul>
Server Enabled Will the flp server accept Require Authenti Will the flp server promp Allow Anonymou Allow anonymous users	incoming connections? (cation t for user name and password? 18 Users 2000unt on the server to login to the server? 18 Uploads 10 upload and change files?	<ul> <li>No</li> <li>Yes</li> <li>No</li> <li>Yes</li> <li>No</li> <li>Yes</li> <li>No</li> <li>Yes</li> <li>No</li> <li>No</li> </ul>
Server Enabled Will the ftp server accept Require Authenti Will the ftp server promp Allow Anonymou Allow users without an a Allow anonymous users Allow Anonymous	incoming connections? ication for user name and password? IS USERS account on the server to login to the server? IS UploadS to upload and change files? IS users to virtual roots	<ul> <li>⊙ No</li> <li>⊙ Yes</li> <li>○ No</li> <li>⊙ Yes</li> <li>○ No</li> <li>○ Yes</li> <li>⊙ No</li> <li>○ Yes</li> <li>⊙ No</li> <li>○ Yes</li> </ul>
Server Enabled Will the fip server accept Require Authenti Will the fip server promp Allow Anonymou Allow users without an ar Allow anonymous users Allow Anonymous users Allow Anonymous users	incoming connections? ication for user name and password? IS Users is Uploads to upload and change files? Is users to virtual roots to view and access files in virtual roots?	<ul> <li>No</li> <li>Yes</li> <li>No</li> <li>Yes</li> <li>No</li> <li>Yes</li> <li>No</li> <li>Yes</li> <li>No</li> <li>No</li> </ul>
Server Enabled Will the ftp server accept Require Authenti Will the ftp server promp Allow Anonymou Allow when without an ar Allow Anonymous users Allow Anonymous users Default Directory	incoming connections? ication for user name and password? IS Users is Uploads to upload and change files? Is users to virtual roots to view and access files in virtual roots?	<ul> <li>No</li> <li>Yes</li> <li>No</li> <li>Yes</li> <li>No</li> <li>Yes</li> <li>No</li> <li>Yes</li> <li>No</li> <li>Yes</li> <li>Yes</li> </ul>

## Logs

Use Logs section to control what information about the FTP transactions is logged.

🗿 FTP Server Configuration - Microsoft Internet Explorer		
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網址(1) 🕘 http://172.18.3.89/NetworkAdmin/ftp		✓ 参 移至 連結 ※
msn <sup>1</sup> •	🔀 封鎖快顯視窗 (23) 🔹 🔤 Hotmail 🔏 Messenger 👔 我的 MSN	
Default Directory The default directory that anonymous FTP users will log in to	(Temp)	<u>^</u>
${\rm Logs}$ Use this section to control what information about the FIP transactions is logged to file		
Log Directory The directory to store the log file in	Windows	
Log Size The maximum size of the log file(in KiloBytes)	4	
Log Zones Check the information that you want written to the log Stituat	© Errors © Visits D'File Transfers □ FTP Commands © Diagnostic Information □ Details	3
FTP Users Use his section to control access to the FTP server for each user. To add new users go to the A You can configure a separate home directory for each user by appending the use's same to ho Denying real permission to a user, denies complete access to the ftp server for that user.	Allow Allow Allow Hidden Read Write Allow the Files Allow the Doctor Durate	

## **FTP Users**

Use FTP Users section to control access to the FTP server for each user. To add new user, please go to the "User Account" page.

You can configure a seprate home directory for each user by appending the user's name to home directory. Denying read permission to a user, denies complete access to the FTP server for that user.

Service - 20日目現示 小道第 (2) ・ 2日目現示 小道第 (2) ・ 日本 Hotmail 低 Messeager 12 形的 MAN  FTP Users  FTP Users  Co. ca. configure a speare home directory for each user. To add new users go to the Add Users page.  Co. ca. configure a speare home directory for each user by appending the use's name to home directory.  Derying real permittion to a user, dealer complete access to the figure ref for flat use.  Allow Allow Hidden  Hidden  Hidden	▼ ▶ 移至	連結
TP Users         is this section to could access to the FIP server for each user. To add new users go to the Add Users page.         on can configure a separate home discovery for each user by appending the user's name to home discovery.         wying real permission to a user, denies complete access to the Pp server for that user.         Allow       Allow         Hidden,         Write       Write		
e this section to control access to the FTF server for reach user. To add are writen go to the Add Ulues page. and conclusing a sequence hore distortly for each user by spreaming the user's same to home directory. anying read permission to a user, denies complete access to the ftp server for that user. Allow Allow Allow Allow Hidden Write Ulura		
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n can configure a separate house discrosy for each user by spreading the user's name to home directory. aying read permission to a user, denies complete access to the flp server for that user. Allow Allow Allow Allow Hidden Read Write Visitual Visitual		
aying read permission to a use, denies complete access to the flp server for that user.           Allow         Allow         Allow         Allow         Hidden           Read         Write         United         Tribue		
Allow Allow Hidden Read Write Virtual Tiles		
Allow Allow Hidden Read Write Virtual Tiles		
Read Write Withual Files		
servane Home Directory user to login user to Roots Allow the		
e login name of The path to user's home directory and upfoad and any balance were to view hidden and even		
files from files on the the virtual system files		
the server server roots on the server		
huest VELASHYTPROOT		

## **Virtual Roots**

You can add/delete virtual roots to the FTP server. Virtual roots allow you map a physical directory to and directory with a different name.

FTP Server Configuration	- Microsoft Internet Exp	lorer						<b>B</b> 🔀
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ADMIN	X				2			
Submit Virtual Roots Use this section to add/delete virt If the user has permissions to see The virtual directory name cannot include the backslash	virtual roots, these roots will	appear as folders under the use	r's home directory.					
Virtual Directory Name The name of the directory to disp	lay under the users home dir	Directory Pa ectory Path to the phys				Delete Check the virtual directories you would like to delete		
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# 4.7.4 Telnet Server

The telnet server accepts telnet connections and allows the UNO-1019 to be configured remotely.

## **Telnet Server Configuration**

- Server Enabled- Will the telnet server accept incoming connections?
- Require Authentication- Will the telnet server prompt for user name and password?

## **Telnet Server Users**

Choose which users can access the telnet server.

Telnet Server Configuration - Microsof 省案(F) 編輯(E) 檢視(V) 我的最愛(A)	工具(T) 説明(H)			
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Home   Network   Feat	ures   Advanced   User i	Accounts		
lse extreme caution when configu	tions and allows the device to be configu ring the teln et server. Should the te way. The teln et server is intended for ad	lnet server be misconfig	ured, a malicious user could	
Server Enabled Vill the tehet server accept incoming c	onnections?	⊛ Yes ⊙No		
Require Authentication /ill the telnet server prompt for user na		⊚ Yes ⊙ No		
Submit Felnet Server Users				
hoose which users can access the teln	et server.			
User and Group Names	Enabled	Disabled	Default	
Buest	0	0	۲	
ADMIN	۲	0	0	
PowerUsers (Group)	0	0	۲	
RasUsers (Group)	0	0	۲	
Allow default items if checked	d, items set as default will be treated as e	en able d.		
Update				
Wir	dows CE Version: (4.20) Build Version: (1088) S A2000-2002 Microsoft Corporation. All rights			
完成				📢 近端内部網路

# 4.7.5 Restart Network

Restart for network change to take effect. To make the changes you have made take effect immediately, please press "Restart Networking" button, and then the home gateway networking services will be restart.