



4G Modem

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Chapter 1 Introduction

1.1 Introduction

Congratulations on your purchase of Protectli's IDG400 M2M Cellular Modem. With this Protectli cellular modem you have made a great first step in the world of connected Internet of things (IOT) by simply inserting a SIM card from the local mobile carrier into this device to get things connected. This section gives you all the information you need to set up your device.

Main Features:

- Provide 3G/4G WAN connection.
- Provide one Giga-Ethernet port for comprehensive LAN connection.
- Simple Web GUI is used for basic setting and check the 3G/4G status.
- Designed easy-to-mount metal body for business and M2M environment to work with a variety M2M (Machine-to-Machine) applications..

Before you install and use this product, please read this manual in detail for fully exploiting the functions of this product.

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1.2 Contents List

1.2.1 Package Contents

#Standard Package

Items	Description	Contents	Quantity
1	IDG400-0TE01 4G Modem		1pcs
2	Cellular Antenna		2pcs
	MicroUSB Cable		1pcs
4	RJ45 Cable		1pcs

#Optional Package

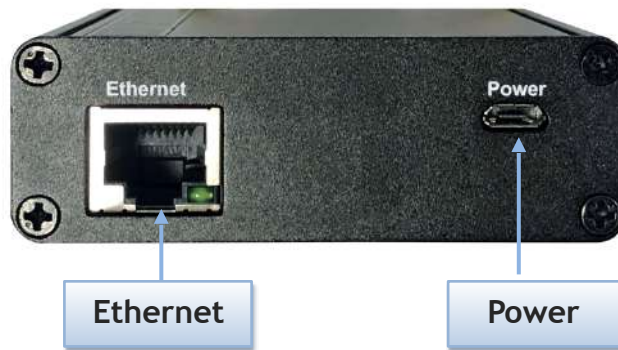
Items	Description	Contents	Quantity
1	Extender		1pcs or 2 pcs (1 pcs needed for din-rail and 2 pcs needed for wall-mount)
2	DIN-Rail Bracket		1pcs
3	WALLMOUNT		2pcs/set

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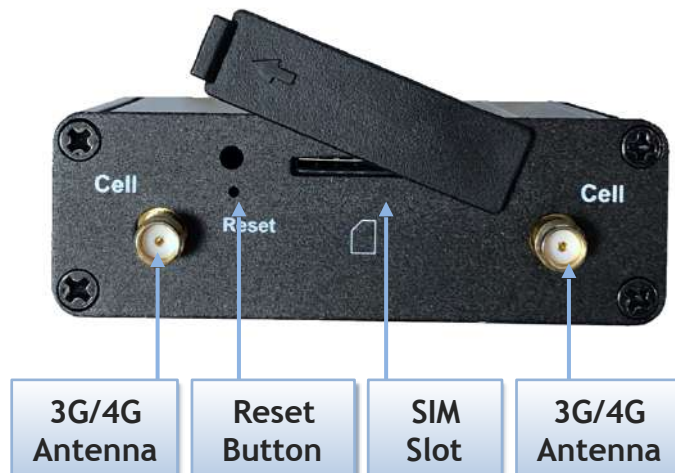
4	DC TO Micro USB		1pcs
5	Power Adapter		1pcs
6	Plug(US/EU/AU/UK)		1PCS

1.3 Hardware Configuration

➤ Left View



➤ Right View





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※Reset Button

RESET button provides user a quick and easy way to resort the default setting. Press the RESET button continuously for 6 seconds, and then release it. The device will restore to factory default settings.

1.4 LED Indication



Indication	LED Color	Description
 Power	Blue	Steady On: Device power is on Off: Device power is off
 Status	Blue Red	Red Steady on: Cellular is not ready or no cellular signal. Red Flash: Cellular is ready but register status is not ready. Blue Steady On: The signal is ready and registers to operator. Blue Fast Flash: State on LTE. Blue Slow Flash: State on 3G.

1.5 Installation & Maintenance Notice

1.5.1 SYSTEM REQUIREMENTS

Network Requirements	<ul style="list-style-type: none">• A fast Ethernet RJ45 cable• 3G/4G cellular service subscription• 10/100/1000 Ethernet adapter on PC
Web-based Configuration Utility Requirements	<p>Computer with the following:</p> <ul style="list-style-type: none">• Windows®, Macintosh, or Linux-based operating system• An installed Ethernet adapter <p>Browser Requirements:</p> <ul style="list-style-type: none">• Internet Explorer 10.0 or higher• Chrome 73 or higher• Firefox 60.0 or higher

1.5.2 WARNING

Attention

- Only use the power cable that comes with the package.
- Over voltage rating is dangerous and may damage the product.
- Do not open or repair the case yourself. If the product is too hot, turn off the power immediately and have it repaired at a qualified service center.
- Place the product on a stable surface and avoid using this product and accessories outdoors.

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Federal Communication Commission Interference 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.

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 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.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

FOR PORTABLE DEVICE USAGE (<20m from body/SAR needed)

Radiation Exposure Statement:

The product comply with the FCC portable RF exposure limit set forth for an uncontrolled environment and are safe for intended operation as described in this manual. The further RF exposure reduction can be achieved if the product can be kept as far as possible from the user body or set the device to lower output power if such function is available.

FOR MOBILE DEVICE USAGE (>20cm/low power)

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

FOR COUNTRY CODE SELECTION USAGE (WLAN DEVICES)

Note: The country code selection is for non-US model only and is not available to all US model. Per FCC regulation, all WiFi product marketed in US must fixed to US operation channels only.

1.5.3 HOT SURFACE CAUTION



CAUTION: The surface temperature for the metallic enclosure can be **very high!** Especially after operating for a long time, installed at a closed cabinet without air conditioning support, or in a high ambient temperature space.

DO NOT touch the hot surface while servicing!!

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1.5.4 Product Information for CE RED Requirements

The following product information is required to be presented in product User Manual for latest CE RED requirements. ¹

(1) Frequency Band & Maximum Power

1.a Frequency Band for Cellular Connection (for EC25-EU version)

Band number	Operating Frequency	Max output power
LTE FDD BAND 1	Uplink: 1920-1980 MHz Downlink: 2110-2170 MHz	23.1 dBm
LTE FDD BAND 3	Uplink: 1710-1785 MHz Downlink: 1805-1880 MHz	23.0 dBm
LTE FDD BAND 7	Uplink: 2500-2570 MHz Downlink: 2620-2690 MHz	22.8 dBm
LTE FDD BAND 8	Uplink: 880-915 MHz Downlink: 925-960 MHz	23.2 dBm
LTE FDD BAND 20	Uplink: 832-862 MHz Downlink: 791-821 MHz	23.5 dBm
LTE FDD BAND 28A	Uplink: 704 -723 MHz Downlink: 759 - 778MHz	23 dBm
LTE FDD BAND 38	Uplink: 2570-2620 MHz Downlink: 2570-2620 MHz	21.7 dBm
LTE FDD BAND 40	Uplink: 2300-2400 MHz Downlink: 2300-2400 MHz	21.5 dBm
WCDMA BAND 1	Uplink: 1920-1980 MHz Downlink: 2110-2170 MHz	23.3 dBm
WCDMA BAND 8	Uplink: 880-915 MHz Downlink: 925-960 MHz	
E-GSM	Uplink: 880-915 MHz Downlink: 925-960 MHz	32.9 dBm
DCS	Uplink: 1710-1785 MHz Downlink: 1805-1880 MHz	29.9 dBm

1.b Frequency Band for Cellular Connection (for Quectel EC25-AF version)

¹ The information presented in this section is ONLY valid for the EU/EFTA regional version. For those non-CE/EFTA versions, please refer to the corresponding product specification.

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Band number	Operating Frequency	Max output power
LTE FDD BAND 2	Uplink: 1850-1910 MHz Downlink: 1930-1990 MHz	23.86 dBm
LTE FDD BAND 4	Uplink: 1710-1755 MHz Downlink: 2110-2155 MHz	23.82 dBm
LTE FDD BAND 5	Uplink: 824-849 MHz Downlink: 869-894 MHz	23.46 dBm
LTE FDD BAND 12	Uplink: 699-716 MHz Downlink: 729-746 MHz	23.75 dBm
LTE FDD BAND 13	Uplink: 777-787 MHz Downlink: 746-756 MHz	23.86 dBm
LTE FDD BAND 14	Uplink: 788-798 MHz Downlink: 758-768 MHz	23.86 dBm
LTE FDD BAND 66	Uplink: 1710-1780 MHz Downlink: 2100-2200 MHz	23.34 dBm
LTE FDD BAND 71	Uplink: 663-698 MHz Downlink: 617-652 MHz	23.46 dBm
WCDMA BAND 2	Uplink: 1850-1910 MHz Downlink: 1930-1990 MHz	23.3 dBm
WCDMA BAND 4	Uplink: 1710-1755 MHz Downlink: 2110-2155 MHz	
WCDMA BAND 5	Uplink: 824-849 MHz Downlink: 869-894 MHz	

(2) DoC Information

You can get the DoC information of this product from the following URL: <http://www.amitwireless.com/products-doc/>

(3) RF Exposure Statements

To comply with RF exposure limits established in FCC, the distance between the antenna or antennas and the user should not be less than 20 cm (7.87”).

(4) Unit Mounting Notice

The product is suitable for mounting at heights <= 2m (approx. 6 ft), or in a cabinet. Ensure the unit is fixed tightly to reduce the likelihood of injury due to exposure to mechanical hazards if dropped.

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(5) Manufacture Information

Manufacture Name: AMIT Wireless Inc.

Manufacture Address: No. 28, Lane 31, Sec. 1, Huandong Rd., Sinshih Dist., Tainan 74146,
Taiwan

1.6 Hardware Installation

This chapter describes how to install and configure the hardware

1.6.1 Mount the Unit

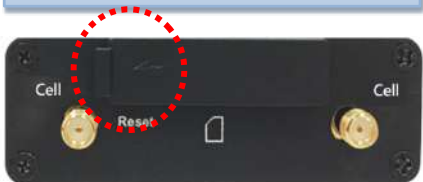
The IDG400 series can be placed on a desktop, or use extender to place on DIN-Rail bracket or mount on the wall.

1.6.2 Insert the SIM Card

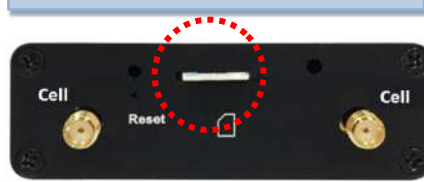
WARNING: BEFORE INSERTING OR CHANGING THE SIM CARD, PLEASE MAKE SURE THAT POWER OF THE DEVICE IS SWITCHED OFF.

SIM card slot is located in the middle area of IDG400 series. You need to remove the outer SIM card cover before installing or removing an inserted SIM card. Please follow below instructions to install or remove a SIM card. After SIM card is well installed or removed, put back the outer SIM card cover.

Step 1: Remove SIM cover
Remove the SIM cover from left side.



Step 2: Remove SIM
Push the inserted SIM card to eject the SIM card.



Step 3: Insert a SIM
Push the SIM card into the SIM slot.



Step 4: Put Back SIM cover
Put back the SIM cover



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1.6.3 Connecting to the Network or a Host

The IDG400 series provides one RJ45 port to connect to Giga-Ethernet. It can auto detect the transmission speed on the network and configure itself automatically. Connect one Ethernet cable to the RJ45 port (LAN) of the device and plug another end of the Ethernet cable into your computer's network port to connect this device to the host PC for device configuration.

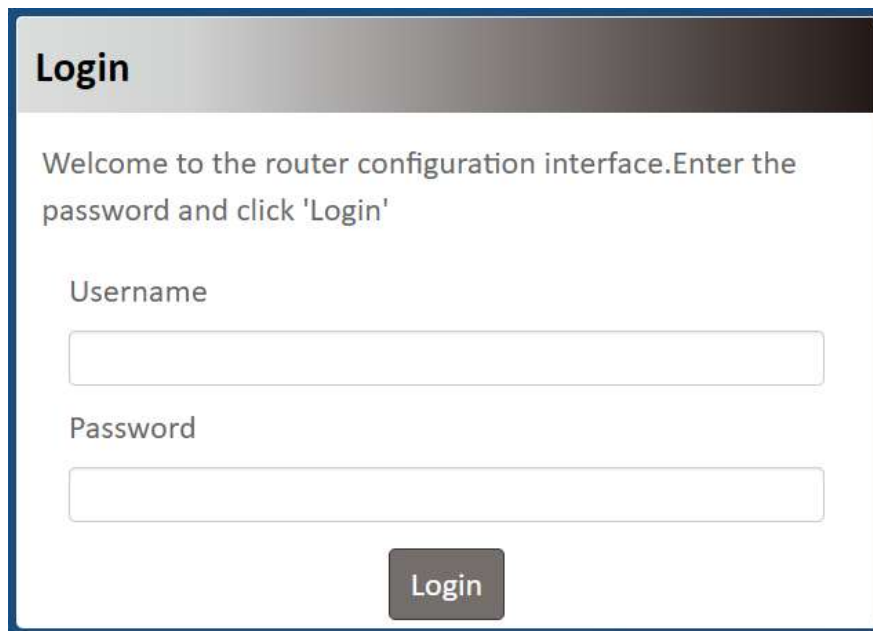
1.6.4 Setup by Configuring WEB UI

You can browse web UI to configure the device.

Type in the IP Address (<http://192.168.123.254>)²



When you see the login page, enter the user name and password and then click 'Login' button.

A screenshot of a web-based login page for a router configuration interface. The page has a dark header with the word "Login" in white. Below the header, there is a message: "Welcome to the router configuration interface. Enter the password and click 'Login'". There are two input fields: "Username" and "Password". Below the "Password" field is a "Login" button.

The default setting for both username and password is 'admin'³.

² The default LAN IP address of this gateway is 192.168.123.254. If you change it, you need to login by using the new IP address.

³ For security concern, the login process will force user to change default password at the first time.

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Chapter 2 Setup

The IDG400 series connect to a machine via giga ethernet interface for 3G/4G network connection. IDG400 series also provides another function with NAT router. It can help the network application more flexible.

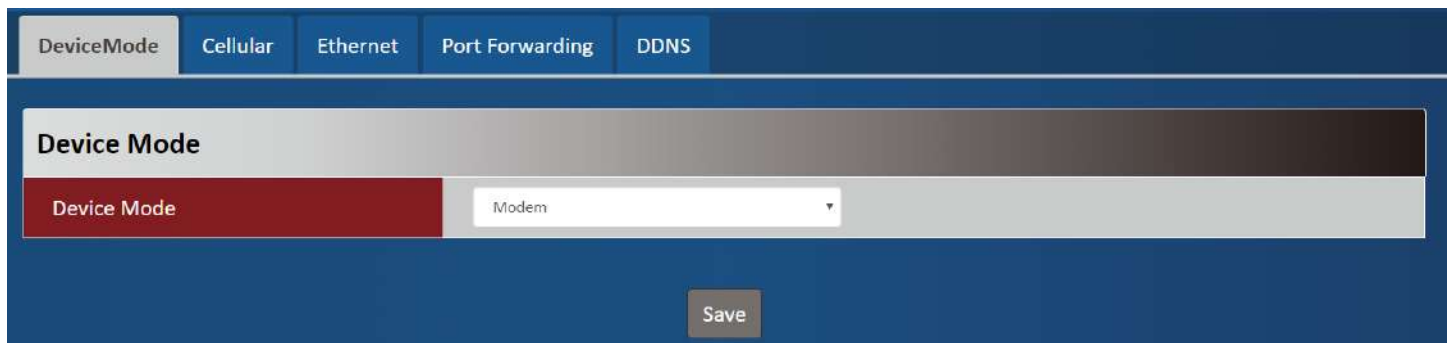
2.1 Network



Network Page

Item	Description
Device Mode	Set the unit operating mode
Cellular	Set the parameter for cellular network.
Ethernet	Set the IP of Ethernet and DHCP service
Port Forwarding	Enable specified port or protocol for service on connected device.
DDNS	Register a dynamic host name for the unit.

2.1.1 Device Mode



Device Mode

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Item	Value setting	Description
Device Mode	<ol style="list-style-type: none"> 1. A Must filled setting 2. By default NAT is selected 	<p>NAT The unit will provide a NAT service and provide a simple firewall for the connected device.</p> <p>Modem The unit will pass the cellular IP to connected device via ethernet</p>

2.1.2 Cellular

Device Mode
Cellular
Ethernet
Port Forwarding
DDNS

Cellular Access

APN	<input type="text" value="Manual"/>
Manual APN	<input type="text"/>
Username	<input type="text"/>
Password	<input type="text"/>
Authentication	<input type="text" value="Auto"/>
IP Type	<input type="text" value="IPv4"/>
IP Mode	<input type="text" value="Dynamic IP"/> Static IP Config
PIN Code	<input type="text"/>
MTU Setup	<input type="checkbox"/> Enable <input type="text" value=""/> (68~1500)
Keep Alive	<input type="checkbox"/> Enable IP Address : <input type="text" value="8.8.8.8"/> Interval : <input type="text" value="60"/> (2~14400 seconds)

Device Mode		
Item	Value setting	Description
APN	<ol style="list-style-type: none"> 1. A Must filled setting 2. By default Auto is selected 	<p>Auto The unit will detect the SIM and set an APN from internal database.</p> <p>Manual User must set APN manually.</p>
Manual APN	<ol style="list-style-type: none"> 1. A Must filled setting 2. String format : any text 	Enter the APN you want to use to establish the connection. This is a must-filled setting if you selected Manual APN as APN scheme.

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Username	<ol style="list-style-type: none"> 1. An Optional setting 2. String format : any text 	Enter the optional username settings if your ISP provided such settings to you.
Password	<ol style="list-style-type: none"> 1. An Optional setting 2. String format : any text 	Enter the optional Password settings if your ISP provided such settings to you.
Authentication	<ol style="list-style-type: none"> 1. A Must filled setting 2. By default Auto is selected 	Select PAP (Password Authentication Protocol) and use such protocol to be authenticated with the carrier's server. Select CHAP (Challenge Handshake Authentication Protocol) and use such protocol to be authenticated with the carrier's server. When Auto is selected, it means it will authenticate with the server either PAP or CHAP .
IP Type	<ol style="list-style-type: none"> 1. A Must filled setting 2. By default IPv4 is selected 	Specify the IP type of the network service provided by your 3G/4G network. It can be IPv4 , IPv6 , or IPv4v6 .
IP Mode	<ol style="list-style-type: none"> 1. A Must filled setting 2. By default Dynamic IP is selected 	Dynamic IP The unit will get IP from cellular service.. Static IP The unit will set IP according Static IP Config .
PIN Code	<ol style="list-style-type: none"> 1. An Optional setting 2. String format : interger 	Enter the PIN (Personal Identification Number) code if it needs to unlock your SIM card.
MTU Setup	<ol style="list-style-type: none"> 1. An Optional setting 2. Uncheck by default 	Check the Enable box to enable the MTU (Maximum Transmission Unit) limit, and specify the MTU for the 3G/4G connection. MTU refers to Maximum Transmission Unit. It specifies the largest packet size permitted for Internet transmission. Value Range: 68 ~ 1500.
Keep Alive	<ol style="list-style-type: none"> 1. An optional setting 2. Box is unchecked by default 	Check the Enable box to activate the keep alive function. Input IP Address and interval to send an ICMP packet to check the network status.

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Static IP Configuration

IP	<input type="text" value="0.0.0.0"/>
Subnet Mask	<input type="text" value="255.255.255.0 (/24)"/>
Default Gateway	<input type="text" value="0.0.0.0"/> (Optional)
Primary DNS	<input type="text" value="0.0.0.0"/> (Optional)
Secondary DNS	<input type="text" value="0.0.0.0"/> (Optional)

Save

Close

Static IP Configuration

Item	Value setting	Description
IP	1. IPv4 format. 2. A Must filled setting	The Static IP Address setting of this unit.
Subnet Mask	255.255.255.0 (/24) is set by default	The Subnet Mask of this configured static IP.
Default Gateway	1. IPv4 format. 2. An Optional setting	The gateway setting of this configured static IP.
Primary DNS	1. IPv4 format. 2. An Optional setting	Assigned DNS server of this configured static IP.
Secondary DNS	1. IPv4 format. 2. An Optional setting	Assigned DNS server of this configured static IP.

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2.1.3 Ethernet

DeviceMode Cellular **Ethernet** Port Forwarding DDNS

Ethernet IP

IP	<input type="text" value="192.168.123.254"/>
Netmask	<input type="text" value="255.255.255.0 (/24)"/>
DHCP Server	<input checked="" type="checkbox"/> Enable
DHCP Setting	<input type="button" value="DHCP Config"/>

Ethernet IP		
Item	Value setting	Description
IP	1. IPv4 format. 2. A Must filled setting	The LAN IP Address of this unit.
Netmask	255.255.255.0 (/24) is set by default	The Subnet Mask of this unit.
DHCP Server	The box is unchecked by default.	Click Enable box to activate DHCP Server.
DHCP Setting	N/A	Click DHCP Config button to pop-up the DHCP Setting page.

DHCP Setting

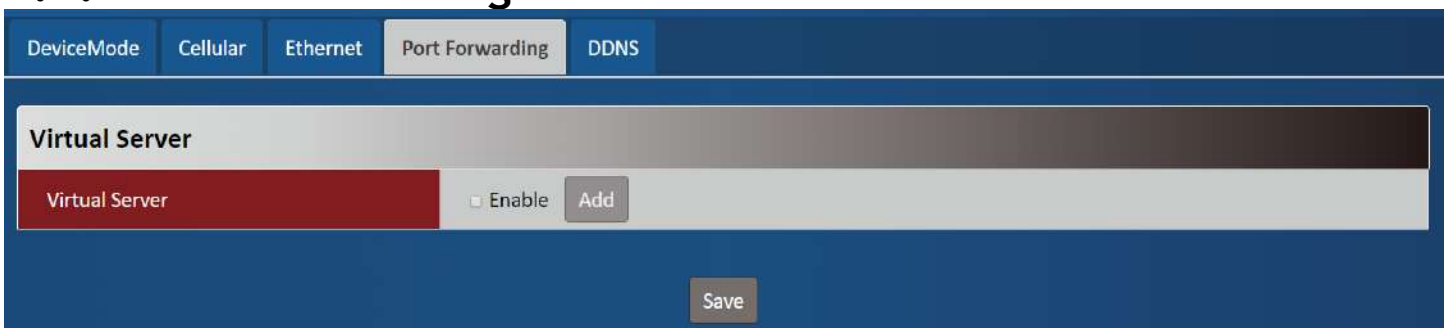
IP Pool Start	<input type="text" value="5"/>
IP Pool End	<input type="text" value="10"/>
Lease Time	<input type="text" value="3600"/>

DHCP Setting

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Item	Value setting	Description
IP Pool Start	<ol style="list-style-type: none"> 1. Numeric string format. 2. A Must filled setting 	The IP Pool of this DHCP Server. It is Starting Address entered in this field.
IP Pool End	<ol style="list-style-type: none"> 1. Numeric string format. 2. A Must filled setting 	The IP Pool of this DHCP Server. It is Ending Address entered in this field.
Lease Time	<ol style="list-style-type: none"> 1. Numeric string format. 2. A Must filled setting 	The Lease Time of this DHCP Server. <i>Value Range: 300 - 604800 seconds.</i>

2.1.4 Port Forwarding



Virtual Server		
Item	Value setting	Description
Virtual Server	The box is unchecked by default	Check the Enable box to activate this port forwarding function Click Add will pop-up Virtual Server Rule Configuration page.

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Virtual Server Rule Configuration

Name	<input type="text"/>
Server IP	<input type="text"/>
Source IP	<input type="text" value="Any"/>
Protocol	<input type="text" value="TCP(6)"/>
Public Port	<input type="text" value="Single Port"/> <input type="text"/>
Private Port	<input type="text" value="Single Port"/> <input type="text"/>
Rule	<input type="checkbox"/> Enable

Virtual Server Rule Configuration		
Item	Value setting	Description
Name	<ol style="list-style-type: none">String format can be any textA Must filled setting	The name of current rule
Server IP	A Must filled setting	This field is to specify the IP address of the interface selected in the WAN Interface setting above.
Source IP	<ol style="list-style-type: none">A Must filled settingBy default Any is selected	<p>This field is to specify the Source IP address.</p> <p>Select Any to allow the access coming from any IP addresses.</p> <p>Select Specific IP Address to allow the access coming from an IP address.</p> <p>Select IP Range to allow the access coming from a specified range of IP address.</p>

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Protocol	A Must filled settin	<p>When “TCP(6)” is selected It means the option “Protocol” of packet filter rule is TCP. Public Port selected a predefined port from Well-known Service, and Private Port is the same with Public Port number. Public Port is selected Single Port and specify a port number, and Private Port can be set a Single Port number. Public Port is selected Port Range and specify a port range, and Private Port can be selected Single Port or Port Range. <u>Value Range</u>: 1 ~ 65535 for Public Port, Private Port.</p> <p>When “UDP(17)” is selected It means the option “Protocol” of packet filter rule is UDP. Public Port selected a predefined port from Well-known Service, and Private Port is the same with Public Port number. Public Port is selected Single Port and specify a port number, and Private Port can be set a Single Port number. Public Port is selected Port Range and specify a port range, and Private Port can be selected Single Port or Port Range. <u>Value Range</u>: 1 ~ 65535 for Public Port, Private Port.</p> <p>When “TCP(6) & UDP(17)” is selected It means the option “Protocol” of packet filter rule is TCP and UDP. Public Port selected a predefined port from Well-known Service, and Private Port is the same with Public Port number. Public Port is selected Single Port and specify a port number, and Private Port can be set a Single Port number. Public Port is selected Port Range and specify a port range, and Private Port can be selected Single Port or Port Range. <u>Value Range</u>: 1 ~ 65535 for Public Port, Private Port.</p> <p>When “User-defined” is selected It means the option “Protocol” of packet filter rule is User-defined. For Protocol Number, enter a port number.</p>
Rule	<ol style="list-style-type: none"> 1. An optional filled setting 2. The box is unchecked by default. 	Check the Enable box to activate the rule.

Rule Name	<div style="background-color: #800000; color: white; padding: 2px;">test</div> <div style="display: inline-block; margin-left: 10px;"> <input type="button" value="Edit"/> <input type="button" value="Delete"/> </div>	
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Virtual Server - Rule Name

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Item	Value setting	Description
Rule name	N/A	Click “ Edit ” button to pop-up Virtual Server Rule Configuration page to edit the rule. Click “ Delete ” button to delete this rule

2.1.5 DDNS

DDNS		
Item	Value setting	Description
DDNS	The box is unchecked by default	Check the Enable box to activate this function.
Provider	DynDNS.org is set by default	Select your DDNS provider of Dynamic DNS. It can be DynDNS.org , NO-IP.com , TZO.com etc...
Host Name	1. String format can be any text 2. A Must filled setting	Your registered host name of DDNS Service. Value Range: 0 - 63 characters.
User Name / E-Mail	1. String format can be any text 2. A Must filled setting	Enter your User name or E-mail addresss of DDNS Service.
Password / Key	1. String format can be any text 2. A Must filled setting	Enter your Password or Key of DDNS Service.

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2.2 System

This section provides the configuration of system features.

2.2.1 System Time

System Time	
Current Time	Wed Jan 1 01:34:37 2020
Sync Time	Auto
Time Zone	(GMT+00:00) Greenwich Mean Time: Dublin, Edinburgh, Lisbon, London
NTP Server	pool.ntp.org
Daylight Saving	<input type="checkbox"/> Enable
Start Date	1 / 1 / 0 (Month/Day/Hour)
End Date	1 / 1 / 0 (Month/Day/Hour)
Action	Action

Save

Device Mode

Item	Value setting	Description
Current Time	N/A	Show the current time of the unit.
Sync Time	1. A Must-filled item. 2. Auto is selected by default.	When select Auto , unit will sync the time via cellular cell, and then try to use NTP if cellular cell doesn't provide time information. When select NTP , the unit will sync time via ntp service.
Time Zone	1. A Must-filled item. 2. GMT+00 :00 is selected by default.	Select a time zone where this device locates.
Daylight Saving	1. It is an optional item. 2. Un-checked by default	Check the Enable button to activate the daylight saving function. When user enabled this function, user has to specify the Start Date and End Date for the daylight saving time duration.
Start Date	N/A	Start time for Daylight Saving.
End Date	N/A	End Time of Daylight Saving.

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Action	N/A	Click Action to sync time immediately
--------	-----	--

2.2.2 Language

System Time | Language | System Information | Scheduling

Configuration

Language List: English

Save

Language		
Item	Value setting	Description
Language List	1. A Must-filled item. 2. English is selected by default.	Language setting of the WebGUI.

2.2.3 System Information

System Time | Language | System Information | Scheduling

System Information

Model Name	IDG400-0TE0C
Serial Number	ZZ20500000
Manufacturing Date	2020-5

System Information		
Item	Value setting	Description
Model Name	N/A	Show the model name of the device
Serial Number	N/A	Show the serial number of the device
Manufacturing Date	N/A	Show the manufacturing date of the device.

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2.2.4 Scheduling

The screenshot shows the 'Scheduling' tab selected in a navigation bar. Below the navigation bar, there is a 'Time Schedule' section with a red header and a grey body containing an 'Add' button.

Scheduling		
Item	Value setting	Description
Time Schedule	N/A	Press Add to create a schedule rule for system.

The 'Time Schedule Configuration' dialog box contains the following fields and options:

- Rule Name:** A text input field.
- Rule Policy:** A dropdown menu currently set to 'Inactivate'. Below it is the text 'The Selected Days and Hours Below.'
- Time Period Definition:**
 - Week Day:** A dropdown menu currently set to 'Every Day'.
 - Start Time (hh:mm):** A time input field.
 - End Time (hh:mm):** A time input field.

At the bottom of the dialog are 'Save' and 'Close' buttons.

Time Schedule Configuration		
Item	Value Setting	Description
Rule Name	String: any text	Set rule name
Rule Policy	Default Inactivate	Inactivate/activate the function been applied to in the time period below

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Time Period Definition

Item	Value Setting	Description
Week Day	Select from menu	Select everyday or one of weekday
Start Time	Time format (hh :mm)	Start time in selected weekday
End Time	Time format (hh :mm)	End time in selected weekday

Chapter 3 Administrator

3.1 Manager

3.1.1 FW Upgrade

The screenshot shows the 'FW Upgrade' page with a navigation bar containing 'FW Upgrade', 'Password & MMI', 'Reboot & Reset', 'Telnet & SSH', and 'Remote Administrator'. The main content is divided into three sections:

- Firmware Information:** A table with two rows: 'FW Version' (00004D0.K21_021.0000_02071600) and 'FW Date' (2020/02/07).
- Firmware Upgrade:** A form with 'FW Path' (Choose File, No file chosen) and 'Upgrade Action' (Upgrade button).
- Backup Configuration Settings:** A form with 'Backup Configuration Settings' (Download dropdown) and 'Via Web UI' button.

Firmware Information

Item	Value setting	Description
FW Version	N/A	It displays the firmware version of the product
FW Date	N/A	It displays the build time of the firmware

Firmware Upgrade

Item	Value setting	Description
FW Path	N/A	Select firmware file to be upgraded

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Upgrade Action	N/A	Click Upgrade button to start upgrade process with selected FW
Backup Configuration Settings		
Item	Value setting	Description
Backup Configuration Settings	N/A	Select “ Download ” to backup current configuration to a file. Select “ Upload ” to restore configuration from selected file.

3.1.2 Password & MMI

FW Upgrade
Password & MMI
Reboot & Reset
Telnet & SSH
Remote Administrator

Password

Old Password	<input style="width: 90%;" type="text"/>
New Password	<input style="width: 90%;" type="text"/>
New Password Confirmation	<input style="width: 90%;" type="text"/>

MMI

Login	Password-Guessing Attack & MAX: <input style="width: 30px; text-align: center;" type="text" value="3"/> (times)
Login Timeout	<input checked="" type="checkbox"/> Enable <input style="width: 30px; text-align: center;" type="text" value="300"/> (seconds)

Password		
Item	Value setting	Description
Old Password	1. String: any text 2. The default password for web-based MMI is 'admin'.	Enter the current password to enable you unlock to change password.
New Password	String: any text	Enter new password
New Password Confirmation	String: any text	Enter new password again to confirm
Save	N/A	Click Save button to save the settings

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MMI		
Item	Value setting	Description
Login	3 times is set by default	Enter the login trial counting value. Value Range: 3 - 10. If someone tried to login the web GUI with incorrect password for more than the counting value, an warning message “Already reaching maximum Password-Guessing times, please wait a few seconds!” will be displayed and ignore the following login trials.
Login Timeout	The Enable box is checked, and 300 is set by default.	Check the Enable box to activate the auto logout function, and specify the maximum idle time as well. Value Range: 30 - 65535.

3.1.3 Reboot & Reset

The screenshot shows the 'Reboot & Reset' configuration page. At the top, there are navigation tabs: 'FW Upgrade', 'Password & MMI', 'Reboot & Reset' (selected), 'Telnet & SSH', and 'Remote Administrator'. The main content area is titled 'System Operation'. It contains two rows of controls. The first row has a 'Reboot' button, a dropdown menu set to 'Now', and a 'Reboot' button. The second row has a 'Reset to Default' button and a 'Reset' button. At the bottom center, there is a 'Save' button.

Device Mode		
Item	Value setting	Description
Reboot	N/A	Click the Reboot button to reboot the unit immediately
Reset to Default	N/A	Click the Reset button to reset the device configuration to its default value.

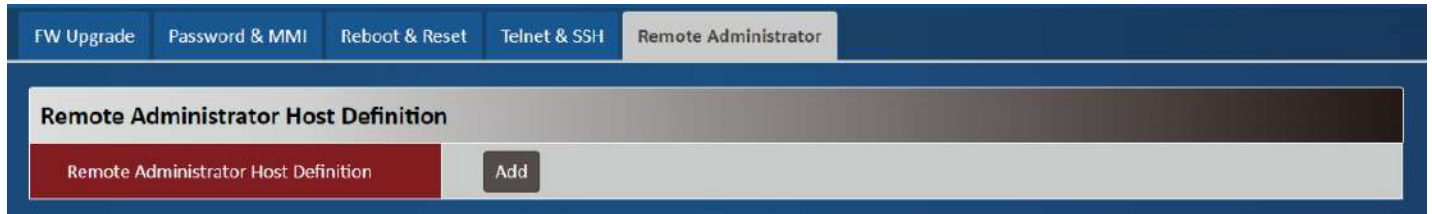
3.1.4 Telnet & SSH

The screenshot shows the 'Telnet & SSH' configuration page. At the top, there are navigation tabs: 'FW Upgrade', 'Password & MMI', 'Reboot & Reset', 'Telnet & SSH' (selected), and 'Remote Administrator'. The main content area is titled 'Configuration'. It contains two rows of controls. The first row is for 'Telnet' and has 'LAN' and 'WAN' checkboxes (both checked), and a 'Service Port' field set to '23'. The second row is for 'SSH' and has 'LAN' and 'WAN' checkboxes (both checked), and a 'Service Port' field set to '22'. At the bottom center, there is a 'Save' button.

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Telnet & SSH		
Item	Value setting	Description
Telnet	<ol style="list-style-type: none">1. Default value is disable such service2. By default Service Port is 23.	Check the Enable box to activate the Telnet function for connecting from LAN or WAN interfaces. You can set which number of Service Port you want to provide for the corresponding service. <i>Value Range: 1 ~65535.</i>
SSH	<ol style="list-style-type: none">3. Default value is disable such service1. By default Service Port is 22.	Check the Enable box to activate the SSH Telnet function for connecting from LAN or WAN interfaces. You can set which number of Service Port you want to provide for the corresponding service. <i>Value Range: 1 ~65535.</i>

3.1.5 Remote Administrator



Remote Administrator Host Definition		
Item	Value setting	Description
Remote Administrator Host Definition	N/A	Press “Add” to set a remote administrator rule

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Rule Configuration

Name	<input style="width: 100%;" type="text"/>
Protocol	<input style="width: 100%;" type="text" value="HTTP"/>
Remote IP	<input style="width: 100%;" type="text" value="Any IP"/>
Subnet Mask	<input style="width: 100%;" type="text" value="255.0.0.0 (/8)"/>
Service Port	<input style="width: 100%;" type="text" value="80"/>
Rule	<input type="checkbox"/> Enable

Rule Configuration		
Item	Value setting	Description
Name	String: any text	Set rule name
Protocol	HTTP is set by default	Select HTTP or HTTPS method for router access.
Remote IP	A Must filled setting	This field is to specify the remote host to assign access right for remote access. Select Any IP to allow any remote hosts Select Specific IP to allow the remote host coming from a specific subnet.
Subnet Mask	N/A	An IP address entered in this field and a selected Subnet Mask to compose the subnet if Remote IP set in Specific IP .
Service Port	1. 80 for HTTP by default 2. 443 for HTTPS by default	This field is to specify a Service Port to HTTP or HTTPS connection. <u>Value Range: 1 ~ 65535.</u>
Rule	The box is unchecked by default.	Click Enable box to activate this rule.

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3.2 Utility

3.2.1 SMS

SMS

SMS Service

SMS	<input type="checkbox"/> Enable
SMS Storage	SIM
Free Space	0 (0-10)
Event Management	<input type="checkbox"/> Enable <input type="button" value="Edit"/>

SMS Summary

New SMS	0
Received SMS	0
Action	<input type="button" value="New SMS"/> <input type="button" value="SMS Inbox"/>

SMS - SMS Service

Item	Value setting	Description
SMS	The box is unchecked by default	This is the SMS switch. If the box checked that the SMS function enable, if the box unchecked that the SMS function disable.
SMS Storage	The box is SIM by default	The storage location of SMS. SIM means to store SMS in SIM card and Modem means to store SMS in the unit.
Free Space		Specify a number (1-10) for message count to reserve some available storage space and prevent it from run out of storage. The oldest message(s) will be deleted when the SMS storage is going to full. 0 means the function is ignored.
Event Management	The box is unchecked by default	Check the Enable box to activate the Event Management function. After enable the function, press Edit to set the management rule.

SMS - SMS Summary

Item	Value setting	Description
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New SMS	N/A	If SIM card inserts to unit first time, New SMS value is zero. When received a new SMS but didn't read, this value will plus one.
Received SMS	N/A	This value records the existing SMS numbers. When received the new SMS, this value will plus one.
Action	N/A	New SMS When press this button, it will pop-up a page to let user write an SMS and can send it out. SMS Inbox When press this button, SMS inbox table will show to user.

Account Configuration

Phone Number#1	<input type="text"/>
Application	<input type="checkbox"/> Managing <input type="checkbox"/> Notifying
Enable	<input type="checkbox"/>
Phone Number#2	<input type="text"/>
Application	<input type="checkbox"/> Managing <input type="checkbox"/> Notifying
Enable	<input type="checkbox"/>

Managing Events

Cellular Status	<input type="checkbox"/> Enable
Cellular Reconnect	<input type="checkbox"/> Enable
Reboot	<input type="checkbox"/> Enable

Notifying Events

Cellular Connected	<input type="checkbox"/> Enable
Cellular Disconnected	<input type="checkbox"/> Enable

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Account Configuration		
Item	Value setting	Description
Phone Number#1 / #2	1. Mobile phone number format 2. A Must filled setting	Fill the specify Phone number to activate the Event Management function. User just can handle Event Management function on these phone numbers.
Application	Check box, default is unchecked.	Activate the phone tto have Managing / Notifying or both functions.
Enable	Check box, default is unchecked.	Checked it to enable the SMS event management on #1 or #2 phone number.

Managing Events		
Item	Value setting	Description
Cellular Status	N/A	Enable the option and user can query the current connection status via sending SMS “ status ” from specify phone number which enables managing function.
Cellular Reconnect	N/A	Enable the option and user can force the current connection reconnect once via sending SMS “ reconnect ” from specify phone number which enables managing function.
Reboot	N/A	Enable the option and user can force the device reboot once via sending SMS “ reboot ” from specify phone number which enables managing function.

Notifying Events		
Item	Value setting	Description
Cellular Connected	N/A	Enable the option will send a SMS to show “ WAN Link UP-IP:xxx.xxx.xxx.xxx ” to specify phone number which enable Notifying function when cellular WAN establishes a connection.
C e l l u l a r Disconnected	N/A	Enable the option will send a SMS to show “ WAN Link Down ” to specify phone number which enable Notifying function when cellular WAN connection is broken.

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New SMS

Receiver	<input style="width: 100%; height: 20px;" type="text"/> (Use '+' for International Format and ';' to Compose Multiple Receivers)
Text Message	<div style="border: 1px solid #ccc; height: 200px; width: 100%;"></div>
Action	Current Input Length: 0/512 <input type="button" value="Send"/> <input type="button" value="Clear"/>

New SMS		
Item	Value setting	Description
Receiver	N/A	Write the receivers to send SMS. User need to add the semicolon and compose multiple receivers that can group send SMS
Text Message	N/A	Write the SMS context to send SMS. The router supports up to a maximum of 512 characters for SMS context length.
Action	N/A	Click Send to send current content of Text Message to Receiver Click Clear to clear current Text Message .

SMS Inbox

0905339934	2018/12/20 15:37:42	<input type="button" value="Detail"/> <input type="button" value="Delete"/>
0905339934	2018/12/20 12:26:31	<input type="button" value="Detail"/> <input type="button" value="Delete"/>

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SMS Inbox		
Item	Value setting	Description
SMS Inbox	N/A	Show the phone number and timestamp of the SMS Detail: Click this button will pop-up the SMS Inbox to show the content. Delete: Click this button will delete the SMS.

SMS Inbox

Sender	0905339934	2018/12/20 15:37:42
SMS Content	9999999	

Close

SMS Inbox		
Item	Value setting	Description
Sender	N/A	Show the phone number and timestamp of the SMS
SMS Content	N/A	Show the content of the SMS