

## INTRODUCTION

This Ethernet interface kit is for use with the Defender<sup>®</sup> 5000 TD52 indicators.

## KIT CONTENTS



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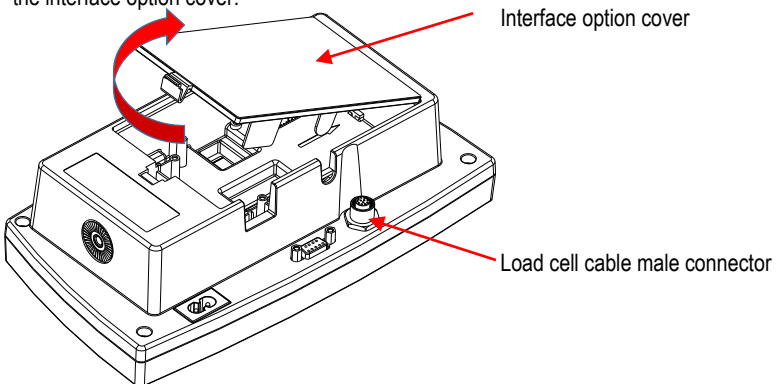
- Cable
- Screws(3)
- Ethernet Cable
- Ethernet PC board

## INTERFACE INSTALLATION

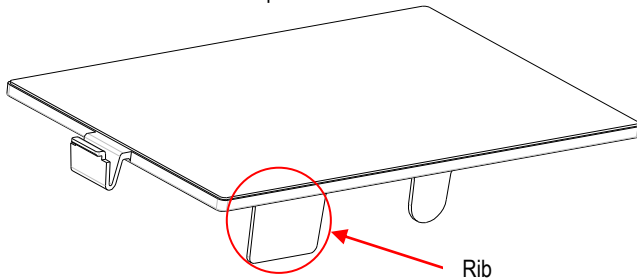
Install the Ethernet Interface on the underside of the indicator as shown.

For TD52P:

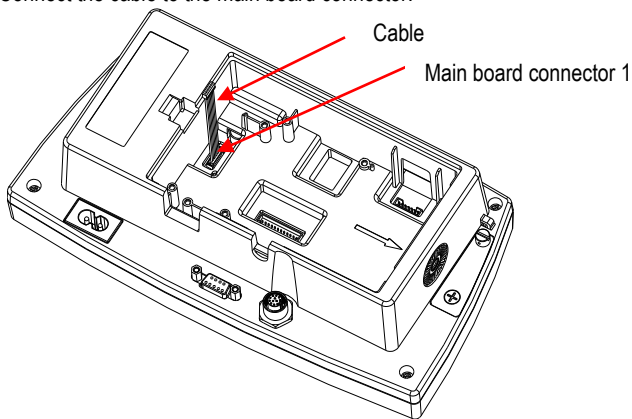
1. Separate the indicator from the base by loosening load cell cable male connector. Remove the interface option cover.



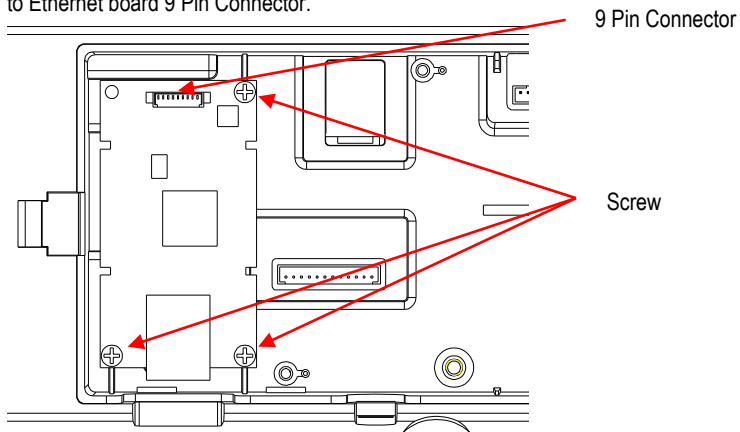
2. Break off the rib of the interface option cover as shown.



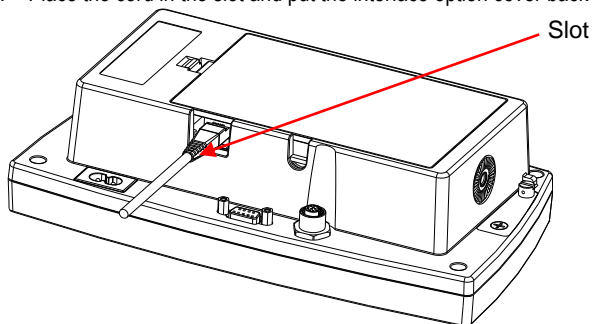
3. Connect the cable to the main board connector.



4. Install the Ethernet board. Secure it with the 3 screws. Connect the cable to Ethernet board 9 Pin Connector.

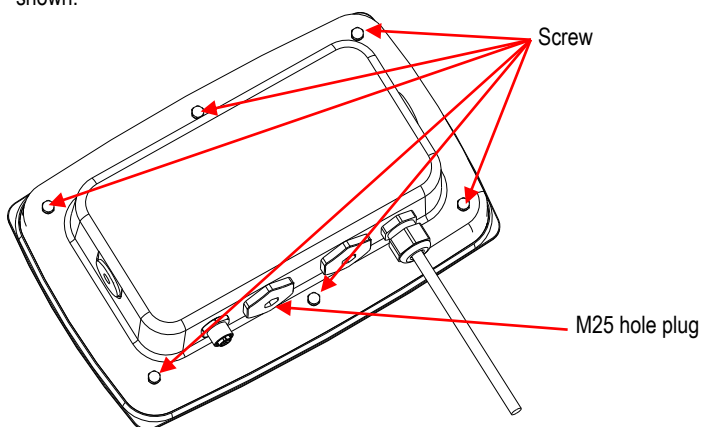


5. Place the cord in the slot and put the interface option cover back on.

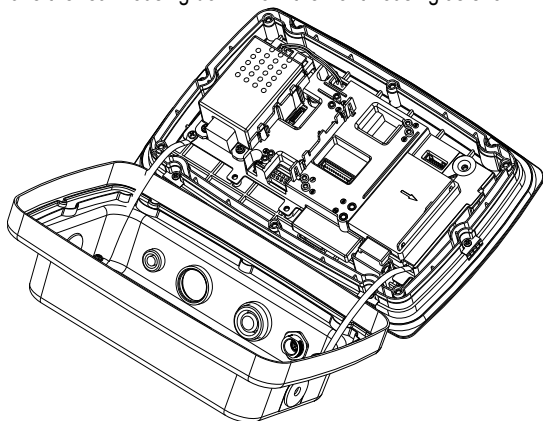


For TD52XW:

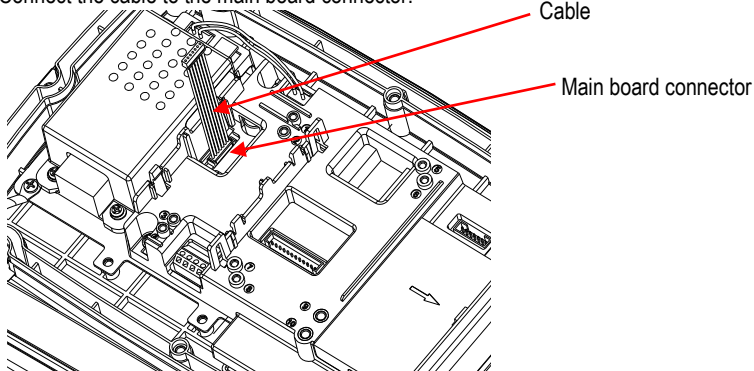
1. Remove the 6 sealing screws to open the rear housing. Remove the M25 hole plug as shown.



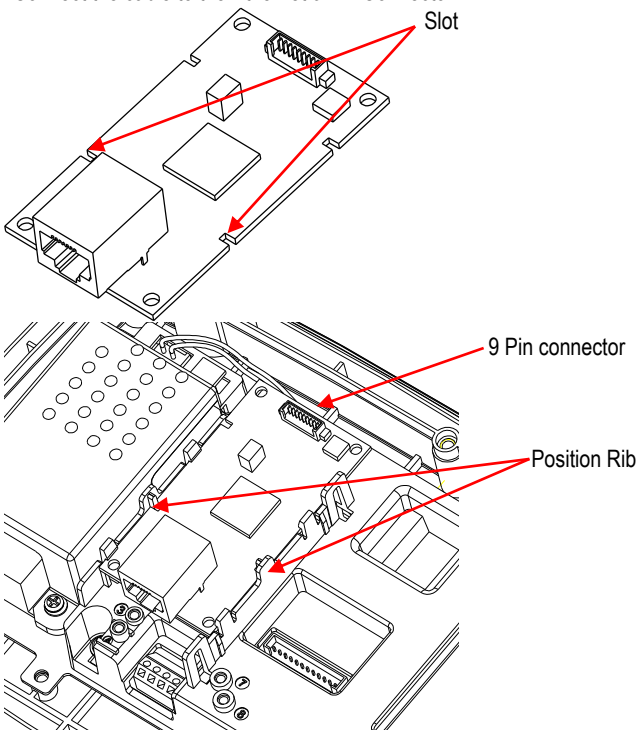
2. Take the rear housing down from the front housing as shown.



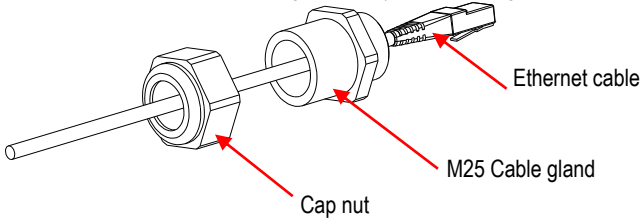
3. Connect the cable to the main board connector.



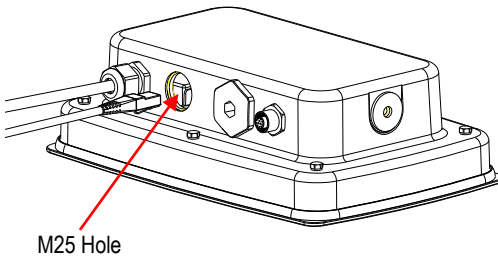
4. Install the Ethernet board. Fix the Ethernet board by 4 plastic clips and 2 position ribs. (Note: the slots of the accessory board align with the 2 position ribs as shown.) Connect the cable to the Ethernet 9 Pin Connector.



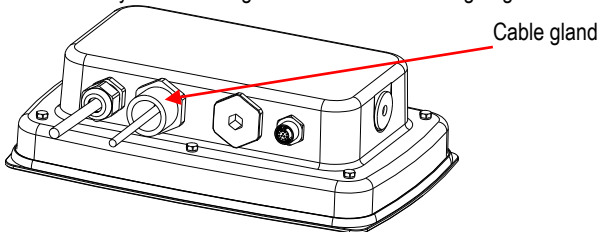
- Disassemble the cable gland by loosening the cap nut and removing the rubber seal. Pass the Ethernet cable through the cap nut; then spread the rubber seal and place it over the cable. Now pass the cable through the body of the cable gland.



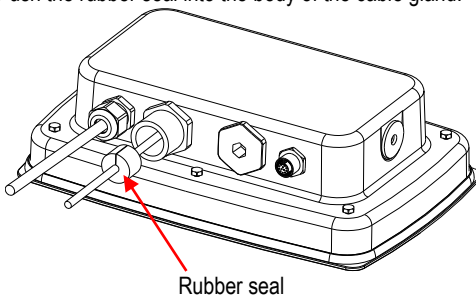
- Put the rear housing back on the front housing. Install the 6 sealing screws (Torque is  $1.8N \cdot m \pm 0.5$ ). Insert the Ethernet cable through the housing and connect it to the Ethernet board.



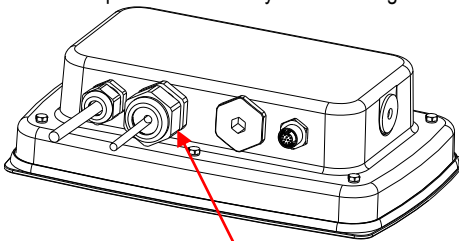
- Install the body of the cable gland into the rear housing. Tighten the cable gland.



- Push the rubber seal into the body of the cable gland.



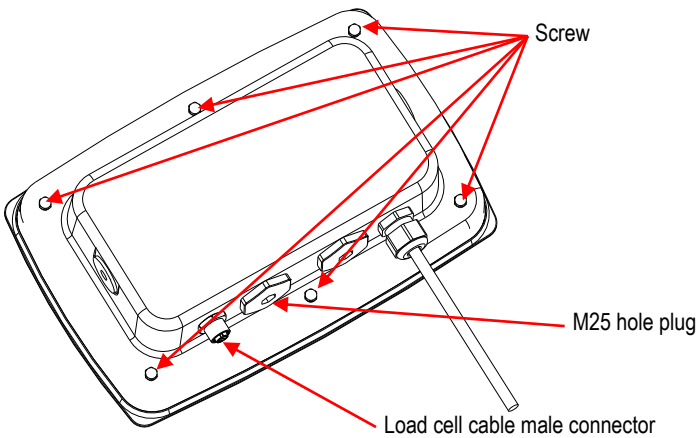
9. Install the cap nut onto the body of the cable gland. Tighten the cap nut.



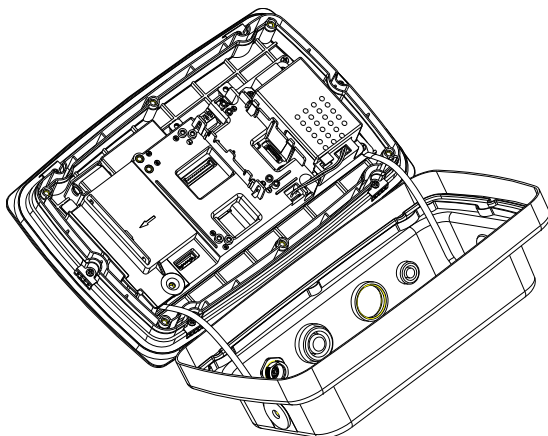
Cap nut of M25 gland

For TD52XW with reversed rear cover:

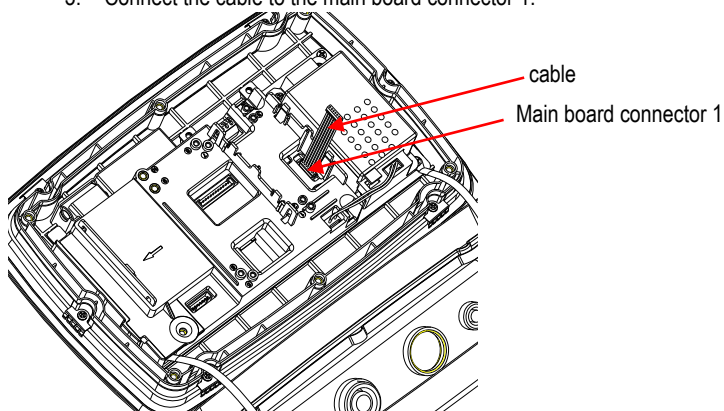
1. Remove the 6 sealing screws to open the rear housing. Remove the M25 hole plug as shown.



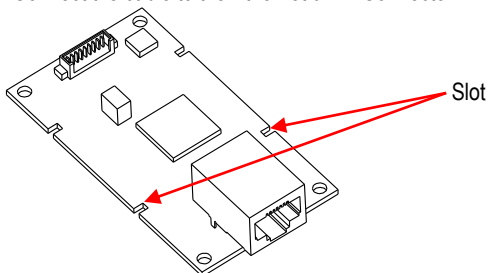
2. Take the rear housing down from the front housing as shown.

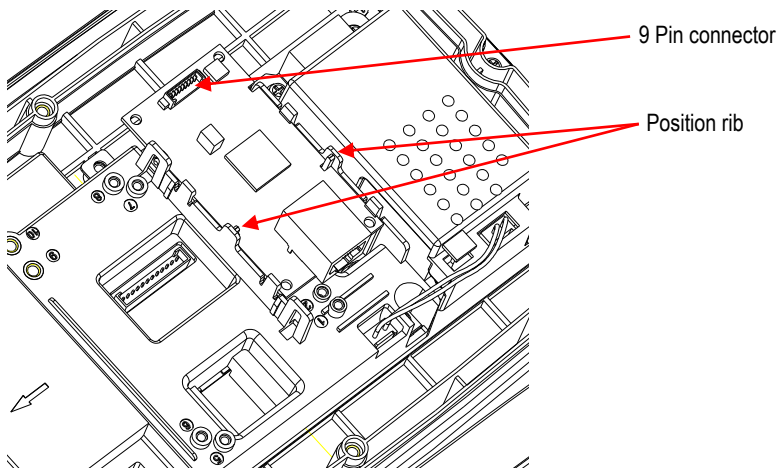


3. Connect the cable to the main board connector 1.

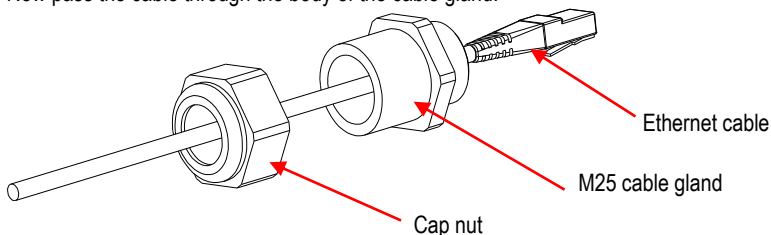


4. Install the Ethernet board. Fix the Ethernet board by 4 plastic clips and 2 position ribs. (Note: the slots of accessory board match with the 2 position ribs as shown) Connect the cable to the Ethernet 9 Pin Connector.

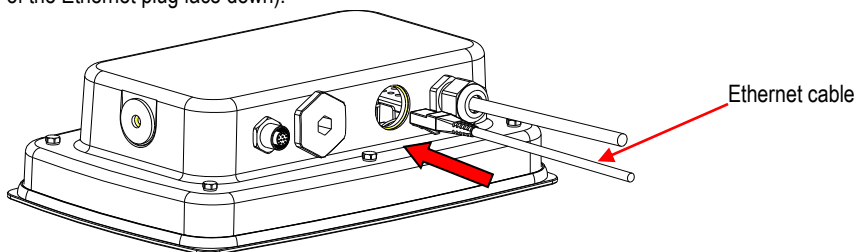




5. Disassemble the cable gland by loosening the cap nut and removing the rubber seal. Pass the Ethernet cable through the cap nut; then spread the rubber seal and place it over the cable. Now pass the cable through the body of the cable gland.

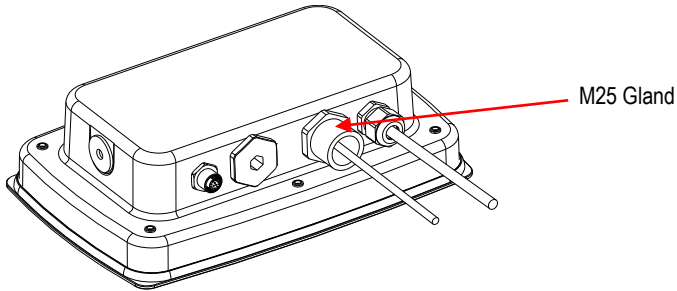


6. Put the rear housing back on the front housing. Re-install the 6 screws (Torque is  $1.8N \cdot m \pm 0.5$ ). Insert the Ethernet cable through M25 hole. (Note: the direction which is the hook of the Ethernet plug face down).

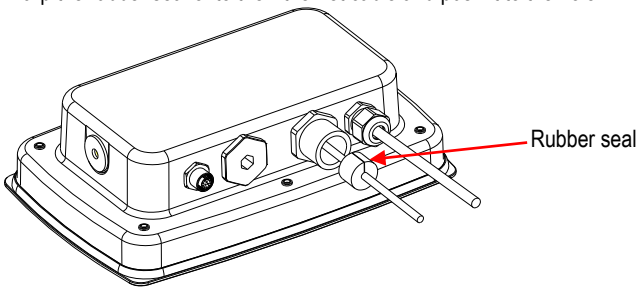


7. Fasten the M25 gland to the rear housing.

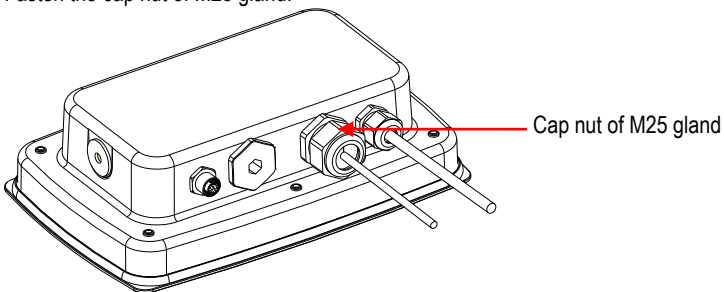




8. Warp the rubber seal onto the Ethernet cable and push it to the hole.



9. Fasten the cap nut of M25 gland.

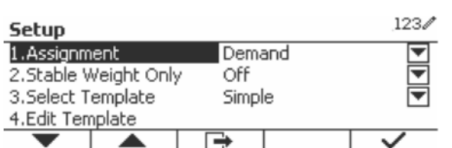


## SETUP

Upon installation, the indicator will recognize the Ethernet Interface Kit and add relevant items to the menu. Configure the indicator to the desired RS232 and printing parameters (refer to the indicator User Manual for assistance in using the menus).

Communication		123/
1. RS232	Configuration	
2. Ethernet	Setup	

Configuration		123/
1. Host Name	0R1ETH	
2. MAC Address	00:7E:00:00:00:00	
3. Port	9761	
4. Version	1.01	



### Ethernet Connection

If DHCP is set to ON, the IP Address will be automatically assigned by the IP share or router. If the DHCP is set to OFF, the user can setup the IP Address, Subnet mask, Gateway, Preferred DNS and Alternate DNS. The Interface has a preset IP Address. The Port Number is always **9761** and cannot be changed.

**Note:** After the setup of IP Address, Gateway, Preferred DNS and Alternate DNS, please reboot the indicator to enable the setting.

## OPERATION

### Output

With the interface installed the indicator will operate in one of the following two ways:

- Auto Print = off, Stable = on or off  
Pressing PRINT will send the display data.  
If Stable is set to On, the indicator will wait for a stable reading before sending the stable data.
- Auto Print = not off, Stable = on or off  
The indicator will automatically send data based on the settings in the Menu.  
If Stable is set to On, only stable values will be sent.

Data sent from the Interface is in standard ASCII format terminated with a [CRLF] (carriage return-line feed). For the output format please refer to the indicator's instruction manual.

### Input

The indicator will respond to various commands sent via the interface adapter. Terminate the following commands with [CRLF].

### Commands

For the full list of commands, please refer to the indicator's instruction manual.

## CONFIGURATION

The TD52 indicator connects an Ethernet option board through the RS232 interface. The baud rate will be 19200. If the option board is not connected, the submenu will not display.

Communication		Options (bold is default, Red is read only)	
Ethernet	Configuration	Host Name	OHETHER
		MAC Address	00-11-22-33-44-55
		Port	9761
		Version	1.01
		DHCP	Off, <b>On</b>
		IP Address	169.254.1.1

Communication		Options (bold is default, Red is read only)		
		Subnet Mask	255.255.255.0	
		Gateway	169.254.1.1	
		Primary DNS	169.254.0.1	
		Secondary DNS	169.254.0.1	
		Alt Print CMD	'a' ~ 'z', 'A' ~ 'Z', <b>P</b>	
		Alt Tare CMD	'a' ~ 'z', 'A' ~ 'Z', <b>T</b>	
		Alt Zero CMD	'a' ~ 'z', 'A' ~ 'Z', <b>Z</b>	
		Reset	<b>No/Yes</b>	
	Print Setup	Assignment	<b>Demand</b>	
			Stable Only	<b>Off, No</b>
			<b>Auto On Stable</b>	
			Mode	<b>Load, Load and Zero</b>
			<b>Auto On Accept</b>	
			<b>Interval</b>	
Time			<b>1~50000</b>	
<b>MT-Continuous</b>				
<b>OH-Continuous</b>				
<b>SICS</b>				
Select Template	<b>Simple</b> , Custom 1, Custom 2, Custom 3, Custom 4, Custom 5			
Edit Template	Field 1~ Field 100			
Edit String	String 1~ String 10			
Reset	<b>No/Yes</b>			

### Host Name

The **Host Name** is the name of the Ethernet option board in the network. It is "OHETHER" by default.

### MAC Address

The **Medium Access Control (MAC)** Address of the **Ethernet** option board is not editable.

### Port

The Ethernet option board has a TCP server, with the port of 9761 (unmodifiable).

### DHCP

If the DHCP is set Off, the user must set IP Address, Subnet Mask, Gateway, Primary DNS and Secondary DNS manually.

If the DHCP Client is set On and there is **DHCP server** in the network, IP Address, Subnet Mask, Gateway, Primary DNS and Secondary DNS fields will be read-only and assigned automatically by the network. If there is no **DHCP server** in the network, the DHCP Server of the Ethernet option board will be the **DHCP server** of the network.

### IP Address

IP is 192.168.0.1 by default.

### Subnet Mask

Subnet mask is 255.255.255.0 by default.

**Gateway**

Gateway is 169.254.1.1 by default.

**Primary DNS & Secondary DNS**

DNS value is not needed when the system connects to a LAN. And the DNS value is assigned by the ISP when connecting to the internet.


**Alternative Command**

The alternative command of Print, Tare, Zero can be set to 'a' ~ 'z' or 'A' ~ 'Z'.

**NOTE:**

- The submenu will display after the installation of Ethernet option board.
- The configurations of other submenus are the same as in section 3.9.1.

## COMPLIANCE

Mark	Standard
	<p>This product complies with the applicable harmonized standards of EU Directives 2011/65/EU (RoHS) and 2014/30/EU (EMC). The EU Declaration of Conformity is available online at <a href="http://www.ohaus.com/ce">www.ohaus.com/ce</a>.</p>

### FCC 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.

### Industry Canada Note

This Class A digital apparatus complies with Canadian ICES-003

### Disposal



In conformance with the European Directive 2012/19/EU on Waste Electrical and Electronic Equipment (WEEE) this device may not be disposed of in domestic waste. This also applies to countries outside the EU, per their specific requirements.

Please dispose of this product in accordance with local regulations at the collecting point specified for electrical and electronic equipment. If you have any questions, please contact the responsible authority or the distributor from which you purchased this device.

Should this device be passed on to other parties (for private or professional use), the content of this regulation must also be related.

For disposal instructions in Europe, refer to [www.ohaus.com/weee](http://www.ohaus.com/weee).

Thank you for your contribution to environmental protection.



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