



# M/GE-PSW-SX-01, M/GE-PSW-LX-01, and M/GE-PSW-SX-01(ST)

Standalone Mini Media Converters

User Guide

Part Number 33398 Revision G December 2022

#### **Intellectual Property**

© 2022 Lantronix, Inc. All rights reserved. No part of the contents of this publication may be transmitted or reproduced in any form or by any means without the written permission of Lantronix.

*Lantronix* is a registered trademark of Lantronix, Inc. in the United States and other countries. All other trademarks and trade names are the property of their respective holders.

Patented: patents.lantronix.com; additional patents pending.

#### Warranty

For details on the Lantronix warranty policy, go to <a href="http://www.lantronix.com/support/warranty">http://www.lantronix.com/support/warranty</a>.

#### **Contacts**

#### **Lantronix Corporate Headquarters**

48 Discovery, Suite 250 Irvine, CA 92618, USA Toll Free: 800-526-8766 Phone: 949-453-3990

Fax: 949-453-3995
Technical Support

Tel: +1 (800) 526-8766, Tel: +1 (949) 453-3990, or <a href="https://www.lantronix.com/technical-support/">https://www.lantronix.com/technical-support/</a>

#### **Sales Offices**

For a current list of our domestic and international sales offices, go to <a href="www.lantronix.com/about/contact">www.lantronix.com/about/contact</a>.

#### Disclaimer

All information contained herein is provided "AS IS." Lantronix undertakes no obligation to update the information in this publication. Lantronix does not make, and specifically disclaims, all warranties of any kind (express, implied or otherwise) regarding title, non-infringement, fitness, quality, accuracy, completeness, usefulness, suitability or performance of the information provided herein. Lantronix shall have no liability whatsoever to any user for any damages, losses and causes of action (whether in contract or in tort or otherwise) in connection with the user's access or usage of any of the information or content contained herein. The information and specifications contained in this document are subject to change without notice.

#### **Revision History**

| Date     | Rev. | Comments  |
|----------|------|---|
| 1/25/08  | Α    | Initial release.  |
| 11/20/09 | В    | Correct the product description on page 1 and add DoC.  |
| 3/14/17  | С    | Add M/GE-PSW-SX-01(ST), change format, add ALPT feature at FW Rev. C, and update contact information. |
| 6/4/21   | D    | Add M/GE-PSW-SX-01(LC) and add PEM to top metals.   |
| 2/8/22   | Е    | Initial Lantronix rebrand release.  |
| 10/10/22 | F    | Update contact and power supply information.  |
| 12/21/22 | G    | Update artwork.   |

# **Table of Contents**

| Product Description                   | 4  |
|---------------------------------------|----|
| Ordering Information                  | 4  |
| Options (sold separately)             | 4  |
| Features                              | 5  |
| Applications                          | 5  |
| Package Contents                      | 5  |
| Installation                          | 6  |
| Electrostatic Discharge (ESD)         | 6  |
| Copper and Fiber Ports                |    |
| Connect the Fiber Cable               |    |
| Connect the Twisted-pair Copper Cable |    |
| Power up the Media Converter          | 7  |
| Operation                             | 8  |
| Status LEDs                           | 8  |
| Features                              | 8  |
| Cable Specifications                  | 11 |
| Technical Specifications              | 13 |
| Troubleshooting                       | 14 |
| For More Information                  | 14 |
| Compliance Information                | 15 |
| Declaration of Conformity             | 15 |
| CE Mark                               | 15 |
| Electrical Safety Warnings            | 17 |

# **Product Description**

The M/GE-PSW Series is a Gigabit Ethernet stand-alone Mini media converter that provides cost effective media conversion between 10/100/1000Base-T ports and 1000Base-SX/LX ports. With its fixed configuration, deployments are just plug-and-play, and its small size makes it ideal for locations where space is limited. Operating at Layer 2, the data link layer, this converter not only converts copper to fiber, it also provides rate conversion allowing legacy 10/100 copper devices to connect to 1000Base-SX/LX fiber.

# **Ordering Information**

Note: Long Haul single mode and Single Strand single mode are available on request.

| Model              | Description   |
|--------------------|---|
| M/GE-PSW-SX-01(ST) | 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-SX 850nm multimode (ST) [62.5/125 µm fiber: 220 m/722 ft.] Link Budget: 7.0 dB [50/125 µm fiber: 550 m/1804 ft.]* Link Budget: 7.0 dB |
| M/GE-PSW-SX-01     | 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-SX 850nm multimode (SC) [62.5/125 µm fiber: 220 m/722 ft.]* Link Budget: 7.0 dB [50/125 µm fiber: 550m/1804 ft.] Link Budget: 7.0 dB  |
| M/GE-PSW-SX-01(LC) | 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-SX 850nm multimode (LC) [62.5/125 µm fiber: 220 m/722 ft.]* Link Budget: 7.0 dB [50/125 µm fiber: 550m/1804 ft.] Link Budget: 7.0 dB  |
| M/GE-PSW-LX-01     | 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-LX 1310nm single mode (SC) [10 km/6.2 mi.]* Link Budget: 10.5 dB  |

<sup>\*</sup> Typical maximum cable distance; actual distance depends on network physical characteristics.

# **Options (sold separately)**

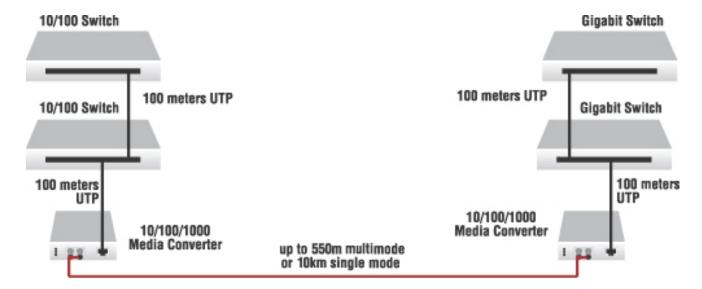
| Option      | Description   |
|-------------|---|
| SPS-2460-SA | Wide Input (24 - 60 VDC) Stand-Alone Power Supply   |
| WMBM        | Wall Mount Bracket for Mini Media Converters  |
| RMBM        | Rack Mount Bracket for Mini Media Converters in the RMS19-SA4-01, E-MCR-05, and/or M-MCR-01   |
| DRBM        | 3.3" DIN Rail Mount Bracket for "Mini" Media Converters   |
| M-MCR-01    | 18-Slot Mini Media Converter Chassis  |
| USBC-AM-DC  | USB 2.0 cable male to barrel connector USB Power Cable  |
| SFP Modules | Our SFP transceivers are the ideal solution for any network supporting a large variety of data rates and fiber types. See relevant SFP modules. |

## **Features**

- Unit and Port LEDs allow for quick status information
- Auto-Negotiation
- Fixed Full-Duplex on fiber
- Auto-MDI/MDIX
- Active Link Pass Through
- Automatic Link Restoration
- Connect Legacy Networking Equipment: Connect an existing 10/100 Mbps device to 1000 Mbps devices.
- Jumbo Frame (up to 10,240 Bytes)
- USB Power Option; requires using a USB to DC barrel connector cable (USBC-AM-DC).

# **Applications**

Connect legacy networking equipment: connect an existing 10/100 Mbps device to 1000 Mbps devices.



# **Package Contents**

Make sure you have received the items below. Contact your sales representative if any items are missing. Save the packaging for possible future use.

- One M/GE-PSW-SX-01
- One Power Supply
- One Documentation postcard

## Installation

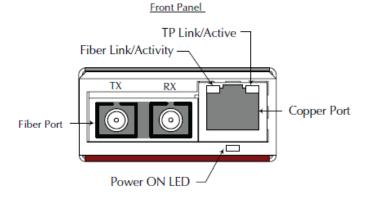
## Electrostatic Discharge (ESD)

Always observe the following ESD precautions when installing or handing the media converter:

- Do not remove the converter from its protective packaging until you are ready to install it.
- Wear an ESD wrist grounding strap before handling any module or component. If you do not have a
  wrist strap, maintain grounded contact with the system unit throughout any procedure requiring ESD
  protection.

## Copper and Fiber Ports

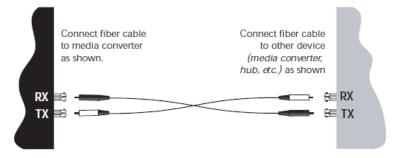
The figure below shows the front panel of the M/GE-PSW-SX-01 media converter.



#### Connect the Fiber Cable

Full duplex (always ON) is on the fiber side only; therefore, the 512-Bit Rule does not apply. The cable lengths are constrained by the cable requirement.

- 1. Locate or build IEEE 803.2™ compliant 1000Base-X fiber cable with male, two-stranded TX to RX connectors installed at both ends.
- 2. Connect the fiber cable to the M/GE-PSW-SX-01 media converters as follows:
  - Connect the male TX cable connector to the female TX port.
  - Connect the male RX cable connector to the female RX port.
- 3. Connect the fiber cable to the other device (another media converter, hub, etc.) as follows:
  - Connect the male TX cable connector to the female RX port.
  - Connect the male RX cable connector to the female TX port.

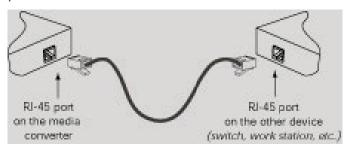


**Note**: With AutoCross permanently enabled, the link LED only lights for a valid end-to-end connection.

## Connect the Twisted-pair Copper Cable

The AutoCross feature allows either MDI (*straight-through*) or MDI-X (*crossover*) cable connections to be configured automatically, according to network conditions.

- 1. Locate or build IEEE 803.2™ compliant 10/100/1000Base-T cables with RJ-45 connectors installed at both ends.
- 2. Connect the RJ-45 connector at one end of the cable to the RJ-45 port on the M/GE-PSW-SX-01 media converter.
- 3. Connect the RJ-45 connector at the other end of the cable to the RJ-45 port on the other device (*switch, workstation, etc.*).

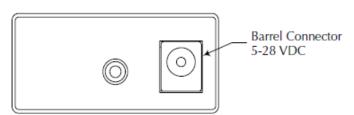


**Note**: With AutoCross permanently enabled, the link LED only lights when a valid end-to-end connection is made.

## Power up the Media Converter

The M/GE-PSW-SX-01 media converter is powered by using a DC power adapter through the barrel connector on its back panel, as shown below.





M/GE-PSW-SX-01 Back Panel Power

When ordered with the corresponding country code, a wall mount AC adapter/power supply Power Supply is included. To order the corresponding country specific power supply, add the extension to the end of the SKU (e.g., M/GE-PSW-SX-01-NA = North America, -LA = Latin America, -EU = Europe, -UK = United Kingdom, -SA = South America, -JP = Japan, -OZ = Australia, -BR = Brazil.

See the Lantronix SPS-2460-SA DC external power supply User Guide for information on powering the media converter with an optional 24-60 VDC power supply.

## **DC Power Adapter**

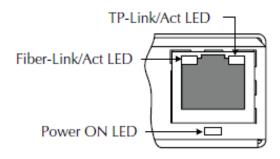
- 1. Insert the power adapter barrel into the barrel connector located on the back of the media converter.
- 2. Connect the power adapter to DC power source.
- 3. Observe that the power ON LED is lit.

# **Operation**

#### Status LEDs

Use the status LEDs to monitor the status of the media converter.

#### Front Panel



#### LED states are as follows:

Fiber-Link/Act LED:

Green ON = Link (fiber)

Flashing = Activity

TP-Link/Act LED:

Green ON = Link (copper)

Flashing = Activity

Power LED:

Green ON = Connected to power

#### **Features**

## **Congestion Reduction**

The M/GE-PSW-xX-01 media converters do not forward collision signals or error packets from one collision domain to another, which results in improvements in baseline network performance. In addition, the media converter filters packets destined for local devices, which reduces network congestion.

## **Auto-Negotiation**

The Auto-Negotiation feature is ON permanently for the M/GE-PSW-xX-01 media converters. Auto-Negotiation allows the media converter to configure itself automatically to achieve the best possible mode of operation over a link. It broadcasts speed (10 /100/1000 Mb/s) and duplex capabilities (full or half) to the other device and negotiates the best mode of operation. Auto-Negotiation allows quick and easy installation because the optimal link is established automatically.

In a scenario where an auto-negotiation device is linked to a non-negotiating device, the negotiating device via parallel detection recognizes the speed of the second device then establishes the best operating speed (10/100/100Mbs) at half-duplex.

## **Active Link Pass-Through (ALPT)**

**Link Pass-Through** is a troubleshooting feature that allows the media converter to monitor both the fiber and copper RX ports for loss of signal. With the loss of RX signal on one media port, the converter will automatically disable the TX signal of the other media port, thus "passing through" the link loss.

- End device automatically notified of link loss
- Prevents loss of valuable data unknowingly transmitted over invalid link

Active LPT is a form of LPT that requires the links to become Active before LPT becomes Active.

With Active LPT there are 2 states: Diagnostic and Active.

The media converter enters the **Diagnostic** state when either of the following conditions is met:

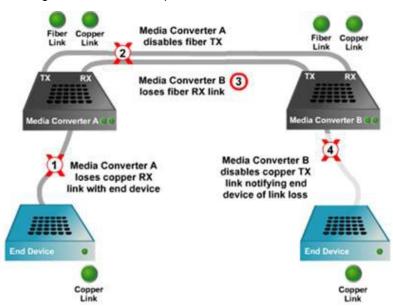
- Upon power-up of the converter.
- Upon removing the converter's SFP module (if equipped).

In the **Diagnostic** state, the link for each of the media converter's ports can come up independently of each other, just like a converter that has no LPT functionality, or a converter that has LPT disabled. The Diagnostic state is helpful during first power up, before all links of a circuit are connected, as it allows the installer to see each link turn on as the cables are plugged in. It's also helpful for finding the location of a fault, if one exists.

The media converter remains in the Diagnostic state until the following condition is met:

• The link status for both media converter's ports is up, simultaneously.

After that condition is met, ALPT enters the **Active** state. It remains in the Active state until the converter is either powered down, or its SFP module is removed. In the Active state, Active LPT works as shown below (the same as when regular LPT is enabled).



Note: Active Link Pass-Through (ALPT) support requires firmware Rev. C or higher.

## AutoCross™

The AutoCross feature allows using either straight-through (MDI) or crossover (MDI-X) copper cables when connecting to 10Base-T or 100Base-TX devices. AutoCross determines the characteristics of the connection and automatically configures the device to link up, regardless of the copper cable configuration, MDI or MDI-X.

#### **Automatic Link Restoration**

The media converter will automatically re-establish the link when connected to a switch if the link is lost, even with Auto-Negotiation and Link Pass-through (both directions) enabled.

## **Full-duplex Flow Control**

In a full-duplex network, maximum cable lengths are determined by the type of cables used (see cable specifications section). The 512-Bit Rule does not apply in a full-duplex network. **Note:** Full duplex is ON permanently for the fiber port only.

## Half-duplex Flow Control (512-Bit Rule)

In a half-duplex network, the maximum cable lengths are determined by the roundtrip delay limitations of each Fast Ethernet collision domain. (A collision domain is the longest path between any two terminal devices; e.g., a terminal, switch, or router.) The 512-Bit Rule determines the maximum length of cable permitted by calculating the round-trip delay in bit-times (BT) of a particular collision domain. If the result is less than or equal to 512 BT, the path is good.

#### **Back Pressure**

Back pressure is used in half duplex mode. It ensures the retransmission of incoming packets when a port using half-duplex is temporarily unable to receive incoming frames.

#### **Flow Control**

The process of adjusting the flow of data from one device to another ensures that the receiving device can handle all the incoming data. This is particularly important where the sending device is capable of transmitting data much faster than the receiving device can accept it.

#### **Distance Extension**

The M/GE-PSW-xX-01 media converters can segment one (1) 10Base-T copper Ethernet, 100Base-T copper fast Ethernet, or 1000Base-T copper Gigabit Ethernet, and one (1)1000 Base-X fiber Fast Ethernet collision domain:

- In a half-duplex Ethernet or Fast Ethernet environment, the M/GE-PSW-xX-01 media converters extend network distances by segmenting collision domains so that the 512-Bit Rule applies separately to each collision domain.
- In a full-duplex Ethernet or Fast Ethernet environment, the M/GE-PSW-xX-01 media converters
  extend network distances to the physical cable limitations imposed by the selected twisted-pair
  copper fiber cables.

#### **Rate conversion**

The M/GE-PSW-xX-01 media converters allow the following connections:

- 10Mb/s devices on a 10Base-T legacy copper network to 1000Mb/s devices on a 1000Base SX/LX Gigabit Ethernet fiber network.
- 100Mb/s devices on a 100Base-T legacy copper network to 1000Mb/s devices on a 1000Base SX/LX Gigabit Ethernet fiber network.

## Cable Specifications

The physical characteristics must meet or exceed IEEE 802.3™ specifications.

#### **Fiber Cable**

Bit Error Rate: <10-9
Single mode fiber (recommended): 9 μm
Multimode fiber (recommended): 62.5/125 μm

Multimode fiber (optional): 100/140, 85/140, 50/125 µm

M/GE-PSW-SX-01 850nm multimode

Fiber Optic Transmitter Power: min: -10.0 dBm max: -4.0 dBm Fiber Optic Receiver Sensitivity: min: -17.0 dBm max: -0.0 dBm

Link Budget: 7.0 dB

M/GE-PSW-LX-01 1310 nm single mode

Fiber-optic Transmitter Power: min: -9.5 dBm max: -3.0 dBm Fiber-optic Receiver Sensitivity: min: -20.0 dBm max: -3.0 dBm

Link Budget: 10.5 dB

M/GE-PSW-LX-01(100) 1310TX/1550RX nm single mode
M/GE-PSW-LX-01(101) 1550TX/1310RX nm single mode
Fiber-optic Transmitter Power: min -8.0 dBm max: -3.0 dBm
Fiber-optic Receiver Sensitivity: min: -21.0 dBm max: -3.0 dBm

Link Budget: 13 dB

M/GE-PSW-SX-01(ST) 850 nm duplex ST multimode

Fiber-optic Transmitter Power: min: -9.5 dBm max: -4 dBm

Fiber-optic Receiver Sensitivity: -18 dBm Link Budget: 8.5 db

Class 1 Laser International Safety Standard IEC 60825-1 Compliant. Complies with IEC 60825-1 and FDA 21 CFR 1040.10 and 1040.11. The transceiver must be operated within the specified temperature and voltage limits. The fiber optic transmitters on this device meet Class I Laser safety requirements per IEC-825/CDRH standards and comply with 21 CFR1040.10 and 21CFR1040.11.

## Copper cable

#### Categories 5 and 5e: minimum requirement

Gauge 24 to 22 AWG

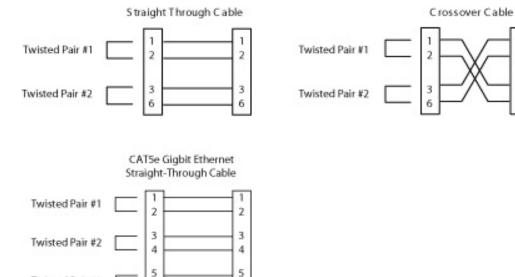
Attenuation 22.0 dB /100m @ 100 MHz

Maximum Cable Distance 100 meters

- Straight-through or crossover twisted-pair cable may be used.
- Shielded (STP) or unshielded (UTP) twisted-pair cable may be used.
- Pins 1&2 and 3&6 are the two active pairs in an Ethernet network.
- All four pairs are used in a gigabit Ethernet network.
- Use only dedicated wire pairs for the active pins (e.g., blue/white & white/blue, orange/white & white/orange, etc.)
- Do not use flat or silver satin wire.

Twisted Pair #3

Twisted Pair #4



6 7

8

# **Technical Specifications**

For Lantronix M/GE-PSW-SX-01 or equivalent:

| Standards         | IEEE 802.3   |
|-------------------|--|
| Data rate         | 10 Mb/s, 100 Mbps, 1000 Mbps   |
| Dimensions        | 1.8"W x 3.35"D x 0.85"H (45.7 x 85.1 x 21.6 mm)  |
| Weight            | 3.15 oz. (127.5 g) approximately<br>Shipping Weight 2 lbs. [0.90 kg]   |
| MTBF*             | 24,466 hours (MIL217F2 V5.0) (MIL-HDBD-217F)<br>100,130 hours (Bellcore7 V5.0)   |
| Memory            | 1Mb  |
| MAC addresses     | 8K   |
| Max Frame Size    | Up to 10,240 bytes   |
| Power Supply      | Unit accepts 4.5 VDC to 28 VDC Wall Mount AC adapter: 12 VDC 400mA Wide Input (24-60 VDC) power supply sold separately |
| Power consumption | 262mA @ 12VDC, 3.15 watts  |
| Operating Temp**  | 0°C to +50°C (32°F to 122°F)   |
| Storage Temp      | -15°C to+ 65°C (5°F to 149°F)  |
| Humidity          | 5% to 95%, non-condensing  |
| Altitude          | 0 to 10,000 feet   |
| Certifications    | Safety: Wall Mount Power Supply, UL Listed, cUL Listed FCC Class A, CISPR22/EN55022 Class A, EN55024, CE Mark          |
| Warranty          | Lifetime   |

<sup>\*</sup> MTBF is estimated using the predictability method. This method is based on MIL-217F at 25°C ambient temperature, typical enclosure heat rise of 10°C with nominal operating conditions and parameters. Installation and configuration specific MTBF estimates are available upon request. Contact Technical Support.

The product is certified by the manufacturer to comply with DHHS Rule 21/CFR, Subchapter J applicable at the date of manufacture.

<u>WARNING</u>: Visible and invisible laser radiation when open. Do not stare into the beam or view the beam directly with optical instruments. Failure to observe this warning could result in an eye injury or blindness.

<u>WARNING</u>: Use of controls, adjustments or the performance of procedures other than those specified herein may result in hazardous radiation exposure.

Copper based media ports such as Twisted Pair (TP) Ethernet, USB, RS232, RS422, RS485, DS1, DS3, Video Coax, etc., are intended to be connected to intra-building (inside plant) link segments that are not subject to lightening transients or power faults and are NOT to be connected to inter-building (outside plant) link segments that are subject to lightening transients or power faults.

The information in this manual is subject to change. For the most current information, view the online manual at <a href="https://www.lantronix.com/products/m-qe-psw-series-2/">https://www.lantronix.com/products/m-qe-psw-series-2/</a>.

<sup>\*\*</sup> Manufacturer's maximum rated ambient temperature (TMRA).

# **Troubleshooting**

If the media converter fails, isolate and correct the failure by determining the answers to the following questions and then taking the indicated action:

Is the PWR (power) LED lit and did the TX and FX LEDs turn ON then turn OFF?

NO

- Is the power adapter the proper type of voltage and cycle frequency for the AC outlet?
- Is the power adapter properly installed in the media converter and in the outlet?
- · Contact Tech Support.

YES

· Proceed to step 2.

**Note**: As a link pass-through device, both the copper and the fiber cables must be installed before the LEDs will light.

2. Are the "FX - Link" and "TX-Link/Act" LEDs lit on the RJ-45 port?

NO

- Check the copper cables for proper connection. See "Copper and Fiber Ports" on page 6.
- Check the fiber cables for proper connection. See "Copper and Fiber Ports" on page 6.
- · Contact Tech Support.

YES

## For More Information

Other related manuals are listed below.

- SPS-2460-xx Power Supply User Guide (33455)
- WMBS, WMBL, WMBP, & WMBM Wall-Mount Brackets Install Guide (33393)
- Release Notes (firmware version specific)

For Lantronix Documentation, Firmware, App Notes, etc. go to <a href="https://www.lantronix.com/technical-support/">https://www.lantronix.com/technical-support/</a>. Note that this manual provides links to third party web sites for which Lantronix is not responsible

# **Compliance Information**

The M/GE-PSW-xX-01 is in conformity with the following standards: EN 55022:1994 + A1:1995 + A2:1997; EN 55024:1998 + A1:2001 + A2:2003. Compliance: Safety: Wall Mount Power Supply, UL Listed, cUL Listed (Canada); FCC Class A, CISPR22/EN55022 Class A, EN55024, CE Mark.

## **Declaration of Conformity**

Manufacture's Name: Lantronics, Inc.

Manufacture's Address: 48 Discovery, Suite 250, Irvine, California 92618 USA

Declares that the products:

M/GE-PSW-SX-01(ST), M/GE-PSW-SX-01, M/GE-PSW-SX-01(LC), M/GE-PSW-LX-01,

M/GE-PSW-LX-01 (100), M/GE-PSW-LX-01 (101)

Conforms to the following Product Regulations:

Electromagnetic Compatibility (EMC) Directive 2014/30/EU: EN 55022:2010, EN 55024:2010

Low-Voltage Directive (LVD) 2014/35/EU: EN 60950-1:2006

With the technical construction on file at the above address, this product carries the CE Marking

I, the undersigned, hereby declare that the equipment specified above conforms to the above

Directive(s) and Standard(s).

Place: Irvine, California Date: April 27, 2022

Signature: Fathi Hakam Full Name: Fathi Hakam

Position: Vice President of Engineering

#### **CE Mark**

## FCC regulations

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at the user's own expense.

## **Canadian regulations**

This digital apparatus does not exceed the Class A limits for radio noise for digital apparatus set out on the radio interference regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la Class A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

## **European regulations**

#### Warning

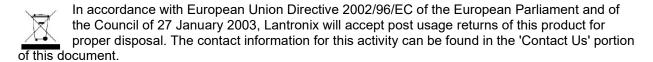
This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

#### Achtung!

Dieses ist ein Gerät der Funkstörgrenzwertklasse A. In Wohnbereichen können bei Betrieb dieses Gerätes Rundfunkstörungen auftreten. In diesem Fäll is der Benutzer für Gegenmaßnahmen verantwortlich.

#### Attention!

Ceci est un produit de Classe A. Dans un environment domestique, ce produit risque de créer des interférences radioélectriques, il appartiendra alors à l'utilsateur de prende les measures spécifiques appropriées.





CAUTION: RJ connectors are NOT INTENDED FOR CONNECTION TO THE PUBLIC TELEPHONE NETWORK. Failure to observe this caution could result in damage to the public telephone network.

Der Anschluss dieses Gerätes an ein öffentlickes Telekommunikationsnetz in den EGMitgliedstaaten verstösst gegen die jeweligen einzelstaatlichen Gesetze zur Anwendung der Richtlinie 91/263/EWG zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über Telekommunikationsendeinrichtungen einschliesslich der gegenseitigen Anerkennung ihrer Konformität.

## **Electrical Safety Warnings**

## **Electrical Safety**

**IMPORTANT**: This equipment must be installed in accordance with safety precautions.

#### **Elektrische Sicherheit**

WICHTIG: Für die Installation dieses Gerätes ist die Einhaltung von Sicherheitsvorkehrungen erforderlich.

#### Elektrisk sikkerhed

VIGTIGT: Dette udstyr skal installeres i overensstemmelse med sikkerhedsadvarslerne.

#### Elektrische veiligheid

**BELANGRIJK**: Dit apparaat moet in overeenstemming met de veiligheidsvoorschriften worden geïnstalleerd.

#### Sécurité électrique

IMPORTANT: Cet équipement doit être utilisé conformément aux instructions de sécurité.

#### Sähköturvallisuus

TÄRKEÄÄ: Tämä laite on asennettava turvaohjeiden mukaisesti.

#### Sicurezza elettrica

IMPORTANTE: questa apparecchiatura deve essere installata rispettando le norme di sicurezza.

#### Elektrisk sikkerhet

VIKTIG: Dette utstyret skal installeres i samsvar med sikkerhetsregler.

#### Segurança eléctrica

**IMPORTANTE**: Este equipamento tem que ser instalado segundo as medidas de precaução de segurança.

#### Seguridad eléctrica

**IMPORTANTE**: La instalación de este equipo deberá llevarse a cabo cumpliendo con las precauciones de seguridad.

#### Elsäkerhet

OBS! Alla nödvändiga försiktighetsåtgärder måste vidtas när denna utrustning används.



#### **Lantronix Corporate Headquarters**

48 Discovery, Suite 250 Irvine, CA 92618, USA Toll Free: 800-526-8766 Phone: 949-453-3990 Fax: 949-453-3995

## **Technical Support**

Tel: +1 (800) 526-8766, Tel: +1 (949) 453-3990, or <a href="https://www.lantronix.com/technical-support/">https://www.lantronix.com/technical-support/</a>

#### **Sales Offices**

For a current list of our domestic and international sales offices, go to the Lantronix web site at <a href="https://www.lantronix.com/about/contact">www.lantronix.com/about/contact</a>.