

Millinet VDSL2 modem

Model: MVM204



User's Guide v1.0

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December, 2005

This User's Guide includes information and instruction for safe usage of product to prevent any damage or injury to the properties or users. User should read this guide before installation or use of the product.

Please keep this guide near by the product for reference.

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Changes and enhancements to the product and to the information herein will be documented and issued as a new release to this manual.

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1. Safety information

1.1 Safety Cautions

This manual describes information and instructions for safe usage of products to prevent any damage or injury to the property or body of users or others.

This system should be installed and managed only by experienced technicians who fully understand how to use this product after completely understanding the contents of this manual. This manual describes overall cautions for installation and operation of the product.

1.2 Meaning of Warnings and Cautions

**Warning**

Indicates the matters that must not be performed. Failing to comply with this warning may result in death or injury to the user. In addition, it indicates that significant physical damage may occur.

**Caution**

Failing to comply with this may result in the injury of the user or physical damage.

**Prohibited**

This mark prohibits actions indicated.

**Compulsory**

This mark compels actions indicated.



Handling



Prohibited

Do not disassemble, remodel and repair.

Disassembling this product may result in personal or material damages due to electric shock or failure.



Prohibited

Do not drop or give strong impact on the product.

Damaging inside may result in fire or electric shock during use.



Prohibited

Do not insert foreign materials inside.

If foreign materials is inserted inside turn off the power immediately, remove the power cable, and contact the designated customer center. If you keep using the product while foreign substance is inserted inside, it may result in fire or electric shock.



Prohibited

Do not touch the product with wet hands.

It may result in fire or electric shock. If water comes inside, immediately remove power cable and contact the designated customer center. It may result in fire or electric shock if you keep using.



Prohibited

Do not block the vent of product.

It will raise the temperature inside and result in fire or electric shock.

Power Supply



Prohibited

Do not use power voltage other than designated.

It may result in fire or failure.



Compulsory

Connect the power cable firmly to the power outlet.

If you keep using the product while the power cable is improperly connected to the power outlet, it may result in a fire or electric shock.



Prohibited

Do not use power wiring with too many equipment connected when you connect the power cable of this product.

It may result in fire or a problem in the product performance.

**Prohibited****Do not cut or damage power cord or cable.**

It may result in fire or electric shock if you keep using the product while cable or cord is damaged.

In case of smoke

**Compulsory****If you notice a smoke comes out from the product, immediately remove the power cable connected to this product.**

It may result in fire or electric shock if you keep using. Contact the designated customer center.

In case of thunderstorm

**Prohibited****Do not expose the product or cables connected to the product to lightning.**

It may result in severe personal or physical damages such as electric shock or failure of product. Be careful not to expose product to dangerous environment which may result in lightning damage. Install surge protection system.

Electromagnetic Wave

**Prohibited****Make sure to install and operate the product in the way that electromagnetic wave does not affect the product and cable.**

Electromagnetic wave may cause abnormal operation or deteriorate the system performance.



Power



Compulsory

Take out the power cord if you do not use it for a long period of time.

It may result in electric shock or electric leakage by insulation deterioration.



Prohibited

Do not excessively pull out the power cord.

If you pull out power cord strongly, some part of power cord may be broken and result in generating heat or fire.

Installation Place



Prohibited

Do not install the product outdoor.

Since this product is for indoor use only, never use it outdoor.



Prohibited

Do not install the products at the place with high temperature or exposed to direct sunlight, or near the heat generating devices.

It may result in fire due to high temperature or in the problem in product operation.



Prohibited

Do not use it at the place near cooler or heater where temperature abruptly changes.

If abrupt temperature change occurs, dew may form inside the product, resulting in fire or electric shock.



Prohibited

Do not use it at too dry or humid place.

Too high humidity may result in fire or electric shock. If it is dry too much, it may result in electric shock or fire.



Prohibited

Use it at well ventilated place.

If you use it at the place where ventilation is improper, it may raise the heat inside and result in fire or failure.



Prohibited

Do not install at unstable and high place.

It may fall down and suffer impact, resulting in failure of the product.



Prohibited

Do not place the wet foods or cup on it.

A cup may fall down and water may penetrate inside, resulting in a fire or electric shock.

Moving and Installing Equipment



Prohibited

Do not move or transport this product carelessly.

Since this product is not designed for easy transportation, special caution is required when transporting or installing the product. Special care is required not to give excessive power when transporting product. Be careful not to fall down the product. If the product falls down, it may cause problem in operation of product.

2. Introduction

MVM204 VDSL2 Modem is a Very high data rate Digital Subscriber Line 2 (VDSL2) modem for residential or business connectivity to VDSL service provider's network via Ethernet connection.

3. Unpacking the box

Check the components inside of box you purchased.
Following components should be included:

MVM204 VDSL2 Modem,
MVM204 VDSL2 Modem User's Guide,
1 x RJ-45 Ethernet cable,
1 x RJ11 cable,
1 x AC Power Adaptor cable,
1 x Splitter (provided separately as an option)

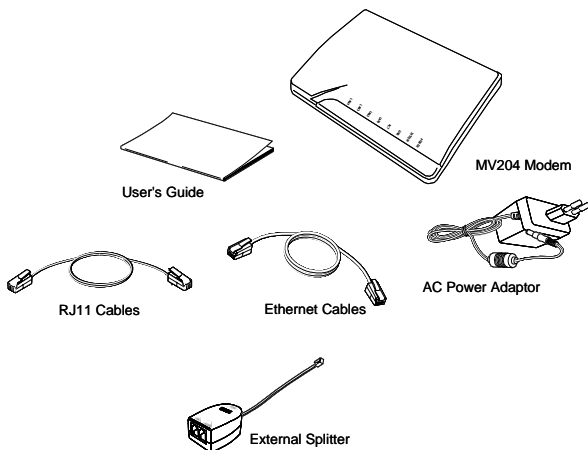


Figure 1: Components of MVM204

4. Safety Check

Followings are should be checked before installing or using MVM204 VDSL subscriber modem.

4.1 Electricity

User, by himself should not dismount the cover of the product or disassemble the product. Especially never do such jobs while power is on otherwise it may cause physical or personal damages.

Make sure there is no element of danger in the installation place. Wet floor, ungrounded power code extension, rubbed-off power code, ungrounded facility floor, high temperature, high humidity, and improper ventilation should be avoided in installation of product.

4.2 Installation Place

Because heat is being generated during the operation of electronic product, improper ventilation may cause abnormal operation of the product if air circulation is not made properly. Make sure that air circulation is proper in the installation place.

Check If there is too much noise or sparks from power source. If not, it is recommended to install separate power control equipment.

5. Service Requirement

Following describes items which should be checked before MVM204 installation.

5.1 Availability of VDSL Service

The User who has subscribed telephone service can use existing telephone wire and those who have not subscribed telephone service should call your telephone service provider for new service subscription.

Not all telephone service provider offer VDSL service. Please, before installation, check with your service provider if they provide such service.

5.2 Personal Computer System Requirements

PC should be equipped with LAN card (10Base-T or 10/100Base-T Network Adaptor) to connect MVM204 to the PC. It is possible to have LAN card information from the store where you purchased your PC.

6. Operation Environment

To install and use MVM204 safely, following operation environment is required.

Operation Temperature Range: 0 ~ 45 °C

Relative Humidity range: 0 ~ 90 % (Non-condensing)

Power Consumption: max. 6.0 Watts

Input Power Range: DC+5V, 2A (in use of AC power adaptor)

7. Cable preparation

Make sure following cables are ready before network connection.

Port	Cable
LINE port (or VDSL/TEL ports of the Splitter)	1 x RJ-11 Cable
Ethernet Port (10/100Base-T)	1 x RJ-45 UTP Category-3,4,5 Straight-through Cable

Table 1: Necessary cables for MVM204



Figure 2: RJ-11 Cable



Figure 3: RJ-45 Cable

8. Hardware Description

8.1 Front view

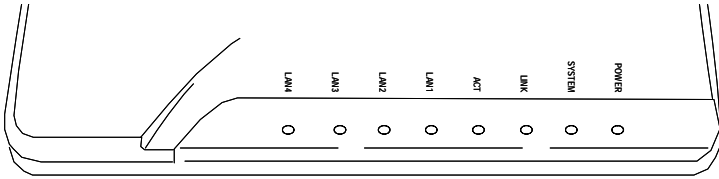


Figure 4: Front view of MVM204

LED	Status	Descriptions
POWER	ON	The power of modem is on.
	OFF	The power is not supplied to modem.
SYSTEM	ON	The booting of modem is in progress.
	OFF	The booting of modem is completed.
LINK	ON	VDSL link has been established.
	OFF	VDSL link has not been established.
ACT	Blinking	Data are being received or transmitted via VDSL line.
	OFF	Data are not being received or transmitted via VDSL line.
LAN1~ LAN4	ON	Ethernet link between PC and modem has been established.
	Blinking	Data are being received or transmitted via Ethernet
	OFF	Ethernet link between PC and modem is not established.

Table 2: LED Indicators of MVM204

8.2 Rear view

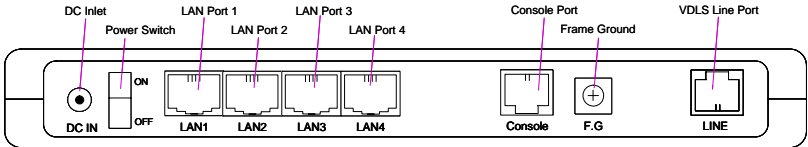


Figure 5: Rear view of MVM204

Table 3 below describes each component of rear panel of MVM204.

Label	Function	Descriptions
LINE	VDLS Line port	The port to connect to telephone line via RJ11 cable.
F.G	Frame ground	The connector for grounding
CONSOLE	Console port	The console port to set modem parameters.
LAN1 ~ LAN4	Ethernet port (10/100Mbps)	The port to connect to LAN card of PC via RJ-45 cable.
DC IN	Power Inlet	The power inlet to connect provided power adaptor.
ON/OFF	Power switch	Power switch of MVM204.

Table 3: LED Indicators of MVM204

8.3 Specification of MVM204

Items	Specifications
Power	Input : DC 5V / 2A Power Consumption : Max. 6.0 Watt
Power Adaptor	AC Input Voltage : 100-240VAC / 50 ~ 60Hz DC Output Voltage : +5V/2A Max. Output Power : 7W
User Interfaces	LINE Interface : VDSL Line (RJ-11) Ethernet Interface : 4 x 10/100Base-Tx (RJ-45) (Category-3,4,5 Straight-through)
LED	POWER, SYSTEM, LINK, ACT, LAN1, LAN2, LAN3, LAN4
Hardware	ABS Housing Dimension : 200 (W) * 137 (D) * 27 (H) mm Weight : 320g
Optional Items	ALM LED may not be shown depending on the model purchased. RS-232 Console port may not be included depending on the model purchased.

Table 4: Specification of MVM204

9. Installing MVM204 VDSL2 Modem

9.1 Connecting Cables



Caution

Connect cables as below while power switch is OFF. The power adaptor provided with the product should be used. An electrical outlet should be within reach of the supplied power adaptor.

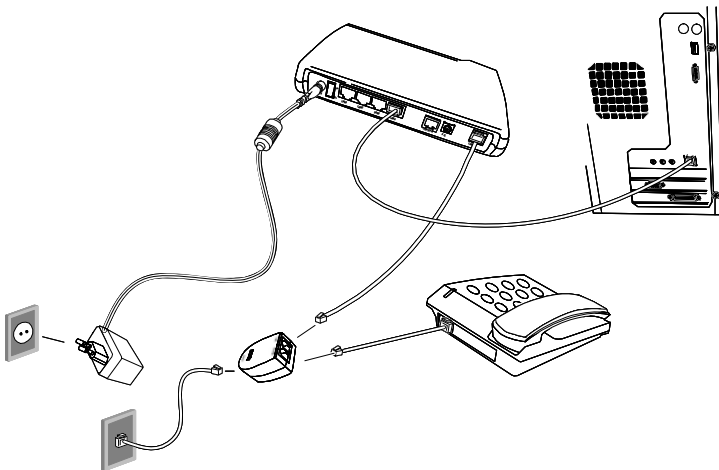


Figure 6: Connecting Cables

In case of the user who does not use PSTN or ISDN service, connect one of the provided RJ11 cables to LINE port of MVM204 and then connect the other end of the cable to the telephone outlet.

In case of the user who uses PSTN or ISDN service, i) connect one of the provided RJ11 cables to LINE port of the splitter (provided separately) and then connect the other end of the cable to the telephone outlet, ii) connect the RJ11 cable provided together with the splitter to Modem port of VDSL splitter and then connect the other

end of the cable to LINE port of MVM204 and iii) connect the one of the provided RJ11 cables to PHONE port of the splitter and then connect the other end of the cable to your telephone

Connect the provided Ethernet cable to LAN port of MVM204 and then connect the other end of the cable to Ethernet port on the back side of your PC.

Connect the provided power supply cable to DC IN port of MVM204 and then plug the power connector into an appropriate electrical outlet.

9.2 Power On

After connection of cables, turn on the MVM204 VDSL2 modem by pressing the power switch on the rear side of the modem.

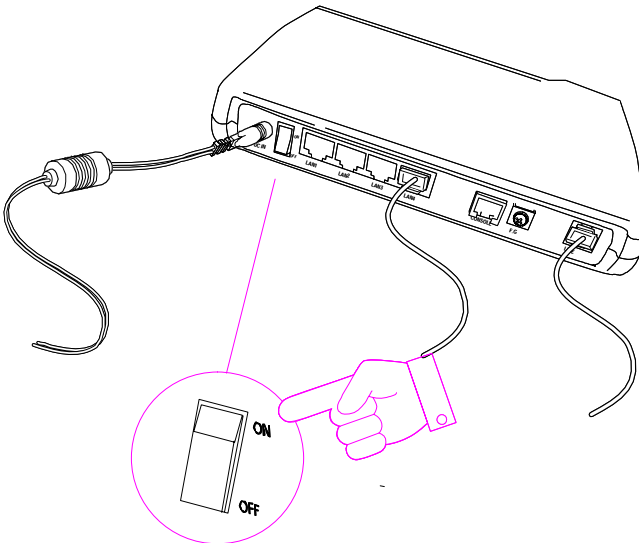


Figure 7: The power switch on the rear side of the modem

10. Operation Status Check

Because of easy network connection feature of MVM204, user and installer can easily check if correct connection is made.

Following items can be checked once VDSL service subscription is made.

10.1 Power Connection Status

After connecting the power adaptor (AC 110~220 / DC +5V, 2A) provided with MVM204 to DC IN terminal on the rear side of MVM204, PWR LED of front panel of MVM204 will be on when the power switch on the rear side of MVM204 is turned on.

10.2 VDSL line status

After connecting telephone line to Line port in the rear side of MVM204, LINK LED of front panel of MVM204 will be on once VDSL service has been started.

10.3 Network status

After connecting Ethernet port of PC to LAN port in the rear side of MVM204, LAN LED of front panel of MVM204 is on and is blinking in case of data transmission.

10.4 Telephone status (when using PSTN or ISDN)

After connecting telephone to MVM204 as described in Section 9. Installing MVM204, it is considered that correct connection has been made if no noise other than voice signal can be heard from the telephone.

11. Troubleshooting

This section describes possible troubles which likely occur during the use of MVM204 and troubleshooting method.

Call the designated customer center for expert's help in case of the problem that you can not solve during the use of service.

It is better to prepare following things before contacting the designated customer center.

Product Model Name

Date of purchase: date of service start

Note about troubles

Steps user have taken to fix the problem.

11.1 Power Supply Trouble

Even after connecting power adaptor to MVM204 and plug the power cord of the adaptor into an outlet, PWR LED is not turned on.

Check following points:

Check the outlet.

Check if LED of the power adaptor is on.

Trun off the Plug; out the power code from DC IN terminal of MVM204 and plug in it again, and switch on MVM204.

If you can not resolve the trouble with above methods, plug out the adaptor from MVM204 and call the designated customer center for help.

11.2 Network Connection Trouble

Following troubles may occur in regard to network connection.

Can not connect to internet.
LAN LED or LINK LED is not turned on.

Check following points in this case:

Check the cabling, MVM204 to telephone line and to PC.
Turn the switch of MVM204 off and then on.
Check the LAN card status of PC.
Check the operation status of PC.
Run following commands at DOS prompt in Command Window.

```
C:\>ipconfig /renew  
C:\>ipconfig /renew_all (windows 98)
```

If you can not resolve the trouble with above methods, plug out the adaptor from MVM204 and call the designated customer center for help.

12. Customer Service Information

Customer Support

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