Connecting to an iMS over Ethernet after installing the SDK

Simple configuration



Considerations:

(a) IP Address

By default, iMS-P Controllers are configured to acquire an IP Address from DHCP. If there is no DHCP Server on the network, the iMS-P will default to its internal IP Address which is pre-configured at Isomet to 192.168.1.10

• Configuring the IP address: SDK utility over USB.

The SDK includes the *iMS IP Configuration* utility which can be found in the start menu. This allows the IP address and subnet of the iMS to be configured over USB.

1: Check Include USB in Scan and hit SCAN



iMS API Documentation (HTML)
 iMS API Documentation (PDF)
 iMS HW Server (32-bit)
 iMS HW Server (64-bit)
 iMS HW Server Documentation (HT...
 iMS HW Server Documentation (PDF)
 iMS HW Server Documentation (PDF)
 iMS HW Server Documentation (PDF)
 iMS Studio

Isomet iMS SDK

Browse SDK

2:

Select (highlight) the iMS and hit Connect.

Use Host NIC:			Serial Numb	ber I	P Addres	IS
ALL		~	iMSP2101	l	JSB	
Include USB	in Scan					
SCAN	Co	nnect				
6 V.						
ntiguration						
DHCP Enabled		IP Address	192	168	1	10
DHCP Enabled Disabled (R:	(ed IP)	IP Address Network N	192 lask 255	168 255	1 255	10 0
DHCP DHCP Disabled Disabled (Re	xed IP)	IP Address Network N Gateway	192 lask 255 192	168 255 168	1 255 1	10 0 1

3: Configure as required e.g. Change to fixed IP 192.168.1.10 Hit **Configure**

Use Host NIC:	Se	rial Number	IP Address	_
ALL		SP2101	USB	
Include USB in Scan				
SCAN	Disconnect			
nfiguration				
nfiguration DHCP O Enabled	IP Address	192 16	8 1 10	
nfiguration DHCP © Enabled @ Disabled (Fixed IP)	IP Address Network Mask	192 16 255 25	8 <u>1</u> <u>10</u> 5 <u>255</u> 0	
nfiguration DHCP © Enabled @ Disabled (Fixed IP)	IP Address Network Mask Gateway	192 16 255 25 192 16	8 1 10 5 255 0 8 1 1	
nfiguration DHCP O Enabled Disabled (Fixed IP)	IP Address Network Mask	192 16 255 25	8 1 10 5 255 0	

- or -

• Configuring the IP address: Coding in C++

The iMS can be configured by the user C++ code to use a static IP address and also modify the IP network mask and gateway.

To retrieve and apply an IP address makes use of *IMSSystem::ApplySettings* and *IMSSystem::RetrieveSettings* methods through which the CS_ETH object is passed with the desired IP address parameters. These will store the settings in non-volatile memory on the iMS Controller so that it will start up with the new parameters on next boot. E.g.

CS_ETH cs_eth;

// Get existing settings from iMS Controller myiMS.RetrieveSettings(cs_eth); std::cout << "Current IP Address: " << cs_eth.Address() << std::endl;</pre>

cs_eth.Address("192.168.2.100"); std::cout << "New IP Address: " << cs_eth.Address() << std::endl;

myiMS.ApplySettings(cs_eth);

See code documentation in CS_ETH.h for details. (e.g. C:\Program Files\Isomet\iMS_SDK\v1.x.x\include\CS_ETH.h).

To apply above change: 4: Cycle the DC power (Off and On)

(b) Enabling/ disabling comms interface and selecting defined port in C++ code /* * Uncomment these defines to include the types of interface on which you wish to communicate with the iMS //#define ENABLE_SERIAL_PORT_SCAN #define ENABLE_THERNET_SCAN // #define ENABLE_USB_SCAN /* * Uncomment these defines to restrict iMS scan to specific interface ports (using conventional interface type port naming) * Note that it is possible to add additional ports by inserting extra lines of "PortMask.push_back(...)" code below */ // #define SERIAL_PORT_MASK "COM3" #define ETHERNET_PORT_MASK "192.168.2.100"

Note: An equivalent control is not yet a feature within the GUI (SDK 1.8.9) (c) Firewall

The iMS Studio and its accompanying *ims_hw_server* process requires a port open in the PC's firewall to enable the scan for iMS systems procedure to complete successfully. Normally this is done during the installation process (there is a checkbox *"Add Firewall Exception"* that defaults to enabled but can be disabled if required by the installer).

To add the firewall exception manually, do the following for Windows 7. (Windows10 should be similar):

From the start menu type **"Firewall"** to bring up a list of actions and select **"Allow a program through Windows Firewall"**

Control Panel (4)	nuvances secondy		
Windows Firewall			
Allow a program through	gh Windows Firewall		
Check firewall status Check security status	Windows Firewall Allow a program through Windows Fire		

Click "Allow Another Program..."

✓ ims_fw_upgrade

then "Browse..." and navigate to "C:\Program Files\Isomet\iMS_SDK\v1.x.x\utils\iMS_Studio" (assuming default SDK install location).

ee 88 32 Choose "ims_hw_server.exe" COMP + Control Fand + System and Security + Windows Risevell + Allowed Progra · 4p Stant Cart Allow programs to communicate through Windows Firew red programs and ports, click Cha add, change, or remove all If you receive an error message What are the role of allowing a program to co SP Change cettings "The application is already in the list Add a Process of exceptions" look for 8 8 "iMS Studio HW Server" in the list and make sure the checkbox alongside it is checked. Organice + 0 0 sting 1.0 The Recent Pla 88 File name: and has to Cipen w Cancel iMS Studio ✓ ✓ iMS Studio HW Server ☑ iMS Studio HW Server ✓

Also, check for any third party firewall or antivirus software which may be blocking communications with the *ims_hw_server.exe* application.

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