

Industrial PC

MELIPC

Safety Guidelines

-MI2532-W
-MI2332-W

SAFETY PRECAUTIONS

(Read these precautions before using this product.)

Before using this product, please read this manual and the relevant manuals carefully and pay full attention to safety to handle the product correctly.

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

In this manual, the safety precautions are classified into two levels: "⚠ WARNING" and "⚠ CAUTION".

 WARNING	Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.
 CAUTION	Indicates that incorrect handling may cause hazardous conditions, resulting in minor or moderate injury or property damage.

Under some circumstances, failure to observe the precautions given under "⚠ CAUTION" may lead to serious consequences.

Observe the precautions of both levels because they are important for personal and system safety.

Make sure that the end users read this manual and then keep the manual in a safe place for future reference.

[Design Precautions]

WARNING

- Configure safety circuits external to the product to ensure that the entire system operates safely even when a fault occurs in the external power supply or the product. Failure to do so may result in an accident due to an incorrect output or malfunction. Emergency stop circuits, protection circuits, and protective interlock circuits for conflicting operations (such as forward/reverse rotations or upper/lower limit positioning) must be configured external to the product.
- The execution of a user application may be delayed on Windows® 11 IoT Enterprise LTSC 2024 due to the effect of operating system scheduling. Do not use this product in a situation that requires a fixed-cycle operation and a high-speed response.

In addition, the execution of a user application may be delayed when any of the following operations is performed:

- Connecting or disconnecting an HDMI connector cable
 - Mounting or removing a device to/from a USB connector
 - Unlocking a Windows lock screen
 - Signing in to Windows
 - Signing out of Windows
 - Remote desktop connection
 - Starting other applications
- Before performing operations for the product from the peripheral connected, read the relevant manuals carefully and ensure the safety.
-

[Design Precautions]

CAUTION

- Do not install the control lines or communication cables together with the main circuit lines or power cables. Doing so may result in malfunction due to electromagnetic interference. Keep a distance of 100mm or more between those cables.
 - When selecting fuses and breakers for external circuits, consider the specification values of fusing/detection characteristics and inrush current.
 - When using an uninterruptible power supply (UPS), do not use the one that outputs square waves.
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[Security Precautions]

WARNING

- To maintain the security (confidentiality, integrity, and availability) of the product and the system against unauthorized access, denial-of-service (DoS) attacks, computer viruses, and other cyberattacks from external devices via the network, take appropriate measures such as firewalls, virtual private networks (VPNs), and antivirus solutions.
-

[Installation Precautions]

CAUTION

- Use the product in an environment that meets Page 17 Environmental Specifications in this manual. Failure to do so may result in electric shock, fire, malfunction, or damage to or deterioration of the product.
 - When using the product in an environment of frequent vibrations, fix it to a control panel with a screw. For details, refer to Attaching wall mounting brackets in the user's manual.
 - Tighten the screws within the specified torque range. Undertightening can cause drop of the component or wire, short circuit, or malfunction. Overtightening can damage the screw and/or product, resulting in drop, short circuit, or malfunction. For the specified torque range, refer to Page 19 Power supply wiring method and Page 20 Connecting the power connector and a ground wire to the main module in this manual.
 - Do not directly touch any conductive parts and electronic components of the product. Doing so can cause malfunction or failure of the product.
 - This product is designed to dissipate heat from the heat sink part of the enclosure; therefore, the enclosure becomes very hot while the power is on or immediately after it is turned off. Avoid touching this part, as it may cause burns to your fingers.
 - Do not touch any part of your body or contact any object to the rotating fan. Doing so may result in injury or failure of the fan module.
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[Wiring Precautions]

WARNING

- Shut off the external power supply (all phases) used in the system before installation and wiring. Failure to do so may result in electric shock or cause the product to fail or malfunction.
 - Directly touching any conductive parts of the connectors while power is on may result in electric shock.
-

[Wiring Precautions]

CAUTION

- Individually ground the FG terminal of the product with a ground resistance of 100 ohms or less. Failure to do so may result in electric shock or malfunction.
 - Use applicable solderless terminals and tighten them within the specified torque range. If any spade solderless terminal is used, it may be disconnected when the terminal screw comes loose, resulting in failure.
 - Check the rated voltage and signal layout before wiring to the product, and connect the cables correctly. Connecting a power supply with a different voltage rating or incorrect wiring may cause fire or failure.
 - Securely connect the connector to the product. Poor contact may cause malfunction.
 - Do not install the control lines or communication cables together with the main circuit lines or power cables. Doing so may result in malfunction due to noise. Keep a distance of 100mm or more between those cables.
 - Place the cables in a duct or clamp them. If not, dangling cables may swing or inadvertently be pulled, resulting in malfunction or damage to the product or cables.
In addition, the weight of the cables may put stress on the product in an environment of strong vibrations and shocks.
 - Check the interface type and correctly connect the cable. Incorrect wiring (connecting the cable to an incorrect interface) may cause failure of the product and external device.
 - Tighten the terminal screws or connector screws within the specified torque range. Undertightening can cause drop of the screw, short circuit, fire, or malfunction. Overtightening can damage the screw and/or product, resulting in drop, short circuit, fire, or malfunction.
 - When disconnecting the cable from the product, do not pull the cable by the cable part. For the cable with connector, hold the connector part of the cable. For the cable connected to the terminal block, loosen the terminal screw. Pulling the cable connected to the product may result in malfunction or damage to the product or cable.
 - When wiring, shield the module using a cover or similar means to prevent foreign matter such as dust or wire chips from entering the module. Such foreign matter can cause a fire, failure, or malfunction. Remove the shield for heat dissipation before operating the system.
 - Wiring must be performed by qualified maintenance personnel with knowledge of protection against electric shock.
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[Startup and Maintenance Precautions]

WARNING

- Do not touch any terminal while power is on. Doing so will cause electric shock or malfunction.
 - Correctly connect the battery. Do not charge, disassemble, heat, short-circuit, solder, or throw the battery into the fire. Also, do not expose it to liquid or strong shock. Doing so will cause the battery to produce heat, explode, ignite, or leak, resulting in injury and fire.
 - Shut off the external power supply (all phases) used in the system before cleaning the product or retightening the terminal screws, connector screws, or product fixing screws. Failure to do so may result in electric shock.
-

[Startup and Maintenance Precautions]

CAUTION

- Do not disassemble or modify the product in any methods not described in this manual. Doing so may cause failure, malfunction, injury, or a fire.
 - Use any radio communication device such as a cellular phone or PHS (Personal Handy-phone System) 25cm or more away in all directions from the product. Failure to do so may cause malfunction.
 - Tighten the screws within the specified torque range. Undertightening can cause drop of the component or wire, short circuit, or malfunction. Overtightening can damage the screw and/or product, resulting in drop, short circuit, or malfunction.
 - Do not directly touch any conductive parts and electronic components of the product. Doing so can cause malfunction or failure of the product.
 - Do not drop or apply shock to the battery to be installed in the product. Doing so may damage the battery, causing the battery fluid to leak inside the battery. If the battery is dropped or any shock is applied to it, dispose of it without using.
 - Startup and maintenance of a control panel must be performed by qualified maintenance personnel with knowledge of protection against electric shock. Lock the control panel so that only qualified maintenance personnel can operate it.
 - Before handling the product, touch a conducting object such as a grounded metal to discharge the static electricity from the human body. Wearing a grounded antistatic wrist strap is recommended. Failure to discharge the static electricity may cause the product to fail or malfunction.
 - After unpacking, eliminate static electricity from the product to prevent electrostatic discharge from affecting the product. If an electrostatically charged product comes in contact with a grounded metal object, a sudden electrostatic discharge of the product may cause failure.
 - Use a clean and dry cloth to wipe off dirt on the product.
 - This product is designed to dissipate heat from the heat sink part of the enclosure; therefore, this part becomes very hot depending on the operating status, and touching it may cause burns to your fingers. When performing maintenance, etc. that requires touching this part, shut down the system and wait at least 30 minutes before touching it.
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[Power-on Precautions]

CAUTION

- Wait for 10 seconds or more after power supply shutdown of the product. Then, supply input power again.
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[Disposal Precautions]

CAUTION

- When disposing of this product, treat it as industrial waste.
 - When disposing of batteries, separate them from other wastes according to the local regulations. For details on battery regulations in EU member states, refer to Handling of batteries and devices with built-in batteries in EU member states in the user's manual.
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[Transportation Precautions]

CAUTION

- When transporting lithium batteries, follow the transportation regulations. For details on the regulated models, refer to Precautions for battery transportation in the user's manual.
 - The halogens (such as fluorine, chlorine, bromine, and iodine), which are contained in a fumigant used for disinfection and pest control of wood packaging materials, may cause failure of the product. Prevent the entry of fumigant residues into the product or consider other methods (such as heat treatment) instead of fumigation. The disinfection and pest control measures must be applied to unprocessed raw wood.
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PRÉCAUTIONS DE SÉCURITÉ

(Lire ces précautions avant toute utilisation du produit.)

Avant d'utiliser ce produit, lire attentivement ce manuel ainsi que les manuels auxquels il renvoie, et toujours considérer la sécurité comme de la plus haute importance en manipulant le produit correctement.

Si les produits sont utilisés autrement que ne le prescrivent leurs fabricants, il se peut que leurs fonctions de protection ne soient pas efficaces.

Dans ce manuel, les précautions de sécurité sont classées en deux niveaux, à savoir :

" AVERTISSEMENT" and " ATTENTION".



AVERTISSEMENT

Attire l'attention sur le fait qu'une négligence peut créer une situation de danger avec risque de mort ou de blessures graves.



ATTENTION

Attire l'attention sur le fait qu'une négligence peut créer une situation de danger avec risque de blessures légères ou de gravité moyennes ou risque de dégâts matériels.

Dans certaines circonstances, le non-respect d'une précaution de sécurité introduite sous le titre " ATTENTION" peut avoir des conséquences graves.

Les précautions de ces deux niveaux doivent être observées dans leur intégralité car elles ont trait à la sécurité des personnes et aussi du système.

Veiller à ce que les utilisateurs finaux lisent ce manuel qui doit être conservé soigneusement à portée de main pour s'y référer autant que de besoin.

[Précautions lors de la conception]



AVERTISSEMENT

- Configurer des circuits de sécurité extérieurs au produit pour garantir la sécurité du système dans son ensemble à la survenance d'une anomalie dans l'alimentation externe comme dans le produit. Faute de quoi, une instruction de sortie incorrecte ou un dysfonctionnement pourrait être à l'origine d'un accident. Configurer des circuits de sécurité externes, comme un circuit d'arrêt d'urgence, un circuit de protection et les circuits de verrouillage de sécurité pour l'opération d'inversion de marche avant/arrière et de positionnement en limite haute/basse.
- L'exécution d'une application utilisateur peut être retardée sur Windows® 11 IoT Enterprise LTSC 2024 en raison de l'effet de la planification du système d'exploitation. Ne pas utiliser ce produit dans une situation qui nécessite un fonctionnement à cycle fixe et une réponse ultra rapide. En outre, l'exécution d'une application utilisateur peut être retardée lorsque l'une des opérations suivantes est effectuée :
 - Connexion ou déconnexion d'un câble de connexion HDMI
 - Montage ou retrait d'un appareil connecté à un connecteur USB
 - Déverrouillage d'un écran de verrouillage Windows
 - Connexion à Windows
 - Déconnexion de Windows
 - Connexion à un bureau à distance
 - Démarrage d'autres applications
- Veuillez lire attentivement le manuel de l'appareil connecté et vérifier entièrement la sécurité lors de la connexion du périphérique à le produit et de son fonctionnement.

[Précautions lors de la conception]

ATTENTION

- Ne pas entremêler les lignes de commandes ou câbles de communication avec les lignes des circuits principaux ou les câbles d'alimentation. Cela pourrait entraîner un dysfonctionnement dû à des interférences électromagnétiques. Garder une distance d'au moins 100 mm entre eux.
 - Lorsque vous sélectionnez des fusibles et des disjoncteurs pour des circuits externes, tenez compte des valeurs de spécification des caractéristiques de fusion/détection et du courant d'appel.
 - Lorsque vous utilisez un onduleur, n'utilisez pas celui qui émet des ondes carrées.
-

[Précautions de sécurité]

AVERTISSEMENT

- Pour maintenir la sécurité (confidentialité, intégrité et disponibilité) du produit et du système contre les accès non autorisés, les attaques par déni de service (DoS), les virus informatiques et autres cyberattaques d'appareils externes via le réseau, prendre les mesures appropriées telles que la configuration d'un pare-feu ou d'un réseau privé virtuel (VPN), ou l'installation d'un logiciel antivirus sur l'ordinateur.
-

[Précautions d'installation]

ATTENTION

- Utiliser le produit dans un environnement en conformité avec Page 17 Environmental Specifications de ce manuel. Faute de quoi, il y a risque d'électrocution, de départ de feu, de dysfonctionnement, d'endommagement ou de détérioration du produit.
 - Si le produit est installé dans un environnement exposé aux vibrations, il doit être immobilisé à un tableau de commande par une vis de blocage. Pour plus de détails, consulter la section Attaching wall mounting brackets du manuel de l'utilisateur.
 - Serrer les vis dans les limites du couple serrage prescrit. Une vis insuffisamment serrée peut produire un court-circuit en tombant, ou être à l'origine de dysfonctionnements. Un serrage excessif peut endommager les vis et/ou le produit, avec aussi un risque de chute, de court-circuits et de dysfonctionnements. Pour la plage de couple spécifiée, consulter Page 19 Power supply wiring method et Page 20 Connecting the power connector and a ground wire to the main module dans ce manuel.
 - Ne toucher directement aucune pièce conductrice ni composant électronique du produit. Cela pourrait causer un défaut de fonctionnement ou une panne du produit.
 - Ce produit est conçu pour dissiper la chaleur du dissipateur thermique du boîtier. Par conséquent, le boîtier devient très chaud pendant la mise sous tension et immédiatement après la mise hors tension. Faire attention au fait de toucher cette partie peut provoquer des brûlures aux doigts.
 - Ne pas toucher ni laisser une partie du corps ou un objet entrer en contact avec le ventilateur tournant. Cela pourrait causer une blessure ou une panne du module de ventilateur.
-

[Précautions de câblage]

AVERTISSEMENT

- Couper l'alimentation externe du système (sur toutes les phases) avant l'installation et le câblage. Faute de quoi, il y a risque d'électrocution et d'endommagement du produit.
 - Le fait de toucher directement les parties conductrices des connecteurs lorsque l'appareil est sous tension peut entraîner un choc électrique.
-

[Précautions de câblage]

ATTENTION

- Mettre à la terre individuellement la borne FG du produit avec une résistance de terre inférieure ou égale à 100 ohms. Ne pas le faire pourrait causer un choc électrique ou un défaut de fonctionnement.
 - Utiliser des bornes sans soudure de type approprié et serrer au couple de serrage prescrit. Si on utilise des bornes sans soudure de type embrochable, il y a risque de déconnexion et de panne au cas où une vis de borne se desserrerait.
 - Vérifier la tension nominale et l'affectation des signaux avant le câblage sur le produit d'alimentation, et raccorder les câbles correctement. Le raccordement d'une alimentation de tension nominale différente ou une erreur de câblage peuvent causer un incendie ou une panne.
 - Brancher fermement le connecteur d'un appareil externe au produit. Un mauvais contact peut provoquer un défaut de fonctionnement.
 - Ne pas entremêler les lignes de commandes ou câbles de communication avec les lignes des circuits principaux ou les câbles d'alimentation. Les installer en maintenant entre eux une distance minimum de 100 mm. Faute de quoi, il y a risque de dysfonctionnement par un bruit.
 - Placer les câbles dans une gaine ou les brider. Sinon, les câbles pendants peuvent se balancer ou être tirés par inadvertance, ce qui pourrait causer un mauvais fonctionnement ou endommager le produit ou les câbles.
De plus, le poids des câbles peut exercer une contrainte sur le produit dans un environnement de fortes vibrations et chocs.
 - Vérifier le type d'interface et raccorder les câbles correctement. Un câblage incorrect (avec raccordement d'un câble à une interface incorrect) peut entraîner une panne du produit ou du dispositif externe.
 - Serrer les vis des bornes et les vis des connecteurs dans les limites du couple de serrage prescrit. Un serrage insuffisant peut entraîner la chute de la vis avec risque de court-circuit, de départ de feu ou de dysfonctionnement. Un serrage excessif peut endommager les vis et/ou le produit, avec aussi un risque de chute, de court-circuits et de dysfonctionnements.
 - Pour débrancher le câble du produit, ne pas tirer directement sur le câble proprement dit. Pour les câbles avec connecteur, saisir le câble par le connecteur. Pour les câbles raccordés sur un bornier, desserrer la vis de la borne. Tirer sur un câble raccordé au produit peut endommager le câble ou le produit et être à l'origine de dysfonctionnements.
 - Veiller à ne pas laisser la poussière, les copeaux métalliques ou d'autres corps étrangers pénétrer dans le produit. Ces corps étrangers peuvent causer un incendie, une panne ou un défaut de fonctionnement.
 - Le câblage et le remplacement d'un module d'alimentation doivent être effectués par un personnel de maintenance qualifié et formé à la protection contre les risques d'électrocution.
-



AVERTISSEMENT

- Ne toucher à aucun des bornes quand le système est sous tension. Faute de quoi, il y a risque d'électrocutions et de dysfonctionnements.
 - Raccorder correctement la pile. Les piles ne doivent pas être rechargées, démontées, court-circuitées ou soudées. Elles ne doivent pas non plus être jetées au feu. De plus, ne pas les exposer à des liquides ou à des chocs violents. Cela pourrait entraîner une surchauffe ou un éclatement de la pile qui pourrait s'enflammer et être à l'origine de blessures ou d'un départ de feu.
 - Couper l'alimentation externe utilisée pour le système (sur toutes les phases) avant de procéder au nettoyage du produit ou au resserrage des vis de bornes des vis de connecteur ou des vis de fixation du produit. Faute de quoi, il y a risque d'électrocution et le produit risque de tomber en panne ou de mal fonctionner.
-

[Précautions de mise en service et de maintenance]

ATTENTION

- Ne pas démonter ni modifier le produit de manière non expliquée dans ce manuel. Cela pourrait entraîner des pannes ou dysfonctionnements et être à l'origine de blessures ou de départs de feu.
 - Tout type d'appareil de communication radio, y compris les téléphones portables et les appareils PHS (Personal handy-phone system), doit être tenu éloigné de plus de 25 cm du produit, dans tous les sens. Le non-respect de cette précaution expose à des dysfonctionnements.
 - Serrer les vis dans les limites du couple serrage prescrit. Une vis insuffisamment serrée peut produire un court-circuit en tombant, ou être à l'origine de dysfonctionnements. Un serrage excessif peut endommager les vis et/ou le produit, avec aussi un risque de chute, de court-circuits et de dysfonctionnements.
 - Ne toucher directement aucune pièce conductrice ni composant électronique du produit. Cela pourrait causer un défaut de fonctionnement ou une panne du produit.
 - Ne pas faire tomber ou soumettre à de forts chocs les piles à installer dans le produit. Cela pourrait endommager les piles, avec risque de fuite du liquide à l'intérieur des piles. Toute pile qu'on a laissée tomber ou qui a subi un choc violent doit être jetée avant usage.
 - La mise en service et la maintenance des tableaux de commande doivent être effectuées par un personnel de maintenance qualifié et formé à la protection contre les chocs électriques. Les tableaux de commande doivent être fermés à clef pour n'être accessibles qu'à un personnel de maintenance qualifié.
 - Avant de manipuler le produit, se débarrasser de la charge électrostatique qu'accumule le corps humain en touchant un objet conducteur approprié. Le port d'un bracelet antistatique mis à la terre est recommandé. Ne pas décharger l'électricité statique peut causer une panne ou un dysfonctionnement du produit.
 - Après le déballage, éliminer l'électricité statique du produit pour éviter que des décharges électrostatiques n'affectent le produit. Si un produit chargé électrostatiquement entre en contact avec un objet métallique mis à la terre, une soudaine décharge électrostatique du produit peut provoquer une panne.
 - Utiliser un chiffon propre et sec pour éliminer la saleté du produit.
 - Ce produit est conçu pour dissiper la chaleur du dissipateur thermique du boîtier. Par conséquent, cette partie devient très chaude en fonction de l'état de fonctionnement, et la toucher peut provoquer des brûlures aux doigts. Lors de la réalisation de la maintenance ou d'autres travaux nécessitant de toucher cette partie, arrêter le système et attendre 30 minutes ou plus avant de la toucher.
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[Précautions de mise sous tension]

ATTENTION

- Attendez dix secondes ou plus après l'arrêt de l'alimentation électrique du produit. Ensuite, alimentez à nouveau le courant d'entrée.
-

[Précautions de mise au rebut]

ATTENTION

- Lors de sa mise au rebut, ce produit doit être traité comme un déchet industriel.
 - Lors de la mise au rebut des piles, séparez-les des autres déchets conformément aux réglementations locales. Pour plus de détails sur les réglementations des piles dans les États membres de l'UE, consulter la section Handling of batteries and devices with built-in batteries in EU member states du manuel de l'utilisateur.
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[Précautions de transport]

ATTENTION

- Lors du transport de piles au lithium, respecter les réglementations de transport. Pour plus de détails sur les modèles réglementés, consulter la section Precautions for battery transportation du manuel de l'utilisateur.
 - Les halogènes (comme le fluore, le chlore, le brome ou l'iode) contenus dans certains fumigènes de désinfection et de traitement antiparasite des emballage en bois peuvent de détérioration du produit. Protéger le produit contre la pénétration des résidus de fumigènes ou envisager d'autres méthodes de traitement que la fumigation (traitement thermique par exemple). Une désinfection et un traitement antiparasite doivent être appliqués sur le bois brut avant façonnage.
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SAFETY INSTRUCTIONS

- 1.** Read these safety instructions carefully.
- 2.** Keep this manual and MI2532-W/MI2332-W User's Manual for later reference.
- 3.** Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.
- 4.** For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.
- 5.** Keep this equipment away from humidity.
- 6.** Put this equipment on a reliable surface during installation. Dropping it or letting it fall may cause damage.
- 7.** The openings on the enclosure are for air convection. Protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
- 8.** Make sure the voltage of the power source is correct before connecting the equipment to a power outlet.
- 9.** Position the power cord so that people cannot step on it. Do not place anything over the power cord.
- 10.** All cautions and warnings on the equipment should be noted.
- 11.** If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.
- 12.** Never pour any liquid into an opening. This may cause fire or electrical shock.
- 13.** Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
- 14.** If one of the following situations arises, get the equipment checked by service personnel:
 - The power cord or plug is damaged.
 - Liquid has penetrated into the equipment.
 - The equipment has been exposed to moisture.
 - The equipment does not work well, or you cannot get it to work according to the user manual.
 - The equipment has been dropped and damaged.
 - The equipment has obvious signs of breakage.
- 15.** **DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT WHERE THE STORAGE TEMPERATURE MAY GO BELOW -40°C (-40°F) OR ABOVE 75°C (167°F). THIS COULD DAMAGE THE EQUIPMENT. THE EQUIPMENT SHOULD BE IN A CONTROLLED ENVIRONMENT.**
- 16.** **CAUTION: THERE IS DANGER OF EXPLOSION IF THE BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER. DISCARD USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS. RESTRICTED ACCESS AREA: THE EQUIPMENT SHOULD ONLY BE INSTALLED IN A RESTRICTED ACCESS AREA.**
ATTENTION : IL Y A UN RISQUE D'EXPLOSION SI LA PILE EST REMPLACÉE INCORRECTEMENT. REMPLACEZ-LA UNIQUEMENT PAR UNE PILE DU MÊME TYPE OU D'UN TYPE ÉQUIVALENT RECOMMANDÉ PAR LE FABRICANT. ÉLIMINEZ LES PILES USAGÉES CONFORMÉMENT AUX INSTRUCTIONS DU FABRICANT. ZONE D'ACCÈS RESTREINT : L'ÉQUIPEMENT DOIT ÊTRE INSTALLÉ UNIQUEMENT DANS UNE ZONE D'ACCÈS RESTREINT.
- 17.** The sound pressure level at the operator's position according to IEC 60704-1 should be no more than 70 dB (A).
- 18.** **RESTRICTED ACCESS AREA:** The equipment should only be installed in a Restricted Access Area.
- 19.** **DISCLAIMER:** This set of instructions is given according to IEC 60704-1. Mitsubishi Electric Corporation disclaims all responsibility for the accuracy of any statements contained herein.
- 20.** This product is intended to be supplied by a Listed Power Adapter or DC power source, rated 12-30Vdc, 12-6A minimum, Tma = 60°C, and the altitude of operation = 2000m if using Class I power sources. The power outlet socket should have grounded connection.

ONBOARD GRAPHICS OUTPUT WITH A GRAPHICS CARD INSTALLED

When installing a graphics card in a PCIe slot on this product, the onboard graphics output is disabled.

When using a graphics card and onboard graphics at the same time, change the BIOS settings.

For details on the setting method, refer to System Agent (SA) Configuration in the following:

 MI2532-W/MI2332-W User's Manual

CREATING A RECOVERY IMAGE FOR SYSTEM RECOVERY

To prepare for the unlikely event that Windows installed on this product is damaged, be sure to create a recovery drive and system image when starting the product for the first time.

For the methods for creating a recovery drive and system image for system recovery, refer to Recovery in the following:

 MI2532-W/MI2332-W User's Manual

1 OVERVIEW

This manual describes the precautions for safe use of this product.

Details on the product are described in the manual listed below.

Develop familiarity with the functions and performance of the product to handle it correctly.

Manual name	Manual number
MI2532-W/MI2332-W User's Manual	SH-082715ENG

1.1 Checking the Included Items

The following items are included in the package of this product.

Check that all the items are included before using the product.

Item	Quantity
MELIPC main module	1
4-pin plug-in block for power supply	1
Wall mounting bracket (small)	2
Wall mounting bracket (large)	1
Screw (for wall mounting bracket)	4
Screw (for HDD/SSD fixing)	4
Rubber clamp pad	2
SATA cable	1
SATA power cable	1
MELSOFT VIXIO Entitlement ID Notification ^{*1}	1 ^{*2}
License Agreement for CC-Link IE TSN Communication Software ^{*1}	1
Software License Agreement	1
This manual	1

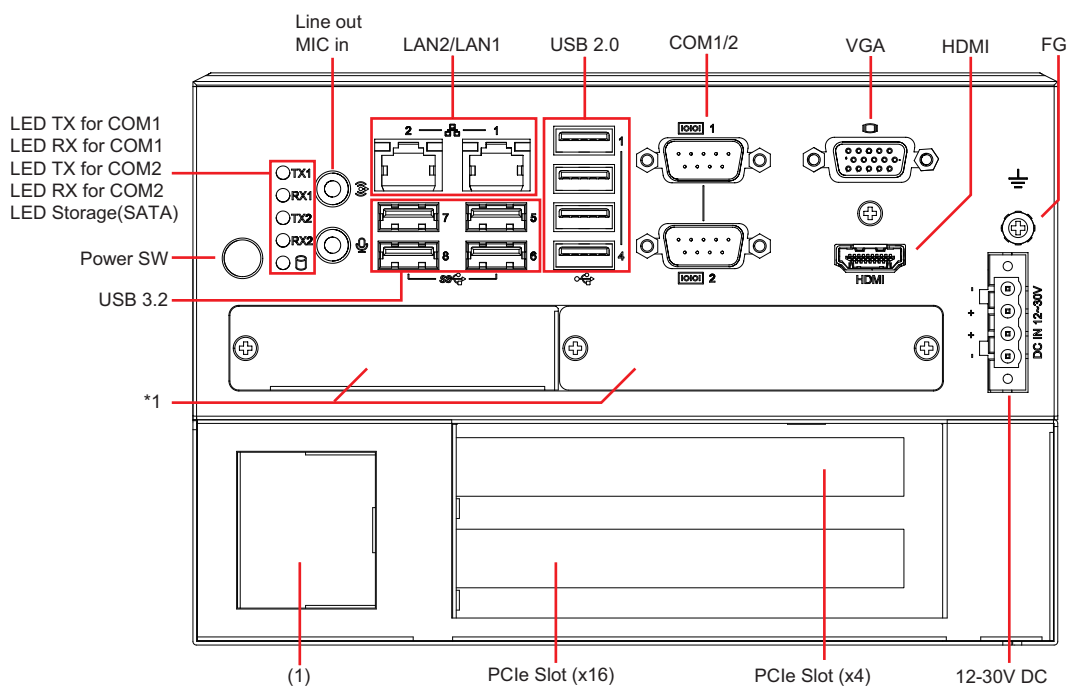
^{*1} For the license-included applications, refer to Pre-installed and License-included Applications in the following:

 MI2532-W/MI2332-W User's Manual

^{*2} Included with MI2532-W only.

2 SPECIFICATIONS

2.1 Appearance Specifications



(1) Vent

*1 Cannot be used. Do not open the cover.

2.2 Environmental Specifications

Item	Specification
Ambient operating temperature Température ambiante de fonctionnement	0 to 55°C (32 to 131°F) 0 à 55°C (32 à 131°F)
Ambient storage temperature	-40 to 75°C (-40 to 167°F)
Ambient operating humidity Ambient storage humidity	5 to 95% RH (non-condensing)
Vibration resistance	Compliant with IEC 60068-2-64
	<div> <div>■When not installing a 2.5-inch HDD in the system</div> <div>3 Grms, random, 5 to 500 Hz, 1 hour for each of the X, Y, and Z axes</div> </div> <div> <div>■When installing a 2.5-inch HDD in the system</div> <div>1 Grms, random, 5 to 500 Hz, 1 hour for each of the X, Y, and Z axes</div> </div>
Shock resistance	Compliant with IEC 60068-2-27
	<div> <div>■When not installing a 2.5-inch HDD in the system</div> <div>20 G, half-sinusoidal, 11 ms</div> </div>
Operating atmosphere	No corrosive gases, flammable gases, less conductive dust
Operating altitude ^{*1}	0 to 2000 m
Installation location ^{*2}	A stable location with minimal influence from electric and magnetic fields
Pollution degree ^{*3}	2 or below

*1 Do not use or store the product under pressure higher than the atmospheric pressure of altitude 0 m.

*2 Take necessary measures at the installation location to protect a person who does not have adequate knowledge of electrical installation from an electric shock. The following shows examples:

- Restrict access to the installation location so that only a person who is trained and has acquired enough knowledge of electrical installation can operate it.
- Install the product in a protective structure (control panel, etc.) with a protection degree of IP20 or higher.

*3 This indicates the degree to which conductive material is generated in an environment in which the equipment is used. Pollution degree 2 is when only non-conductive pollution occurs. A temporary conductivity caused by condensation must be expected occasionally. Insufficient dustproof and waterproof lower the insulation withstand voltage, possibly causing dielectric breakdown.

2.3 Product Specifications

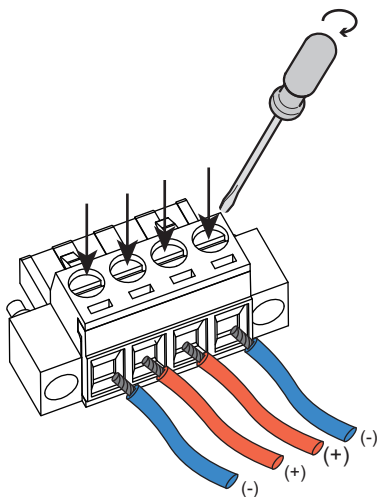
Item		Specification	
		MI2532-W	MI2332-W
CPU		Intel® Core™ i7 13700TE 1.1 GHz (16 Cores)	Intel Core i3 13100TE 2.4 GHz (4 Cores)
Memory capacity		32 GB DDR5-SDRAM	16 GB DDR5-SDRAM
Storage	Internal	1 TB mSATA SSD	128 GB mSATA SSD
	Extended	2.5-inch SATA SSD × 1	
LAN		10BASE-T/100BASE-TX/1000BASE-T × 2	
USB		USB 3.2 (Gen 1) × 4, USB 2.0 × 4	
Serial communication		RS-232C/RS-422/RS-485 × 2	
Display interface		HDMI × 1, VGA × 1	
Dimension	Height	192 mm	
	Width	127 mm	
	Depth	230 mm	
Weight		3.7 kg	
OS		Windows 11 IoT Enterprise LTSC 2024	
Input power	Rated voltage	12 to 30 VDC	
	Rated current	12 VDC input: 12 A 30 VDC input: 6 A	

2.4 Wiring

Power supply wiring method

2

1. Insert power lines into the included power connector.
2. Tighten the screws on the top of the power connector. (Tightening torque: 0.2 N·m)
3. Twist the power lines tightly as close to the connection points with the power connector as possible.



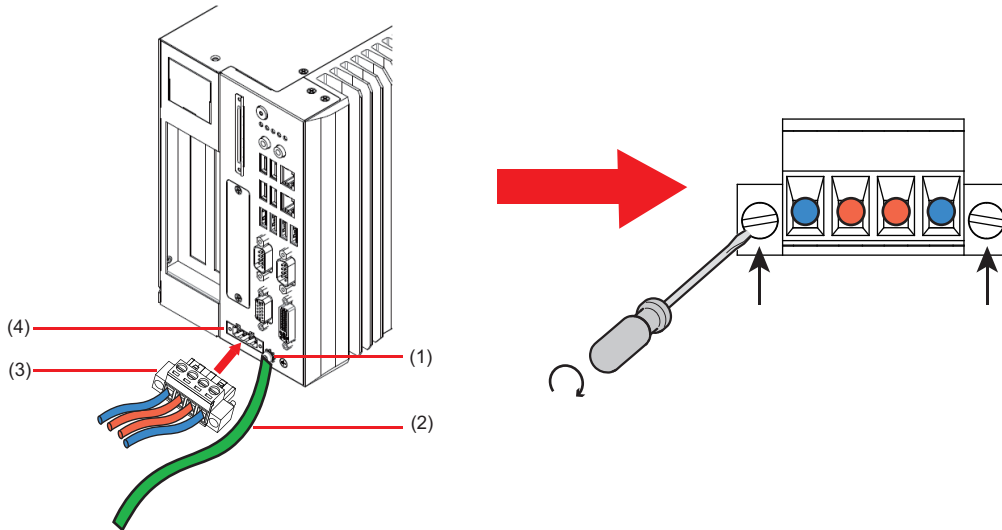
Item	Name	Specification
Wire	Diameter	18 to 14 AWG
	Type	Stranded wire
	Material	Copper
	Temperature rating	75°C or higher

Precautions

- Fully tighten terminal block screws. Otherwise, these may loosen or fall out because of vibration, etc. during operation.
- Four power lines must be connected.

Connecting the power connector and a ground wire to the main module

1. Connect a ground wire (2) to the ground terminal (FG) (1) on the main module. Tighten the screw on the ground terminal. (Tightening torque: 0.49 N·m)
2. Connect the power connector (3) to the power terminal (4) on the main module.
3. Tighten the fixing screws (flathead) on both ends of the power connector (tightening torque: 0.2 N·m) to fix it to the main module.



Precautions

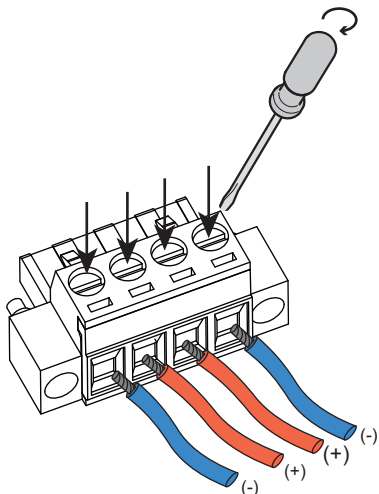
- When using this product, ground the FG terminal. If the grounding is improper, the product becomes susceptible to noise.
- Provide independent grounding when possible. In addition, the ground resistance must be 100 ohms or less.
- Use the thickest possible ground wire (up to 2.5 mm²). In addition, bring the grounding point as close to this product as possible to minimize the length of the ground wire.
- If independent grounding cannot be provided, employ shared grounding with all ground wires of the same length.

2.5 Câblage

Méthode de câblage d'alimentation électrique

1. Insérez des câbles d'alimentation dans le connecteur d'alimentation fourni.
2. Serrez les vis sur le dessus du connecteur d'alimentation. (Couple de serrage: 0,2 N·m)
3. Torsadez fermement les câbles d'alimentation aussi près que possible des points de connexion avec le connecteur d'alimentation.

2



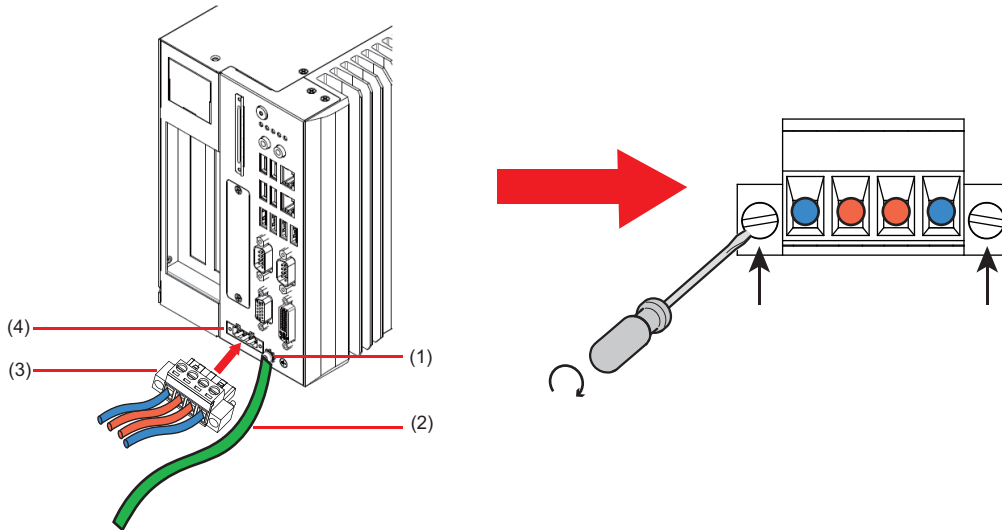
Élément	Nom	Spécification
Fil	Diamètre	18 à 14 AWG
	Type	Torsadé
	Matériau	Cuivre
	Gamme de température	75°C ou plus

Precautions

- Serrez fermement les vis du bornier. Sinon, elles risquent de se desserrer ou de tomber en raison des vibrations et d'autres facteurs pendant l'utilisation.
- Quatre câbles d'alimentation doivent être connectés.

Connexion du connecteur d'alimentation et d'un fil de terre au module principal

1. Connectez un fil de terre (2) à la borne de terre (FG) (1) du module principal. Serrez la vis de la borne de terre. (Couple de serrage: 0,49 N·m)
2. Connectez le connecteur d'alimentation (3) à la borne d'alimentation (4) du module principal.
3. Serrez les vis de fixation (tête plate) aux deux extrémités du connecteur d'alimentation (couple de serrage: 0,2 N·m) pour le fixer au module principal.



Precautions

- Lors de l'utilisation de ce produit, mettez à la terre la borne FG. Si la mise à la terre est incorrecte, le produit devient sensible au bruit.
- Fournissez une mise à la terre indépendante lorsque cela est possible. De plus, la résistance de terre doit être inférieure ou égale à 100 ohms.
- Utilisez un fil de terre aussi épais que possible (jusqu'à 2,5 mm²). De plus, rapprochez le point de mise à la terre de ce produit autant que possible pour minimiser la longueur du fil de terre.
- Si une mise à la terre indépendante ne peut pas être fournie, utilisez une mise à la terre partagée avec tous les fils de terre de la même longueur.

3 EMC AND LOW VOLTAGE DIRECTIVES

In each country, laws and regulations concerning electromagnetic compatibility (EMC) and electrical safety are enacted. For the products sold in the European countries, compliance with the EU's EMC Directive has been a legal obligation as EMC regulation since 1996, as well as the EU's Low Voltage Directive as electrical safety regulation since 1997.

Manufacturers who recognize their products are compliant with the EMC and Low Voltage Directives are required to attach a "CE marking" on their products in European countries.

In some other countries and regions, manufacturers are required to make their products compliant with applicable laws or regulations and attach a certification mark on the products as well (such as UK Conformity Assessed (UKCA) marking in the UK, and Korea Certification (KC) marking in South Korea).

Each country works to make their regulatory requirements consistent across countries based on international standards. When the requirements are consistent, measures to comply with the EMC and electrical safety regulations become common across countries.

The UK and South Korea have enacted EMC regulations whose requirements are consistent with those of the EMC Directive. The UK has also enacted electrical safety regulations whose requirements are consistent with those of the Low Voltage Directive. In this section, the requirements of the EMC and Low Voltage Directives are described as examples of those of the EMC and electrical safety regulations.

3.1 Measures to Comply with the EMC Directive

The EMC Directive sets requirements for emission (conducted and radiated electromagnetic interference emitted by a product) and immunity (the ability of a product not to be influenced by externally generated electromagnetic interference). The manufacturer of the machinery must determine the testing method for compliance and declare conformity to the EMC Directive for machinery incorporating this product or combining it with other products (such as PCIe boards that can be connected to this product).

EMC Directive related standards

This product complies with the following standards:

Item	Supported standard
Emission	EN55032: 2015+A11: 2020 ClassA EN61000-6-4: 2007+A1: 2011 EN61000-3-2: 2019 ClassD EN61000-3-3: 2013+A11: 2019
Immunity	EN IEC 61000-6-2: 2019 EN55035: 2017+A11: 2020

3.2 Measures to Comply with the Low Voltage Directive

The Low Voltage Directive requires electrical equipment that is designed or adapted for use between 50 to 1000 VAC or 75 to 1500 VDC to satisfy the safety requirements.

This section describes the precautions for use of this product to comply with the Low Voltage Directive.

These precautions are based on the requirements of the Low Voltage Directive and the harmonized standards. However, they do not guarantee that the entire machinery constructed according to the descriptions complies with the Low Voltage Directive. The manufacturer of the machinery must determine the testing method for compliance and declare conformity to the Low Voltage Directive.

Regulations applicable to this product

- EN62368-1: 2014, EN62368-1: 2014+A11: 2017 Audio/video, information and communication technology equipment - Safety requirements

This product is not targeted for the Low Voltage Directive compliance because the circuits in the product operate at the 30 VDC or less rated voltage.

APPENDIX

Appendix 1 Restrictions Based on Taiwan RoHS (Restriction of the Use of Certain Hazardous Substances) and Battery Regulation (Waste Disposal Act)

設備名稱：電腦 Equipment name：Embedded Automation Computer				型號（型式）：MI2532-W、MI2332-W Type designation (Type)			
單元 Unit	限用物質及其化學符號 Restricted substances and its chemical symbols						
	鉛 Lead (Pb)	汞 Mercury (Hg)	鎘 Cadmium (Cd)	六價鉻 Hexavalent Chromium (Cr+6)	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)	相對應排除項目依據 (D1~D37)
電路板	—	○	○	○	○	○	D13, D14, D16
機殼 (外殼、支架…等)	○	○	○	○	○	○	D14, D16
其它固定組件 (螺絲、夾具、卡榫)	—	○	○	○	○	○	D13
配件 (線材)	○	○	○	○	○	○	
記憶卡	—	○	○	○	○	○	D16
存取裝置 (SSD)	—	○	○	○	○	○	D16
散熱模組 (例：主機風扇…等)	—	○	○	○	○	○	D13, D14, D16
<div>備考1. “超出0.1 wt %” 及 “超出0.01 wt %” 係指限用物質之百分比含量超出百分比含量基準值。 Note 1. “Exceeding 0.1 wt %” and “exceeding 0.01 wt %” indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.</div> <div>備考2. “○” 係指該項限用物質之百分比含量未超出百分比含量基準值。 Note 2. “○” indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.</div> <div>備考3. “—” 係指該項限用物質為排除項目。 Note 3. The “—” indicates that the restricted substance corresponds to the exemption.</div>							



廢電池請回收

Appendix 2 Restrictions Based on New China RoHS

「电器电子产品有害物质限制使用标识要求」的表示方式

含有有害10物质的名称，含有量，含有部品
本产品中所含有的有害10物质的名称，含有量，含有部品如下表所示。



注) 产品正常使用终结废弃时, 有关电器电子产品的回收, 再利用等要遵守各自治体的法律法规要求。
Note: This symbol mark is for China only.

产品中有害物质的名称及含有的信息表 Information on the names and content of hazardous substances in products										
品号 Model name	MI2332-W, MI2532-W									
部件名称 Substance	有害物质 Hazardous Substances									
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBBs)	多溴二苯醚 (PBDEs)	邻苯二甲酸 二正丁酯 (DBP)	邻苯二甲酸 二异丁酯 (DIBP)	邻苯二甲酸 丁苄酯 (BBP)	邻苯二甲酸二 (2-乙基) 己酯 (DEHP)
印刷电路板及其零组件	×	○	○	○	○	○	○	○	○	○
螺丝类	×	○	○	○	○	○	○	○	○	○
内存	×	○	○	○	○	○	○	○	○	○
硬盘	×	○	○	○	○	○	○	○	○	○
风扇	×	○	○	○	○	○	○	○	○	○

注1: ○:表示该有害物质在该部件所有均质材料中的含量均 不超出电器电子产品有害物质限制使用国家标准要求。
○:Indicates that the hazardous substance in all homogeneous materials of the component does not exceed the concentration limits specified by the national standards for restricted use of hazardous substances in electronic and electrical products.
×:表示该有害物质至少在该部件的某一均质材料中的含量 超出电器电子产品有害物质限制使用国家标准要求。
×:Indicates that the hazardous substance exceeds the concentration limits specified by the national standards for restricted use of hazardous substances in electronic and electrical products.
注2: 以上未列出的部件, 表明其有害物质含量均不超出电器电子产品有害物质限制使用国家标准要求。
For components not listed above, it indicates that the concentration of hazardous substances does not exceed the limits specified by the national standards for restricted use of hazardous substances in electronic and electrical products.

Appendix 3 Standards Based on Standardization Law of the People's Republic of China

基于中国标准法的参考规格: GB4943.1 GB17625.1 GB/T9254.1

Appendix 4 Statements Based on Electromagnetic Interference Regulations of Each Country/Region

Federal Communications Commission (FCC) Statement

- This device complies with the requirements in part 15 of the FCC rules:
Operation is subject to the following two conditions:
■ This device may not cause harmful interference.
■ This device must accept any interference received, including interference that may cause undesired operation

CE Statement

This is a Class A product. In domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

CCC Statement / CCC 认证警告

此为A级产品，在生活环境中，该产品可能会造成无线电干扰。
在这种情况下，可能需要用户对其干扰采取切实可行的措施。

BSMI Statement / BSMI警告

這是甲類的資訊產品，為避免電磁干擾，本產品不應安裝或使用於住宅環境。

KC Statement

기종별	사용자안내문
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REVISIONS

*The manual number is given on the bottom left of the back cover.

Revision date	*Manual number	Description
May 2025	BCN-P5999-1813-A	First edition
November 2025	BCN-P5999-1813-B	■Added or modified part Appendix 2

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CONDITIONS OF USE FOR THE PRODUCT

- (1) Mitsubishi Electric industrial PC ("the PRODUCT") shall be used in conditions;
- i) where any problem, fault or failure occurring in the PRODUCT, if any, shall not lead to any major or serious accident; and
 - ii) where the backup and fail-safe function are systematically or automatically provided outside of the PRODUCT for the case of any problem, fault or failure occurring in the PRODUCT.
- (2) The PRODUCT has been designed and manufactured for the purpose of being used in general industries. MITSUBISHI ELECTRIC SHALL HAVE NO RESPONSIBILITY OR LIABILITY (INCLUDING, BUT NOT LIMITED TO ANY AND ALL RESPONSIBILITY OR LIABILITY BASED ON CONTRACT, WARRANTY, TORT, PRODUCT LIABILITY) FOR ANY INJURY OR DEATH TO PERSONS OR LOSS OR DAMAGE TO PROPERTY CAUSED BY the PRODUCT THAT ARE OPERATED OR USED IN APPLICATION NOT INTENDED OR EXCLUDED BY INSTRUCTIONS, PRECAUTIONS, OR WARNING CONTAINED IN MITSUBISHI ELECTRIC USER'S, INSTRUCTION AND/OR SAFETY MANUALS, TECHNICAL BULLETINS AND GUIDELINES FOR the PRODUCT.
- ("Prohibited Application")
- Prohibited Applications include, but not limited to, the use of the PRODUCT in;
- Nuclear Power Plants and any other power plants operated by Power companies, and/or any other cases in which the public could be affected if any problem or fault occurs in the PRODUCT.
 - Railway companies or Public service purposes, and/or any other cases in which establishment of a special quality assurance system is required by the Purchaser or End User.
 - Aircraft or Aerospace, Medical applications, Train equipment, transport equipment such as Elevator and Escalator, Incineration and Fuel devices, Vehicles, Manned transportation, Equipment for Recreation and Amusement, and Safety devices, handling of Nuclear or Hazardous Materials or Chemicals, Mining and Drilling, and/or other applications where there is a significant risk of injury to the public or property.
- Notwithstanding the above restrictions, Mitsubishi Electric may in its sole discretion, authorize use of the PRODUCT in one or more of the Prohibited Applications, provided that the usage of the PRODUCT is limited only for the specific applications agreed to by Mitsubishi Electric and provided further that no special quality assurance or fail-safe, redundant or other safety features which exceed the general specifications of the PRODUCTS are required. For details, please contact the Mitsubishi Electric representative in your region.
- (3) Mitsubishi Electric shall have no responsibility or liability for any problems involving the PRODUCT trouble and system trouble caused by DoS attacks, unauthorized access, computer viruses, and other cyberattacks.

WARRANTY

Please confirm the following product warranty details before using this product.

1. Gratis Warranty Term and Gratis Warranty Range

If any faults or defects (hereinafter "Failure") found to be the responsibility of Mitsubishi occurs during use of the product within the gratis warranty term, the product shall be repaired at no cost via the sales representative or Mitsubishi Service Company.

However, if repairs are required onsite at domestic or overseas location, expenses to send an engineer will be solely at the customer's discretion. Mitsubishi shall not be held responsible for any re-commissioning, maintenance, or testing on-site that involves replacement of the failed module.

[Gratis Warranty Term]

The gratis warranty term of the product shall be for one year after the date of purchase or delivery to a designated place. Note that after manufacture and shipment from Mitsubishi, the maximum distribution period shall be six (6) months, and the longest gratis warranty term after manufacturing shall be eighteen (18) months. The gratis warranty term of repair parts shall not exceed the gratis warranty term before repairs.

[Gratis Warranty Range]

- (1) The range shall be limited to normal use within the usage state, usage methods and usage environment, etc., which follow the conditions and precautions, etc., given in the instruction manual, user's manual and caution labels on the product.
- (2) Even within the gratis warranty term, repairs shall be charged for in the following cases.
 1. Failure occurring from inappropriate storage or handling, carelessness or negligence by the user. Failure caused by the user's hardware or software design.
 2. Failure caused by unapproved modifications, etc., to the product by the user.
 3. When the Mitsubishi product is assembled into a user's device, Failure that could have been avoided if functions or structures, judged as necessary in the legal safety measures the user's device is subject to or as necessary by industry standards, had been provided.
 4. Failure that could have been avoided if consumable parts (battery, backlight, fuse, etc.) designated in the instruction manual had been correctly serviced or replaced.
 5. Failure caused by external irresistible forces such as fires or abnormal voltages, and Failure caused by force majeure such as earthquakes, lightning, wind and water damage.
 6. Failure caused by reasons unpredictable by scientific technology standards at time of shipment from Mitsubishi.
 7. Any other failure found not to be the responsibility of Mitsubishi or that admitted not to be so by the user.

2. Onerous repair term after discontinuation of production

- (1) Mitsubishi shall accept onerous product repairs for five (5) years after production of the product is discontinued. Discontinuation of production shall be notified with Mitsubishi Technical Bulletins, etc.
- (2) Product supply (including repair parts) is not available after production is discontinued.

3. Overseas service

Overseas, repairs shall be accepted by Mitsubishi's local overseas FA Center. Note that the repair conditions at each FA Center may differ.

4. Exclusion of loss in opportunity and secondary loss from warranty liability

Regardless of the gratis warranty term, Mitsubishi shall not be liable for compensation to:

- (1) Damages caused by any cause found not to be the responsibility of Mitsubishi.
- (2) Loss in opportunity, lost profits incurred to the user by Failures of Mitsubishi products.
- (3) Special damages and secondary damages whether foreseeable or not, compensation for accidents, and compensation for damages to products other than Mitsubishi products.
- (4) Replacement by the user, maintenance of on-site equipment, start-up test run and other tasks.

5. Changes in product specifications

The specifications given in the catalogs, manuals or technical documents are subject to change without prior notice.

INFORMATION AND SERVICES

For further information and services, please contact your local Mitsubishi Electric sales office or representative.
Visit our website to find our locations worldwide.

MITSUBISHI ELECTRIC Factory Automation Global Website

Locations Worldwide

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TRANSLATION OF THE ORIGINAL INSTRUCTIONS

BCN-P5999-1813-B(2511)ADVANTECH

MODEL: MI2532/MI2332-U-HW-M

MITSUBISHI ELECTRIC CORPORATION

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