

# FWA-3700/FWA-3710 User manual

**Rackmount Internet Security Platform with 4 GbE Front LAN Ports and 1 FE  
10/100 manager port / 1 mini PCI Expansion Slots/ LCD Display**

*Advantech Internet Security Platform*

*Your ePlatform Partner*

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## **CE Notification**

The FWA-3700/FWA-3710, developed by Advantech Co., Ltd., has passed the CE test for environment specifications when shielded cables are used for external wiring. We

recommend the use of shielded cables.

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### **Product warranty**

Advantech warrants to you, the original purchaser, that each of its products will be free from defects in materials and workmanship for two year 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 on-screen 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 merchandise 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.

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## Packing List

Before installation, ensure that the following materials have been received:

- One FWA-3700/FWA-3710 Internet Security Platform
  - One box of accessories
  - One warranty certificate
  - One CD-ROM for user manual (PDF file)
- If any of these items are missing or damaged, contact your distributor or sales representative immediately.

## Technical Support and Sales Assistance

If you have any technical questions about the FWA-3700 or any other Advantech products, please visit our support website at:

<http://www.advantech.com.tw/support>  
<http://www.advantech.com>.

For more information about Advantech's products and sales information, please visit:

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# Contents

1. General Information.....	1
1.1 Introduction.....	2
1.2 Features.....	2
1.3 Specifications.....	2

1.4 Dimensions.....	4
1.5 Model List.....	5
<b>2 System Setup.....</b>	<b>6</b>
2.1 Removing the cover.....	7
2.2 Installing Central Processing Unit (CPU).....	8
2.3 Installing Memory Module.....	9
2.4 Installing Hard Drive.....	10
2.5 Installing Compact Flash.....	11
2.6 Setting LAN Bypass function.....	12
<b>Appendix A.....</b>	<b>15</b>
A.1 NAME-3700 Mother Board.....	16

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# Figures

Figure 1-1: FWA-37x0 dimensions.....	4
Figure 1-2: Outlook of FWA-37x0.....	4
Figure 2-1: Front view of FWA-37x0.....	7
Figure 2-2: Removing the cover.....	7
Figure 2-3: Top view of FWA-37x0.....	8
Figure 2-4: Installing Central Processing Unit steps.....	9
Figure 2-5: Installing Memory Module steps.....	10
Figure 2-6: Installing Hard Disk Drive steps.....	11
Figure 2-7: Installing Compact Flash steps.....	12
Figure 2-8: The illustration of LAN Bypass function.....	12
Figure 2-9: LAN Bypass function jumps.....	13
Figure 2-10: Setting LAN Bypass function from BIOS.....	14

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# 1

## General Information



### 1.1 Introduction

Conceived as a powerful but low power consumption rack-mount Internet security platform, the FWA-3700/FWA-3710 was specifically designed for mainstream IDS/IPS, Anti-virus, VPN gateway and Unified Threat Management (UTM) applications. Using the latest Intel Pentium M processor combined with the Mobile Intel 915GM Express chipset and Intel ICH6M I/O Controller Hub, the FWA-3700 provides unprecedented performance, connectivity and throughput without compromising on system thermal design. It supports up to 2 GB of DDR2 system memory at 400 or 533MHz on dual-channel SODIMM banks. By leveraging PCI-Express technology, the FWA-3700 maximizes I/O throughput by taking full advantage of the ICH6-M's PCI Express (PCIe) capability. Four PCIe lanes connect directly to the Marvell 8053 Ethernet controllers to provide bi-directional 2 Gb/s peak bandwidth for Gigabit Ethernet support at wire speed. The system supports one optional 3.5" IDE or SATA HDD, and Compact Flash for OS and Internet security applications. The front panel has a 9-pin RS-232 serial port and one 10/100 managed LAN port, with LCD Module for local system management, maintenance and diagnostics. It is FCC and CE compliant..

### 1.2 Features

- 1U rackmount Internet security platform
- Socket 479 Intel® Pentium® M or Celeron M
- One 32-bit/33 MHz Mini PCI expansion slots
- Four 10/100/1000 Gigabit Ethernet ports, 1 10/100 Fast Ethernet
- Console port for local setting
- Hard drive mounting bracket for 3.5" drive
- LCD display module
- LAN Bypass function

### 1.3 Specifications

- **Processor System:**

- CPU: Intel Pentium M 2.0G Hz, Celeron M processor
- Max. Speed: 533/400 MHz FSB
- L2 Cache: 2MB or 1MB

Chipset: Intel 915GM, ICH6M

BIOS: Award 4 Mb Flash

**Memory:** Support DDR2 533/400, Max. Capacity 2 GB, Socket 200-pin SOD DIMM x 2

**Ethernet:** 1 10/100 Fast Ethernet & 4 10/100/1000 Gigabit Ethernet, RJ-45 x 4

**Drive Bay:** 3.5" HDD x1

**Management:** Console RS-232 x1

**Cooling:** Fan (15 CFM) x2, Blower x1

**Miscellaneous:** Power Switch, 2 LED indicators for Power/HDD, CompactFlash Socket x1, LCD Display Module x1

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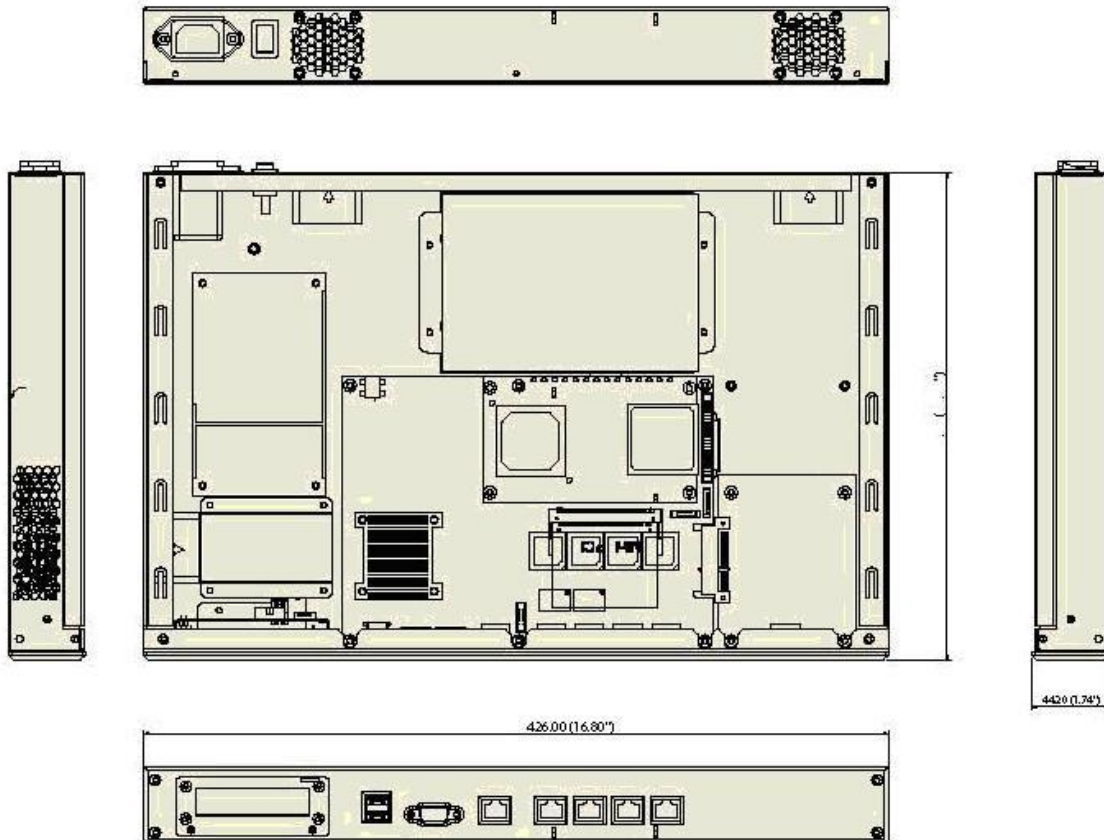
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- **Adapter Power Requirement:** Input: ATX PS, AC 90 ~ 264 V @ 47 ~ 63 Hz, full range Output: 125W
- **Operating Environment:** Operating: Temperature 0 ~ 40 °C (32 ~ 104 °F), Humidity 5 ~ 85 %  
Non-Operating: Temperature -20 ~ 75 °C (-4 ~ 167 °F), Humidity 5 ~ 95 %  
**Dimensions (W x H x D):** 1U: 426 x 44.4 x 360 mm (16.7" x 1.7" x 15.7")  
**Weight:** 4.5 Kg (9.9 lb)

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## 1.4 Dimensions





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## 1.5 Model List

**FWA-3700:** 1U rackmount Internet security platform, 32-bit/33 MHz Mini PCI expansion slots, LCD display module, Four 10/100 GbE Ethernet ports supporting two LAN Bypass function.

**FWA-3700-A:** 1U rackmount Internet security platform, 32-bit/33 MHz Mini PCI expansion slots, LCD display module, Four 10/100 GbE Ethernet ports supporting two LAN Bypass function. I/O card: Broadcom BCM5714 SFP (Fiber) with CN1010 x 2

**FWA-3700-B:** 1U rackmount Internet security platform, 32-bit/33 MHz Mini PCI expansion slots, LCD display module, Four 10/100 GbE Ethernet ports supporting two LAN Bypass function. I/O card: Broadcom BCM5714 RJ45(GbE) with CN1010 x 2

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# 2

## System Setup

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Setting up your FW-3700 requires only a screwdriver and a small amount of time. Before you begin, you should also gather together all of the device you plan to install, as well as the CPU, RAM, HDD, and etc. The front panel of FWA-3700 includes a LCD display module, four Ethernet ports, aRS-232 console port, and two LEDs where one is power LED and another is HDD LED. On the rear panel, there is a power switch located on the top right hand corner.

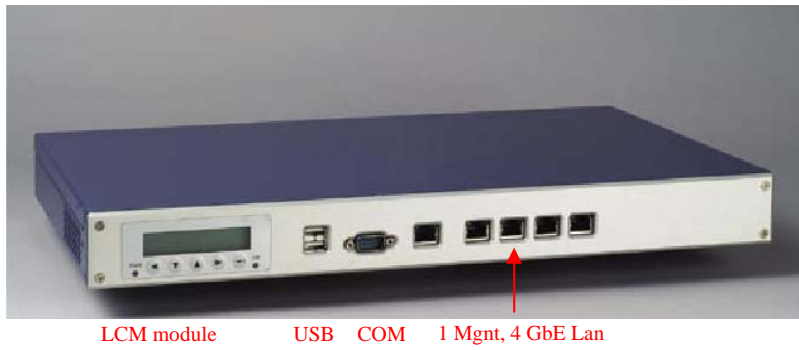


Figure 2-1: Front view of FWA-3700

## 2.1 Removing the cover

There are screws which secure the cover to the chassis. They are along the sides, near the top. Remove them, and then slide the cover to the rear of the chassis.



Figure 2-2: Remove top cover

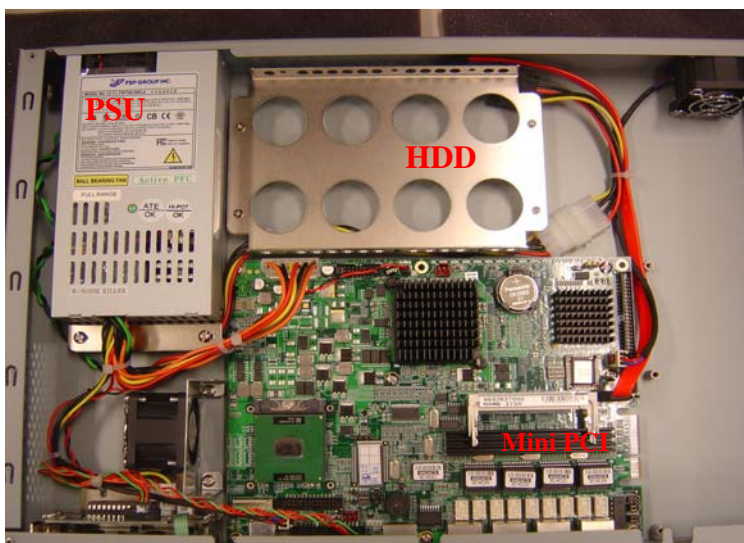


Figure 2-3: Inside of FWA-3700

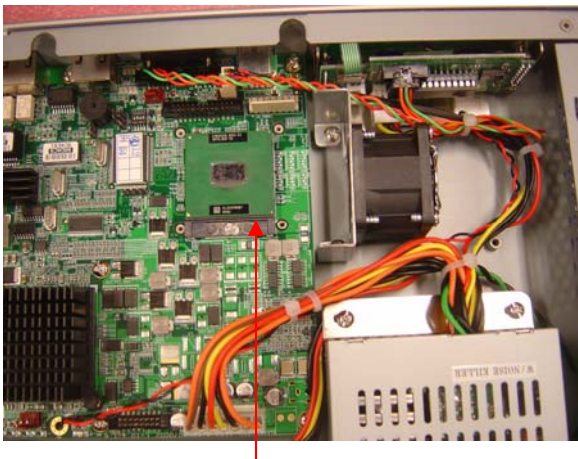


## 2.2 Installing Central Processing Unit (CPU)

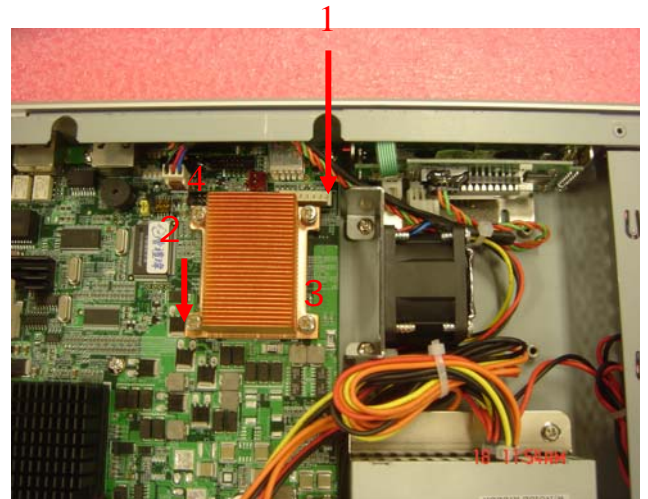
- 1 Locate the 479-pin CPU ZIF socket on the motherboard. And unlock the Socket actuation to the left side directly.
- 2 Position the CPU above the socket that its marked corner (golden cut edge on the CPU upper corner) matches the base of the socket lever. Insert the CPU into the socket. (Do not force the CPU into the socket.) Then lock the socket to secure the CPU.
- 3 Apply the thermal tape to provide better heat conduction between your CPU and cooling fan. Position the cooling fan on top of the CPU. Use screw driver to fix the heatsink sequence.
- 4 Make sure the CPU fan power connector is plugged to the motherboard fan power connector, than installing CPU is completed.



Unlock the socket of CPU as the symbol accordingly



Insert the CPU into the socket



Fix the CPU heatsink on the socket

Figure 2-4: Install CPU

## 2.3 Installing Memory Module

- 1 Unlock a DIMM socket by. Align the notch of the DIMM memory module to match on the socket and insert the DIMM into the socket until the DIMM is properly seated.
- 2 Press the DIMM inward to lock the DIMM memory module. Installing memory module is completed.

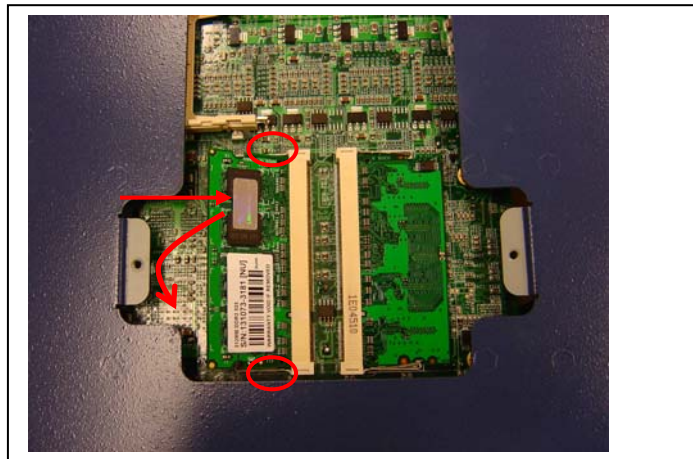


Figure 2-5: Install RAM module

## 2.4 Installing Hard Disk Drive

- 1 Unscrew each side of the HDD supporting frame on the chassis and pull it out.
- 2 Put the HDD above the HDD supporting frame and position the screws accordingly.
- 3 Screw each side of the HDD supporting frame to fix on the chassis.
- 4 Connect the SATA cable included in the accessory box to the connector on the HDD. Connect power connector to the HDD. Installing Hard Disk Drive is completed.

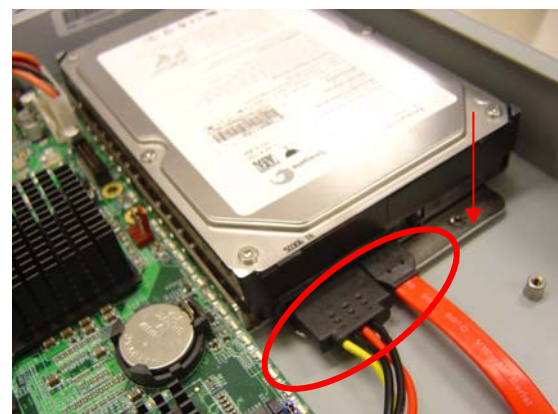
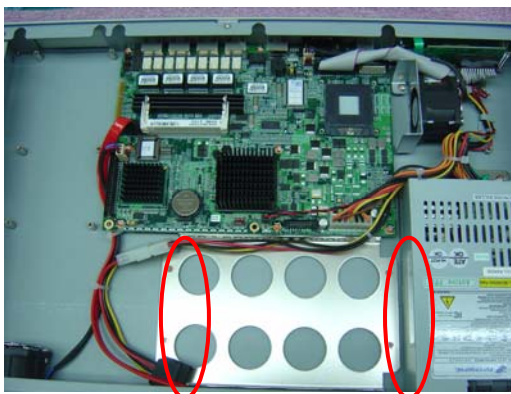


Figure 2-6: Install HDD

## 2.5 Installing Compact Flash

Figure 2-6: Install HDD

- 1 Position a CompactFlash disk accordingly in the CompactFlash disk socket and push it inward. Installing CompactFlash disk is completed.

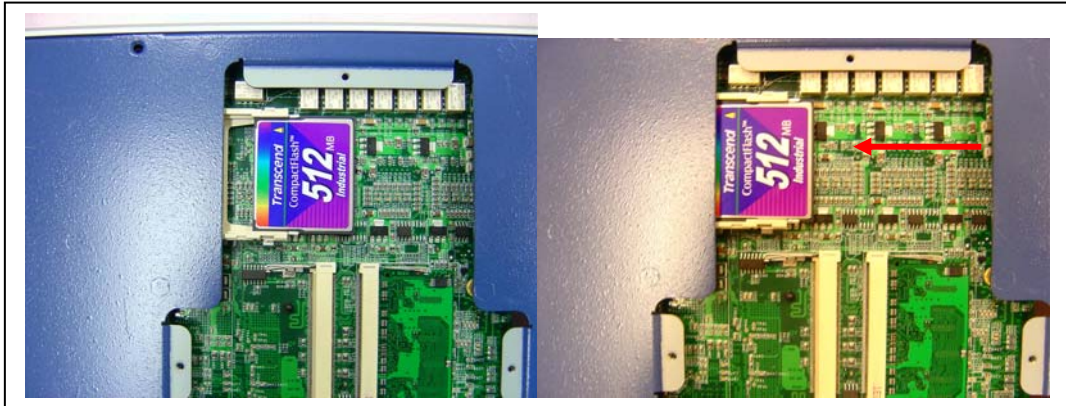


Figure 2-7: Install CF card

## 2 Setting LAN Bypass function

FWA-3700 provides LAN Bypass function showed as Figure 2-8. When system shuts down, LAN1-LAN2 will connect directly to avoid network broken.

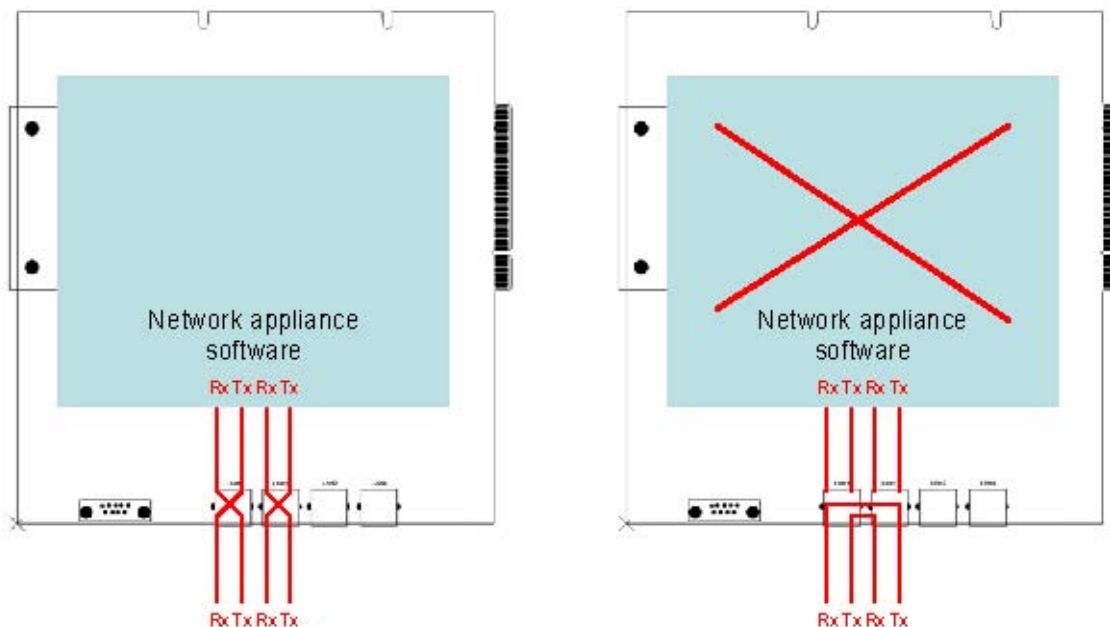


Figure 2-8: The illustration of LAN Bypass function

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The jump "J3 & CNRL1-2" allows you to set LAN Bypass function. (See J4 pins assignment in APPENDIX A.1 NAME-3700 MOTHER BOARD)

Pins 1-3: Monitor network mechanism with watchdog timer Pins

3-5: Turn on LAN Bypass

N. C.: Turn off LAN Bypass

Pins 2-4: Set LAN Bypass enable automatically when system shut down Pins

4-6: Set LAN Bypass enable / disable via BIOS

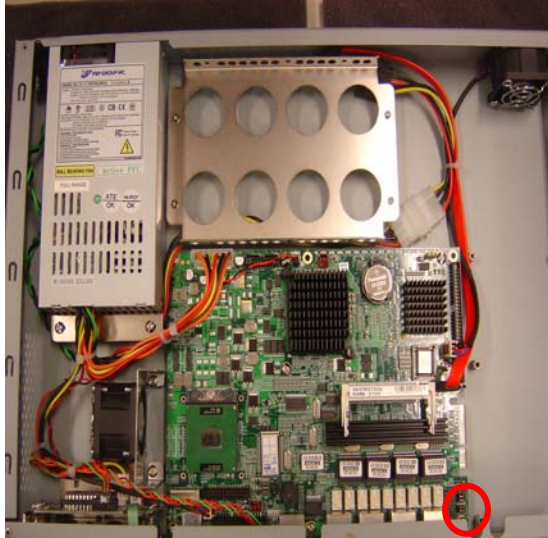


Figure 2-9: LAN Bypass function jumps

<b>J3:</b>		1-2 Watch dog lan bypass
		2-3 Watch dog Reset (default)
<b>CNRL1:</b>		Relay control
		1-3 : GPIO&Watch dog (Default)
		3-5 : Relay force on
		NC : Relay force off
		Relay on control
		2-4 : AUTO ON (Default)
		4-6 : GPIO & watch dog
<b>CNRL2:</b>		Relay control
		1-3 : GPIO&Watch dog (Default)
		3-5 : Relay force on
		NC : Relay force off
		Relay on control
		2-4 : AUTO ON (Default)
		4-6 : GPIO & watch dog

When jumper keeps on pins 4-6, follow below steps to set LAN Bypass function via BIOS.

- 1 Turn on FWA-3700 platform. Then hold down the <Delete> key during the boot process to enter BIOS menu.
- 2 Move to "LAN Bypass Control" Item
- 3 Press <PageUp> or <PageDown> key to change the condition option of "LAN Bypass Control" Item. Condition option [Enabled]: Set LAN Bypass function enable. Condition option [Disabled]: Set LAN Bypass function disable.
- 4 Press <F10> to save and exit BIOS menu.

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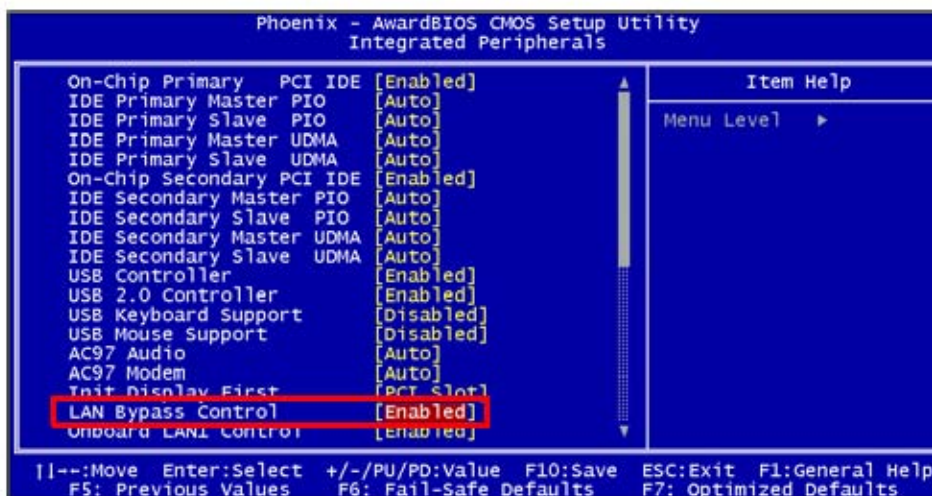


Figure 2-10: Setting LAN Bypass function from BIOS

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# A

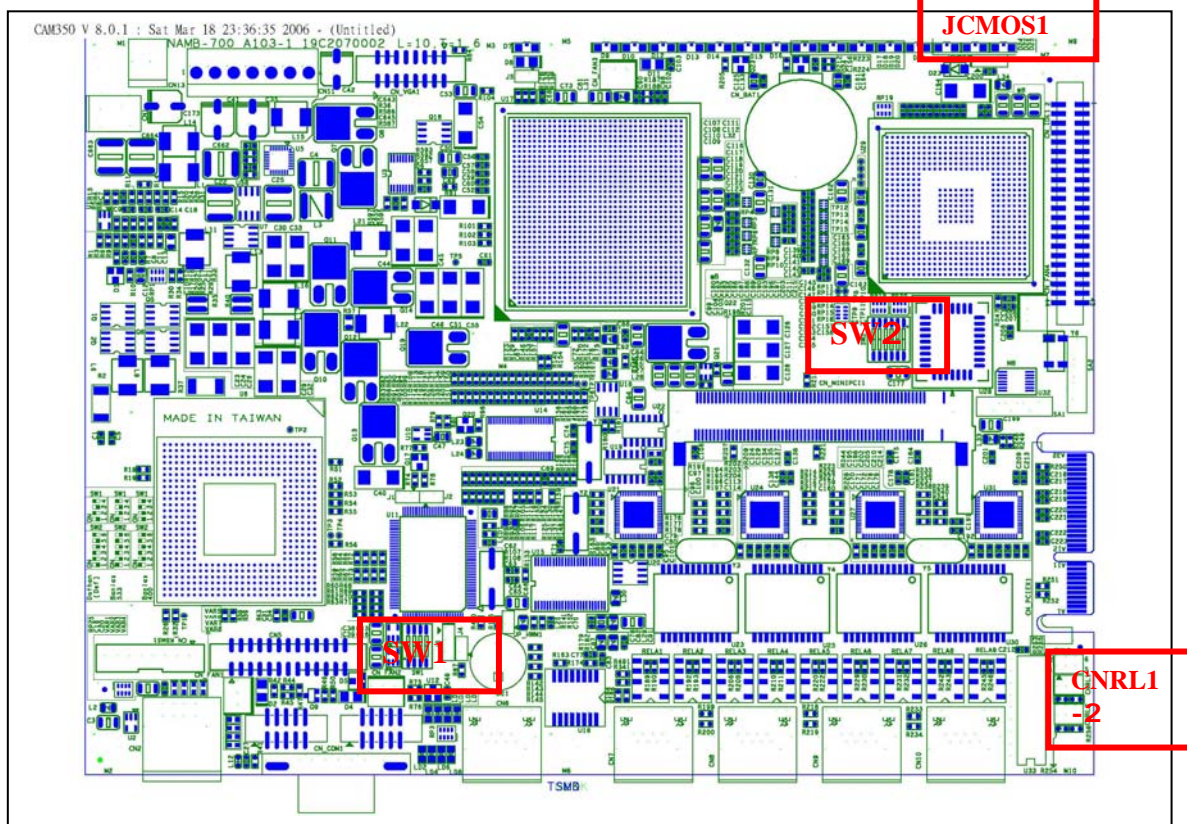
## Pin Assignments

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### A.1 NAME-3700 Mother Board



## Jumper setting of FWA-3700:

