

Sentinel Telephony Card Installation Guide

For the Sentinel 400 only

DGW 49.2.2941

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Safety Recommendations and Information

Danger, Warning, Caution, and Note Definitions



Danger: Indicates a hazardous situation which, if not avoided, will result in death or serious injury.



Warning: Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



Caution: Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury or damage to property or equipment.

Note: Indicates important information not related to personal injury.

Electrical Safety Guidelines



Danger: Do not work on the Mediatrix unit, connect or disconnect its cables during periods of lightning.



Danger: Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.



Danger: Do not connect external lines to Mediatrix S7 units, as it does not have lightning protection.



Warning: The earth ground cable should be the same size (18 AWG minimum) as the earth cable of the provided power cord. Otherwise, make sure the earth ground cable meets the standards and requirements of your local electrical code. The type of the cable is likely to have VW-1 or RT1 markings on the cable.



Warning: The earth ground cable must be firmly and securely connected to the grounding screw on the back of the Mediatrix unit and an appropriate grounding point in your site: the earth ground cable must remain tightly secured at all times during service and installation.

-  **Warning:** Disconnect all interface cables (including PRI, BRI, FXS, and FXO) before unplugging any power sources from the Mediatrix unit.
-  **Warning:** Disconnect all interface cables (including PRI, BRI, FXS, and FXO) as well as all power sources connected to the Mediatrix unit before servicing the unit.
-  **Warning:** This equipment must be installed and maintained by service personnel. Incorrectly connecting this equipment to a general-purpose outlet could be hazardous.
-  **Warning:** This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that a fuse or circuit breaker no larger than 120 VAC, 15 A U.S. (240 VAC, 10 A international) is used on the phase conductors (all current-carrying conductors).
-  **Warning:** The unit must be grounded at all times when connecting/disconnecting cables.
-  **Warning:** The unit must be grounded at all times when in use.
-  **Warning:** The earth ground connection between the grounding screw on the back of the Mediatrix unit and an appropriate grounding point in your site must always be made first and disconnected last.
-  **Warning:** Do not connect the ETH2, ETH1, LAN, and FXS connectors directly to the Public Switched Telephone Network (PSTN), to an off premise application, an out of plant application, any exposed plant application, or to any equipment other than the intended application, connection may result in a safety hazard, and/or defective operation and/or equipment damage. Exposed plant means where any portion of the circuit is subject to accidental contact with electric lighting or power conductors operating at a voltage exceeding 300 V between conductors or is subject to lightning strikes.
-  **Warning:** The Mediatrix unit must be installed on a circuit equipped with a breaker so that you can easily power the unit off if required.
-  **Warning:** Hazardous network voltages may be present in PRI and FXO cables. Always disconnect the cables from the Mediatrix unit first to avoid possible electric shock. Network hazardous voltages may be present on the device in the area of the PRI and FXO port, even when power is turned OFF.
-  **Warning:** Adequate earth ground connection of the Mediatrix unit is mandatory to avoid any damage or injuries.
-  **Warning:** Hazardous network voltages might be present in WAN, LAN, Sync, and telephony port connectors regardless of whether power to the device is OFF or ON. Use caution when working near these connectors to avoid electric shocks.



Warning: The socket outlet, if used, shall be located near the equipment and shall be easily accessible by the user. The AC adaptor inlet is considered as a disconnection device. The device must be readily operational.



Caution: To reduce the risk of fire, use only No. 26 AWG or larger telecommunication line cords.



Caution: The RJ-11 cable should comply with UL 1863 and CSA C22.2 No 233 standards.

General Safety Practices



Warning: Do not use this product near water, for example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.



Warning: Do not expose the unit to rain or moisture to avoid any shock hazard.



Warning: Do not use the telephone to report a gas leak in the vicinity of the leak.



Warning: Do not get this product wet or pour liquids into it.



Warning: Ultimate disposal of this product should be handled according to all national laws and regulations.



Caution: Unit main become very hot in case of fan failure or during intensive use. To avoid any accidental burns, it is important to restrict the physical access to the unit, and to shut it down for 30 minutes before touching it. In case of fan failure, please contact Media5 or your authorised reseller or vendor.



Caution: If the unit is installed in a closed environment or on a multi-unit rack, the ambient temperature of the environment next to the Media5 unit may become greater than the maximum operating temperature recommended by Media5 for the use of its units, i.e. 40°C. The Mediatrix unit should never be used to temperatures greater than the recommended maximum operating temperature. Any damage occurring in such environmental conditions will void the warranty.

- Keep your Mediatrix unit clear and dust-free during and after installation.
- Locate the emergency power-off switch for the room in which you are working. Then, if an electrical accident occurs, you can act quickly to turn off the power.
- Do not work alone if potentially hazardous conditions exist.
- Never assume that power is disconnected from a circuit. Always check.

- Do not perform any action that creates a potential hazard to people or makes the equipment unsafe.
- Do not open or disassemble this product.
- The unit should be located at 20 cm from your monitor, computer casing or other peripheral including speakers.
- When the unit is brought from a cold to a warm environment, condensation, that might be harmful to the unit, may occur. If this is the case, wait one hour before powering the unit.

Electrostatic Discharge Prevention

- When working on a Mediatrix unit, always wear an ESD wrist strap, ensuring that it makes a good contact with your bare skin.
- Attach the ESD wrist strap end to an earth ground i.e. the grounding screw on the back of the Mediatrix unit or on an unpainted bare metal spot of a grounded equipment rack.
- Always ensure proper connection between the grounding screw on the back of the Mediatrix unit and an appropriate grounding point in your site to safely channel unwanted ESD to earth ground.

Translated Warning Definition



Warning: Means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, you must be aware of the hazards involved with electrical circuitry and familiar with standard practices for preventing accidents.



Attentie: Dit waarschuwingssymbool betekent gevaar. U overtreedt in een situatie die lichamelijk letsel kan veroorzaken. Voordat u aan enige apparatuur gaat werken, dient u zich bewust te zijn van de bij elektrische schakelingen betrokken risico's en dient u op de hoogte te zijn van standaard maatregelen om ongelukken te voorkomen.



Varoitus: Tämä varoitusmerkki merkitsee vaaraa. Olet tilanteessa, joka voi johtaa ruumiinvammaan. Ennen kuin työskentelet minkään laitteiston parissa, ota selvää sähkökytkentöihin liittyvistä vaaroista ja tavanomaisista onnettomuuksien ehkäisykeinoista.



Avertissement: Ce symbole d'avertissement indique un danger. Vous vous trouvez dans une situation pouvant causer des blessures ou des dommages corporels. Avant de travailler sur un équipement, soyez conscient des dangers posés par les circuits électriques et familiarisez-vous avec les procédures couramment utilisées pour éviter les accidents.



Warnung: Dieses Warnsymbol bedeutet Gefahr. Sie befinden sich in einer Situation, die zu einer Körperverletzung führen könnte. Bevor Sie mit der Arbeit an irgendeinem Gerät beginnen, seien Sie sich der mit elektrischen Stromkreisen verbundenen Gefahren und der Standardpraktiken zur Vermeidung von Unfällen bewußt



Avvertenza: Questo simbolo di avvertenza indica un pericolo. La situazione potrebbe causare infortuni alle persone. Prima di lavorare su qualsiasi apparecchiatura, occorre conoscere i pericoli relativi ai circuiti elettrici ed essere al corrente delle pratiche standard per la prevenzione di incidenti.



Advarsel: Dette varselsymbolet betyr fare. Du befinner deg i en situasjon som kan føre til personskade. Før du utfører arbeid på utstyr, må du være oppmerksom på de faremomentene som elektriske kretser innebærer, samt gjøre deg kjent med vanlig praksis når det gjelder å unngå ulykker.



Aviso: Este símbolo de aviso indica perigo. Encontra-se numa situação que lhe poderá causar danos físicos. Antes de começar a trabalhar com qualquer equipamento, familiarize-se com os perigos relacionados com circuitos eléctricos, e com quaisquer práticas comuns que possam prevenir possíveis acidentes..



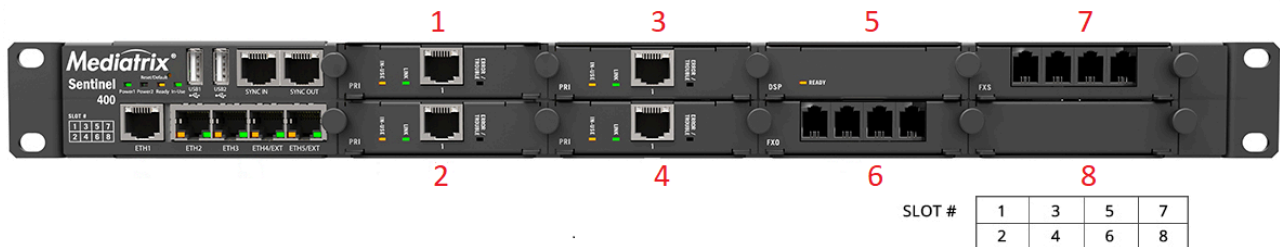
Aviso: Este símbolo de aviso significa peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considerar los riesgos que entraña la corriente eléctrica y familiarizarse con los procedimientos estándar de prevención de accidentes.



Varning - risk för maskinskada: Denna varningssymbol signalerar fara. Du befinner dig i en situation som kan leda till personskada. Innan du utför arbete på någon utrustning måste du vara medveten om farorna med elkretsar och känna till vanligt förfarande för att förebygga skador.

Slot Order - IMPORTANT

The order and location the cards are installed is crucial for the unit to work properly.



- Slot order is indicated on the front of the unit (left bottom corner)
- Always start from slot 1

IMPORTANT: Slot 1 is the only slot having the capabilities of controlling the backplane interfaces. Furthermore, Slot 1 must have a DSP or PRI card because they are the only ones capable of controlling the backplane interfaces which allow for communication between all connected cards. The Ethernet link on the backplane is daisy-chained between each slot of the unit. Therefore, if a slot is empty, Ethernet will not work on the subsequent cards.

Unit with PRI ports

- All PRI cards must be installed first, sequentially starting from slot 1
- The DSP card must be installed in the next available slot, after the last PRI card
- FXS/FXO/BRI cards are installed last

Note: Although it is better to install the FXS cards in the top slots to allow for better heat dissipation, keep in mind that PRI and DSP cards have priority for the use of these slots, and that FXS card can always be placed in the lower slots if not enough top slots are available.

Unit without PRI ports

- The DSP card must be installed in slot 1
- FXS/FXO/BRI cards are installed last.

Note: Although it is better to install the FXS cards in the top slots to allow for better heat dissipation, keep in mind that PRI and DSP cards have priority for the use of these slots, and that FXS card can always be placed in the lower slots if not enough top slots are available.

Removing a Telephony Card

Before you start

-  **Warning:** When installing or replacing a Telephony Interface Card in the Mediatrix unit, the earth ground connection between the grounding screw on the back of the Mediatrix unit and an appropriate grounding point in your site is mandatory all the time. This is mandatory to avoid any damage or injuries, even if Mediatrix unit is installed in a grounded equipment rack.
-  **Warning:** The earth ground cable should be the same size (18 AWG minimum) as the earth cable of the provided power cord. Otherwise, make sure the earth ground cable meets the standards and requirements of your local electrical code. The type of the cable is likely to have VW-1 or RT1 markings on the cable.
-  **Warning:** The earth ground cable must be firmly and securely connected to the grounding screw on the back of the Mediatrix unit and an appropriate grounding point in your site: the earth ground cable must remain tightly secured at all times during service and installation.
-  **Warning:** Before performing this procedure, you must first read and understand the Safety Recommendations listed in this document.
-  **Warning:** The telecommunication lines must be disconnected before unplugging the main power cords.
-  **Warning:** This equipment must be installed and maintained by service personnel. Incorrectly connecting this equipment to a general-purpose outlet could be hazardous.

Steps

- 1) Make sure an adequate earth ground connection has been made between the grounding screw on the back of the Mediatrix unit and an appropriate grounding point in your site.

 **Warning:** Adequate earth ground connection of the Mediatrix unit is mandatory to avoid any damage or injuries.

- 2) Wear an ESD wrist strap, ensuring that it makes good contact with bare skin.
- 3) Attach the ESD wrist strap end to an earth ground (grounding screw on the back of the Mediatrix unit or unpainted bare metal spot of a grounded equipment rack).
- 4) Turn OFF the power switch of the Mediatrix unit.

Note: Redundant Power Supply units do not have a power switch.

- 5) Turn OFF the power sources used to power the Mediatrix unit at the circuit breaker.

- 6) Disconnect all cables (except the earth ground connection) from the Mediatrix unit.



Caution: Power source cables must be disconnected last.

- 7) Unscrew the two thumb screws of the slot where you wish to remove a card.
- 8) Gently remove the existing card.

IMPORTANT: By removing a card, you may need to reorder the cards to make sure the unit continues to work. Refer to the [Slot Order - IMPORTANT](#) (p.8) section to make sure cards are properly ordered in the unit.

IMPORTANT: Be aware that if a card is installed and configured to be used in a slot, moving it to another slot will cause the configuration of the slot to be lost. Therefore the card will no longer work until it is reconfigured for the new slot.

- 9) Install the blank plate in the slot.
- 10) Set the thumb screws back into place. Do not over-tighten.

Installing a New Telephony Card

Before you start



Warning: When installing or replacing a Telephony Interface Card in the Mediatrix unit, the earth ground connection between the grounding screw on the back of the Mediatrix unit and an appropriate grounding point in your site is mandatory all the time. This is mandatory to avoid any damage or injuries, even if Mediatrix unit is installed in a grounded equipment rack.



Warning: The earth ground cable should be the same size (18 AWG minimum) as the earth cable of the provided power cord. Otherwise, make sure the earth ground cable meets the standards and requirements of your local electrical code. The type of the cable is likely to have VW-1 or RT1 markings on the cable.



Warning: The earth ground cable must be firmly and securely connected to the grounding screw on the back of the Mediatrix unit and an appropriate grounding point in your site: the earth ground cable must remain tightly secured at all times during service and installation.



Warning: Before performing this procedure, you must first read and understand the Safety Recommendations listed in this document.



Warning: The telecommunication lines must be disconnected before unplugging the main power cords.



Warning: This equipment must be installed and maintained by service personnel. Incorrectly connecting this equipment to a general-purpose outlet could be hazardous.

IMPORTANT: To comply with the ISED and ACTA regulatory aspects, the label supplied with the telephony card must be applied on the exterior surface of the Model S casing during the installation of the telephony card.

Steps

- 1) Make sure an adequate earth ground connection has been made between the grounding screw on the back of the Mediatrix unit and an appropriate grounding point in your site.



Warning: Adequate earth ground connection of the Mediatrix unit is mandatory to avoid any damage or injuries.

- 2) Wear an ESD wrist strap, ensuring that it makes good contact with bare skin.
- 3) Attach the ESD wrist strap end to an earth ground (grounding screw on the back of the Mediatrix unit or unpainted bare metal spot of a grounded equipment rack).
- 4) Turn OFF the power switch of the Mediatrix unit.

Note: Redundant Power Supply units do not have a power switch.

- 5) Turn OFF the power sources used to power the Mediatrix unit at the circuit breaker.
- 6) Disconnect all cables (except the earth ground connection) from the Mediatrix unit.



Caution: Power source cables must be disconnected last.

- 7) Unscrew the two thumb screws of the slot where you wish to install the new card.

IMPORTANT: Before installing the new card, refer to the [Slot Order - IMPORTANT](#) (p.8) section to make sure all cards are properly ordered in the unit.

Note: Be aware that if a card is installed and configured to be used in a slot, moving it to another slot will cause the configuration of the slot to be lost. Therefore the card will no longer work until it is reconfigured for the new slot.

- 8) Gently remove the blank plate or the existing card.
- 9) Gently slide into the internal plastic rails of the slot the new card.



Attention: Care should be taken to avoid any damage to the electronic parts on the card. The card, when properly inserted, slides in easily.

- 10) Set the thumb screws back into place. Do not over-tighten.

- 11) Apply the label indicating the ISED and ACTA registration numbers on the exterior surface of the casing.

Replacing a Telephony Card

Before you start

-  **Warning:** When installing or replacing a Telephony Interface Card in the Mediatrix unit, the earth ground connection between the grounding screw on the back of the Mediatrix unit and an appropriate grounding point in your site is mandatory all the time. This is mandatory to avoid any damage or injuries, even if Mediatrix unit is installed in a grounded equipment rack.
-  **Warning:** The earth ground cable should be the same size (18 AWG minimum) as the earth cable of the provided power cord. Otherwise, make sure the earth ground cable meets the standards and requirements of your local electrical code. The type of the cable is likely to have VW-1 or RT1 markings on the cable.
-  **Warning:** The earth ground cable must be firmly and securely connected to the grounding screw on the back of the Mediatrix unit and an appropriate grounding point in your site: the earth ground cable must remain tightly secured at all times during service and installation.
-  **Warning:** Before performing this procedure, you must first read and understand the Safety Recommendations listed in this document.
-  **Warning:** The telecommunication lines must be disconnected before unplugging the main power cords.
-  **Warning:** This equipment must be installed and maintained by service personnel. Incorrectly connecting this equipment to a general-purpose outlet could be hazardous.

Steps

- 1) Make sure an adequate earth ground connection has been made between the grounding screw on the back of the Mediatrix unit and an appropriate grounding point in your site.
 -  **Warning:** Adequate earth ground connection of the Mediatrix unit is mandatory to avoid any damage or injuries.
- 2) Wear an ESD wrist strap, ensuring that it makes good contact with bare skin.
- 3) Attach the ESD wrist strap end to an earth ground (grounding screw on the back of the Mediatrix unit or unpainted bare metal spot of a grounded equipment rack).
- 4) Turn OFF the power switch of the Mediatrix unit.

Note: Redundant Power Supply units do not have a power switch.

- 5) Turn OFF the power sources used to power the Mediatrix unit at the circuit breaker.
- 6) Disconnect all cables (except the earth ground connection) from the Mediatrix unit.



Caution: Power source cables must be disconnected last.

- 7) Unscrew the two thumb screws of the slot where you wish to change the card.
- 8) Gently remove the installed card.
- 9) Gently slide into the internal plastic rails of the slot the new card.



Attention: Care should be taken to avoid any damage to the electronic parts on the card. The card, when properly inserted, slides in easily.

- 10) Set the thumb screws back into place. Do not over-tighten.

Product Disposal Instructions

	This symbol indicates that the product is classified as electrical or electronic equipment and should not be disposed of along with commercial or household waste at the end of its working life. For appropriate disposal and recycling instructions, contact your local Media5 Corporation provider.
The Waste of Electrical and Electronic Equipment (WEEE) Directive (2002/96/EC) was established by the European Union to minimize negative impact on the environment, control hazardous substances, and curtail landfill expansion by using the best available recovery and recycling techniques.	

Disclaimers

Innovation, Science and Economic Development Canada (ISED)

This Class B A digital apparatus complies with Canadian ICES-003.

CE Marking



DECLARATION OF CONFORMITY

We, M5 Technologies / Media5 Corporation, located at 130 Sauvé st. Sherbrooke, Québec, Canada J1L 0A7, declare that for the hereinafter mentioned product the presumption of conformity with the applicable essential requirements of Directives 2014/30/EC and 2014/35/EC European parliament (EMC and LVD directives) is given. Any unauthorized modification of the product voids this declaration. For a copy of the original signed Declaration Of Conformity please contact Media5 at the above address.

RoHS Declaration Of Compliance

This Mediatrix unit is in compliance with the Council Directives 2011/65/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

RoHS China

Model M complies with the China IEC 60950-1 safety deviation, but does not have CCC approvals.

这个文件涉及的是在中华人民共和国境内进口或销售的电子信息产品
Include this document with all Electronic Information Products
imported or sold in the People's Republic of China.

部件名称 (Parts)	有毒有害物质或元素 (Hazardous Substance)					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr ⁶⁺)	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
塑料和聚合物部件 (Plastic and Polymeric parts)	0	0	0	0	x	x
集成电路 (Integrated Circuit)	x	0	x	0	x	x

0: 表示该有害物质在该部件所有均质材料中的含量均在 SJ/T-11363 - 2006 规定的限量要求以下。
Indicates that the concentration of the hazardous substance in all homogeneous materials in the parts is below the relevant threshold of the SJ/T-11363 - 2006 standard.

x: 表示该有害物质至少在该部件的某一均质材料中的含量可能超出 SJ/T-11363 - 2006 规定的限量要求。
Indicates that the concentration of the hazardous substance of at least one of all homogeneous materials in the parts might exceed the relevant threshold of the SJ/T-11363 - 2006 standard.

除非另有特别的标注,此标志为针对所涉产品的环保使用期限标志。某些可更换的零件会有一个不同的环保使用期限(例如,电池单元模块)贴在其产品上。
此环保使用期限只适用于产品是在产品手册中所规定的条件下工作。

The Environmentally Friendly Use Period (EFUP) for all enclosed products and their parts are per the symbol shown here, unless otherwise marked. Certain field-replaceable parts have different EFUP (for example, battery modules) and so are marked to reflect such.
The Environmentally Friendly Use Period is valid only when the product is operated under the conditions defined in the product manual.

Altitude of Operation



仅适用于海拔2000m以下地区安全使用”或类似的警告语句 Use only at altitudes no more than 2000 m above sea level.



Only use in non-tropical climate regions.

Available Documentation

For more details, refer to the [Mediatrix Documentation](#) published on the [Media5 Documentation Portal](#).

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