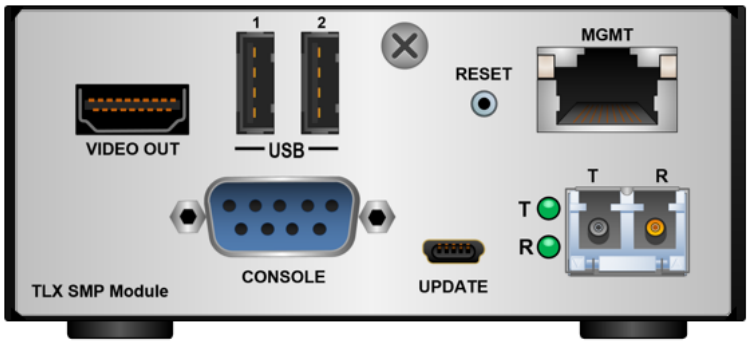
thinklogical®

SMP Module/SMP Client

SYSTEM MANAGEMENT PORTFOLIO PLATFORM

PRODUCT MANUAL



System Management Solutions for Thinklogical's TLX and Velocity KVM Matrix Switches and Fiber-Optic Extension Systems

Thinklogical, LLC®
100 Washington Street
Milford, Connecticut 06460 U.S.A.
Telephone: **1-203-647-8700**
Fax: **1-203-783-9949**
www.thinklogical.com

Value Your Content

thinklogical®

Trust Our Proven Ingenuity

Value Your Content

thinklogical®

Trust Our Proven Ingenuity

Copyright Notice

Thinklogical, LLC®
100 Washington Street
Milford, Connecticut 06460 U.S.A.
Telephone: 1-203-647-8700

Subject: SMP Module/SMP Client Product Manual
Revision: A; June, 2016

thinklogical®

MADE IN USA

Website: www.thinklogical.com
Facebook: www.facebook.com/ThinklogicalUSA
LinkedIn: www.linkedin.com/company/thinklogical
Google+: http://plus.google.com/u/0/109273605590791763795/about
YouTube: www.youtube.com/user/thinklogicalNA
Twitter: @thinklogical

Table of Contents

PREFACE iv
About Thinklogical® iv
About This Product Manual v
Note and Warning Symbols v
Class 1 Laser Information v
THE SYSTEM MANAGEMENT PORTFOLIO 1
The SMP Module/SMP Client 2
Features of the 6G SMP Module/SMP Client 2
Features of the 10G SMP Module/SMP Client 2
Programming & IP Addresses 3
SMP Module/SMP Client Chassis Options 4
The iMX6 Processor 5
Pluggable SFP Modules 5
Fiber-Optic Cable 6
Set Up 7
The 6G System 7
The 10G System 8
Ordering Information 9
REGULATORY & SAFETY REQUIREMENTS 10
Symbols Found on Our Products 10
Regulatory Compliance 10
North America 10
Australia & New Zealand 10
European Union 10
Declaration of Conformity 10
Standards with Which Our Products Comply 10
Supplementary Information 11
Product Serial Number 11
Connection to the Product 11
THINKLOGICAL® SUPPORT 12
Customer Support 12
Website 12
Email 12
Telephone 13
Fax 13
Product Support 13
Warranty 13
Return Authorization 14
Our Addresses 14
APPENDIX A: SMP Module/SMP Client Quick Start Guide 15
APPENDIX B: VX SMP Module/VX SMP Client FPGA Program Upgrade Procedure 16
APPENDIX C: TLX SMP Module/TLX SMP Client FPGA Program Upgrade Procedure 17
APPENDIX D: FPGA Download Installation Procedure 18

PREFACE

About Thinklogical

TOP WORK PLACES 2013 | TOP WORK PLACES 2014 | HEARST media services: CONNECTICUT POST, GREENWICH TIME, THE NEWS-TIMES, THE ADVOCATE

Thinklogical, LLC®
100 Washington St.
Milford, CT 06460

We, the Thinklogical team, are committed to understanding and exceeding our customers' requirements, the first time and every time.

Thinklogical is the leading manufacturer and provider of fiber optic KVM, video, audio, and peripheral extension and switching solutions used in video-rich, big-data computing environments.

Thinklogical offers the only fiber-optic KVM matrix switches in the world that are accredited to the Common Criteria EAL4, TEMPEST Level B, and NATO NIAPC Evaluation Scheme: GREEN information assurance standards. And Thinklogical Velocity products are the first system with both KVM and video matrix switching capabilities to be placed on the Unified Capabilities Approved Product List (UC APL) under the Video Distribution System (VDS) category.

Governments, entertainment, scientific and industrial customers worldwide rely on Thinklogical's products and solutions for security, high performance, continuous operation and ease of integration. Thinklogical products are designed and manufactured in the USA and are certified to the ISO 9001-2008 standard.

CERTIFIED ISO 9001:2008 COMPANY

Information Assurance: NATO | Common Criteria | TEMPEST | NATO Information Assurance Product Catalogue NIAPC

Thinklogical is headquartered in Milford, Connecticut and is privately held by Riverside Partners, LLC, Boston, MA (http://www.riversidepartners.com). For more information about Thinklogical products and services, please visit www.thinklogical.com.

Follow Thinklogical on LinkedIn at http://www.linkedin.com/company/thinklogical and on Facebook at http://www.facebook.com/ThinklogicalUSA

About this Product Manual

This product manual is divided into three sections: **Product Features & Installation, Regulatory & Safety Requirements** and **Thinklogical Support.** These are sub-divided to help you find the topics and procedures you are looking for. This manual also contains Appendices.

Section 1 – Product Features & Installation: Page 1. Details the features and functions of your equipment. Contains all the requirements and procedures necessary to connect and install your equipment.

Section 2 –Regulatory & Safety Requirements: Page 10. Thinklogical® strongly recommends that you read this section prior to starting the hardware assembly.

Section 3 – Thinklogical Support: Page 12. Thinklogical provides the best customer support available. If you have any questions or need to contact us for any reason, please refer to this section of the manual.

Note and Warning Symbols

Throughout this manual you will notice certain symbols that bring your attention to important information. These are **Notes** and **Warnings**. Examples are shown below.

Note: Important Notes appear in blue text preceded by a yellow exclamation point symbol, as shown here.

A **note** is meant to call the reader's attention to **helpful or important** information at a point in the text that is relevant to the subject being discussed.

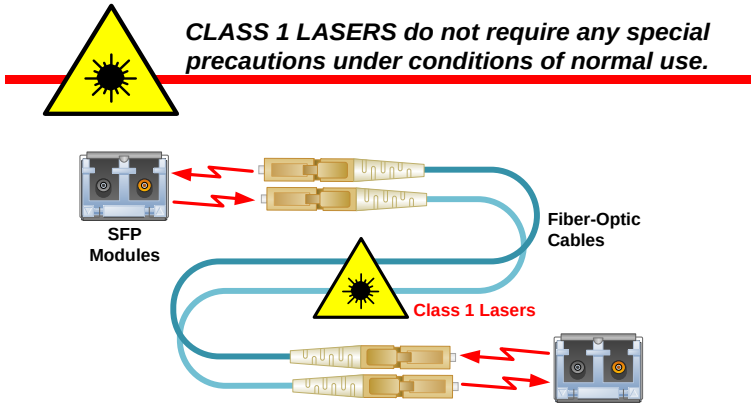
Warning! All Warnings appear in red text, followed by blue text, and preceded by a red stop sign, as shown here.

A **warning** is meant to call the reader's attention to **critical** information at a point in the text that is relevant to the subject being discussed.

BEFORE STARTING ANY PROCEDURE, IT IS RECOMMENDED THAT YOU READ THE INSTRUCTIONS THOROUGHLY!

Class 1 Laser Information

Thinklogical® products are designed and identified as a **Class 1 LASER product.** This means the maximum permissible exposure (MPE) cannot be exceeded when viewing the laser with the naked eye or with the aid of typical magnifying optics (e.g. telescope or microscope).



The System Management Portfolio

The Logical Solution

Thinklogical's fiber-optic routing solutions address many of the complex signal management challenges facing today's broadcast and video post-production professionals. Signal management products from Thinklogical are optimized for broadcast facilities, mobile production trucks and post-production applications where quality, performance and security are paramount.

Thinklogical's System Management Portfolio **is designed to help users easily manage and maintain Thinklogical deployments of any size.**

The ***S****ystem* ***M****anagement* ***P****ortfolio* (SMP) from Thinklogical improves overall system performance and value by reducing support effort, lowering total cost of ownership, enhancing productivity and maximizing system uptime.

Thinklogical's *System Management Portfolio,* which includes the **SMP Module/SMP Client,** the **SMP Appliance,** the **System Management Interface** and **five specialized software packages**, provides powerful remote management and maintenance capabilities, making it easier for users to configure, operate and update a Thinklogical signal extension and switching system.

Related SMP documents may be found on our web site:

http://www.thinklogical.com/user_manuals

- *Manuals*

Manual_System_Management_Portfolio

Manual_SMP_Appliance

- *Quick Start Guides*

SMP_Appliance_6G_QSG

SMP_Appliance_10G_QSG

RX_Display_Text_Overlay_QSG

The SMP Module/SMP Client

The **SMP Module** and **SMP Client** are extensions of the SMP Appliance, which includes **O**n **S**creen **D**isplay (OSD) as part of its standard features. The SMP Client browses to the Hot Key Manager of the SMP Appliance and provides the OSD. SMP Modules can be used for setting up the initial configuration in multiple source systems. SMP Modules and SMP Clients are available in both 6G and 10G models. Either model fits into a single slot of an extender chassis and provides an on-screen display via a browser connection to the SMP Appliance.

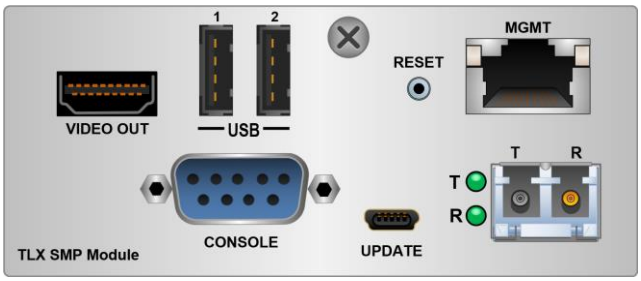
The SMP Module/SMP Client can be accessed locally via two USB 2.0 ports (keyboard and mouse) and an HDMI 1.2 video port. The SMP Module/SMP Client uses a fiber-optic output via an SFP Module (***S**mall **F**orm-factor **P**luggable Module*, pg. 5) that can be routed to any KVM extender. The SMP Module/SMP Client incorporates an i.MX6 Quad ARM 9 core processor that uses a Debian Operating System

Features of the 6G SMP Module/SMP Client

- **Gigabit Ethernet Connection** to the SMP Appliance/Switch network.
- Local OSD port with **two USB 2.0 A** connectors (keyboard/mouse) and **one HDMI 1.2** connector (video).
- **6G/2G Velocity** fiber-optic connection on an OSD routable to a KVM Extender Receiver.
- **DB9 Console Port** for debug, configuration and updates.
- **USB 2.0 mini B** connector for FPGA downloads.
- Recessed **Reset Switch** that will reset both the i.MX6 and the FPGA to their defaults.
- **Download capabilities** for the i.MX6 OS and software updates.
- The SMP Client provides a **Google Chromium** browser that will browse to the Hot Key Manager of the SMP Appliance or SMP Module and provide the OSD.
- **Internal cooling fans** for the FPGA and microprocessor.
- Resides in any of three **TLX-Series Chassis** options.

Features of the 10G SMP Module/SMP Client

- **Gigabit Ethernet Connection** to the SMP Appliance/Switch network.
- Local OSD port with **two USB 2.0 A** connectors (keyboard/mouse) and one **HDMI 1.2** connector (video).
- **10G TLX** fiber-optic connection for an OSD routable to any TLX KVM Extender Receiver.
- **DB9 Console Port** for debug, configuration and updates.
- **USB 2.0 mini B** connector for FPGA downloads.
- Recessed **Reset Switch** that will reset both the i.MX6 and the FPGA to their defaults.
- **Download capabilities** for the i.MX6 OS and software updates.
- The SMP Client provides a **Google Chromium** browser that will browse to the Hot Key Manager of the SMP Appliance or SMP Module and provide the OSD.
- **Internal cooling fans** for the FPGA and microprocessor.
- Resides in any of three **TLX-Series Chassis** options.



Programming & IP Addresses

1. At initial Power-On, a log-in page will open. **To log in as a user:**
   USERNAME: ***user*** PASSWORD: ***user*** *[ENTER]*
   To log in as an administrator and make changes:
   USERNAME: ***root*** PASSWORD: ***root*** *[ENTER]*
2. On the next page, open a browser and click on *Applications Menu*
   Select *Internet*
   Select *Chromium Browser*
3. On the *Start-up Page's* URL, type: ***localhost:60083*** *[ENTER]*
   USERNAME: ***admin*** PASSWORD: ***admin***

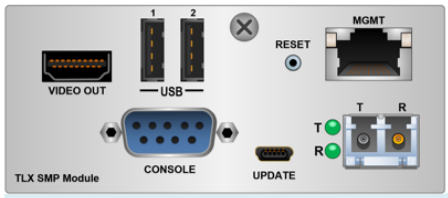
SMP Appliance

ETH0 IP Address: ***192.168.75.xxx*** *(static)*
ETH1 IP Address: ***192.168.13.9***

SOFTWARE SERVICES

SMP Appliance	*Localhost:*	*Web server Username/Password:*
Configurator	60080	admin/admin
Hot Key Manager	60082	admin/admin
StartUp	60083	admin/admin
System Management Interface	60084	admin/admin
Drag-N-Drop	60086	admin/admin
Text Overlay	60088	admin/admin

SMP Module

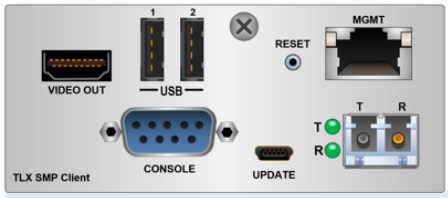


ETH1 IP Address: ***192.168.13.9***

SOFTWARE SERVICES

SMP Module	*Localhost:*	*Web server Username/Password:*
Configurator	60080	admin/admin
Hot Key Manager	60082	admin/admin
StartUp	60083	admin/admin
Drag-N-Drop	60086	admin/admin

SMP Client



ETH0 IP Address: ***192.168.13.14***
192.168.13.9:60082/osdn***.html*** (n=*1-10*)

SOFTWARE SERVICES

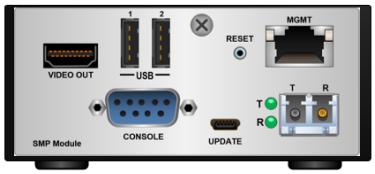
SMP Client	*Localhost:*	*Web server Username/Password:*
StartUp	60083	admin/admin

SMP Module/SMP Client Chassis Options

TLX-Series Chassis

CHS-000004 Chassis: Supports any combination of up to four extender modules. Dual interface and current sharing power supplies. Desktop or 19" rack-mount.

CHS-000002 Chassis: Supports up to two extender modules. Desktop only.



CHS-000001 Chassis: Supports one extender module. Desktop only.

The CHS-000004 Chassis includes the following features:

Desktop/Rack-mount unit can accommodate up to 4 Q-Series or TLX-Series modules in any combination of transmitter or receiver. Features include:

- Hot swappable power supplies to minimize down time
- Current sharing power supplies
- Hot swappable modules
- Front LCD panel/navigation buttons for status monitoring and configuration control
- Fully compatible with all of Thinklogical's VX, MX and TLX Matrix Switch line of products.
- Simple plug and play

The CHS-000002 Chassis includes the following features:

Desktop unit can accommodate up to 2 Q-Series or TLX-Series modules in any combination of transmitter or receiver. Features include:

- Hot swappable modules
- Front LCD panel status monitoring and control
- Fully compatible with all of Thinklogical's VX, MX and TLX Matrix Switch line of products.
- Simple plug and play
- Rack-mount brackets available

The CHS-000001 Chassis includes the following features:

Desktop unit can accommodate any one Q-Series or TLX-Series transmitter or receiver module. Features include:

- Hot swappable module
- Fully compatible with all of Thinklogical's VX, MX and TLX Matrix Switch line of products.
- Simple plug and play

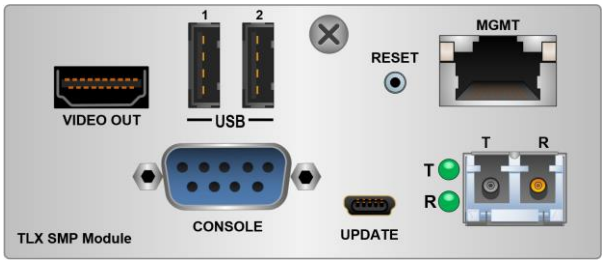
The i.MX6 Processor

The SMP Module/SMP Client incorporates an i.MX6 Quad ARM 9 core Processor that runs Debian as the operating system, providing Google Chromium as the browser.

The Interface Panel

The SMP Module/SMP Client features the following Ports and Interfaces:

1	**SFP**	*LC-type Fiber-Optic Port*
2	**LEDs**	*Valid-signal indicators*
2	**USB-A**	*Keyboard/Mouse*
1	**USB-mini B**	*FPGA Downloads/Updates*
1	**HDMI**	*Video Out*
1	**Reset**	*Return-to-Default Button*
1	**Console**	*DB-9 Serial Port*
1	**MGMT**	*RJ-45 Ethernet Connector*



Pluggable SFP+ Modules

The SMP Module/SMP Client, depending on the model, contains a 6G or a 10G SFP+ module that serves as the fiber-optic coupler for the fiber cables to and from other Thinklogical devices.

The 6G SFP+ Optical Module is an 8Gbs Short-Wavelength Transceiver and the 10G SFP+ Optical Module is a 10.5Gbs Short-Wavelength Transceiver. Both are designed for use in bi-directional Fiber Optic Channel links. The modules are hot-pluggable and operate on 3.3VDC.

Always use **dust caps** to protect against dust and damage when a fiber optic connector is not attached to its coupling device (fiber optic equipment, bulkheads, etc.). All of Thinklogical SFPs are fully populated with dust plugs upon shipment.

Note: It is good practice to immediately install dust plugs in unused SFP modules and on the ferrules of unconnected fiber-optic cables.

An SMP Module/SMP Client has one 6G or one 10G SFP+ Module for fiber-optic connections. It is mounted within a grounded metal enclosure and is locked in with a built-in latch handle that can be opened for removal or locked upon installation (right).

The latch handle spans the two LC ports. Arrows printed on the handle indicate which port is an INPUT ( ) and which is an OUTPUT ( ).

SFP+ Latch Closed

SFP+ Latch Open

Fiber-Optic Cable

Installing Fiber-Optic Cable: Fiber connects any SFP's optical output port (Transmit) to any other SFP's optical input port (Receive).

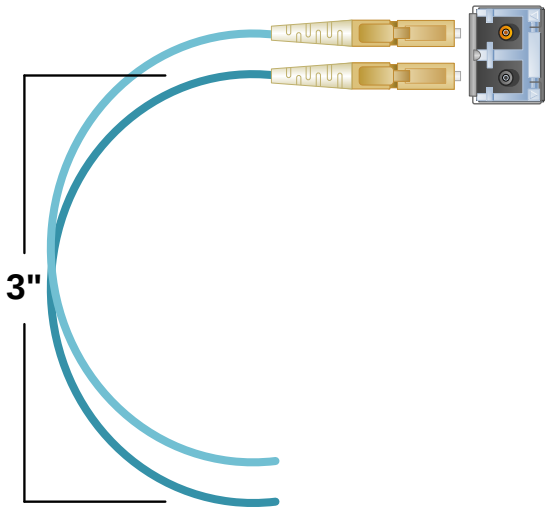
Requirements: Thinklogical recommends SX+ Laser Enhanced (50µm) fiber for your 6G or 10G Extension System. Multi-mode fiber can extend up to a maximum of 400m and Single-mode fiber can extend up to 80km.

Handling Fiber-Optic Cable: Unlike copper cabling, fiber optic cable requires special handling. A small speck of dust or a scratch to the ferrule tip (the end of the connector) can attenuate the optical signal, rendering the cable inoperable.

Warning! The ends of the connectors (the ferrule) should never come in contact with any foreign object, including fingertips. Always install a dust cap immediately on the ferrule of any unused fiber to protect the tip.

Dust cap installed on the ferrule.

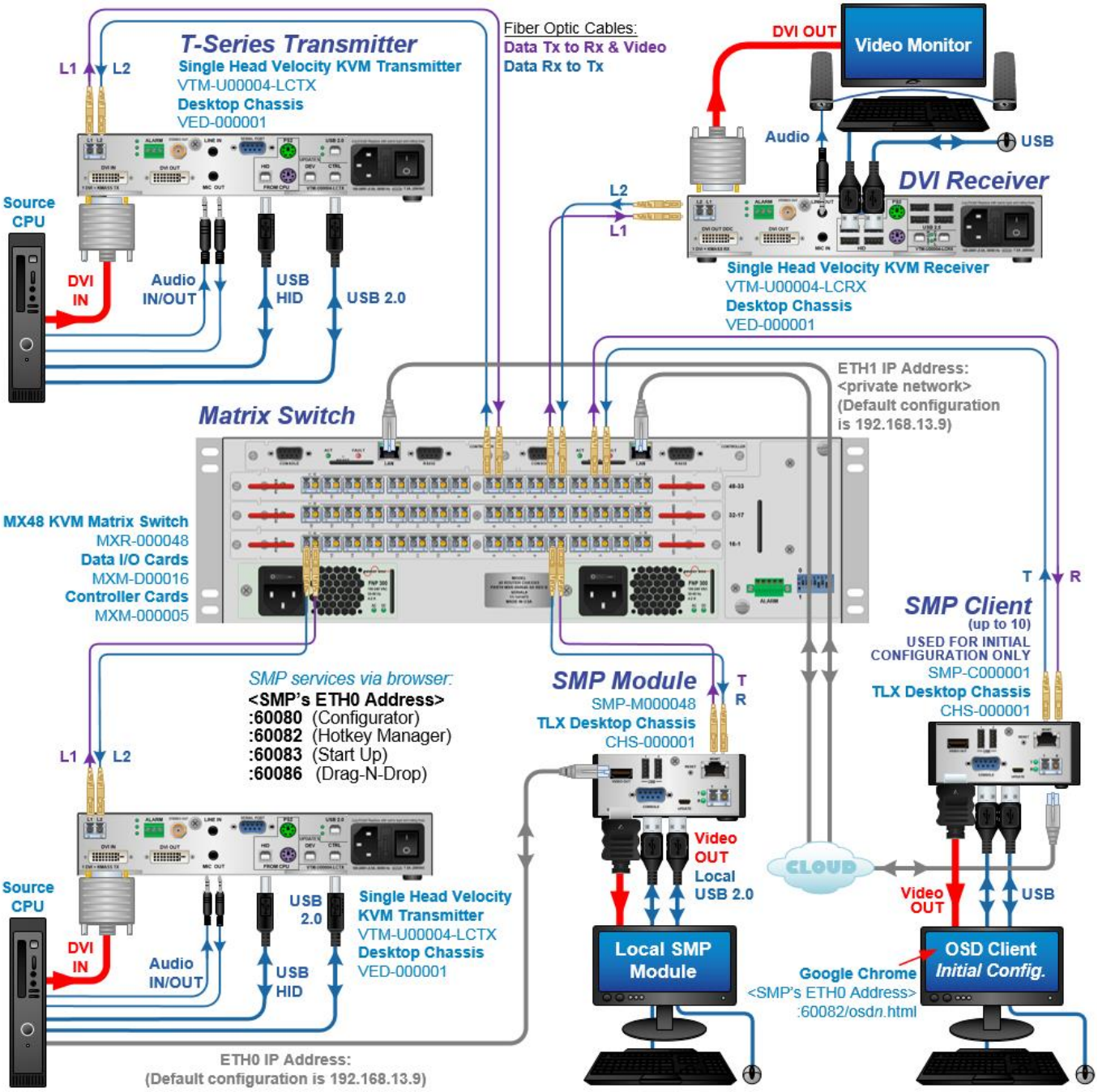
Warning! Minimum bend diameter must be no less than 3". Be careful not to kink or pinch the fiber when using ties.



Set Up

The 6G System

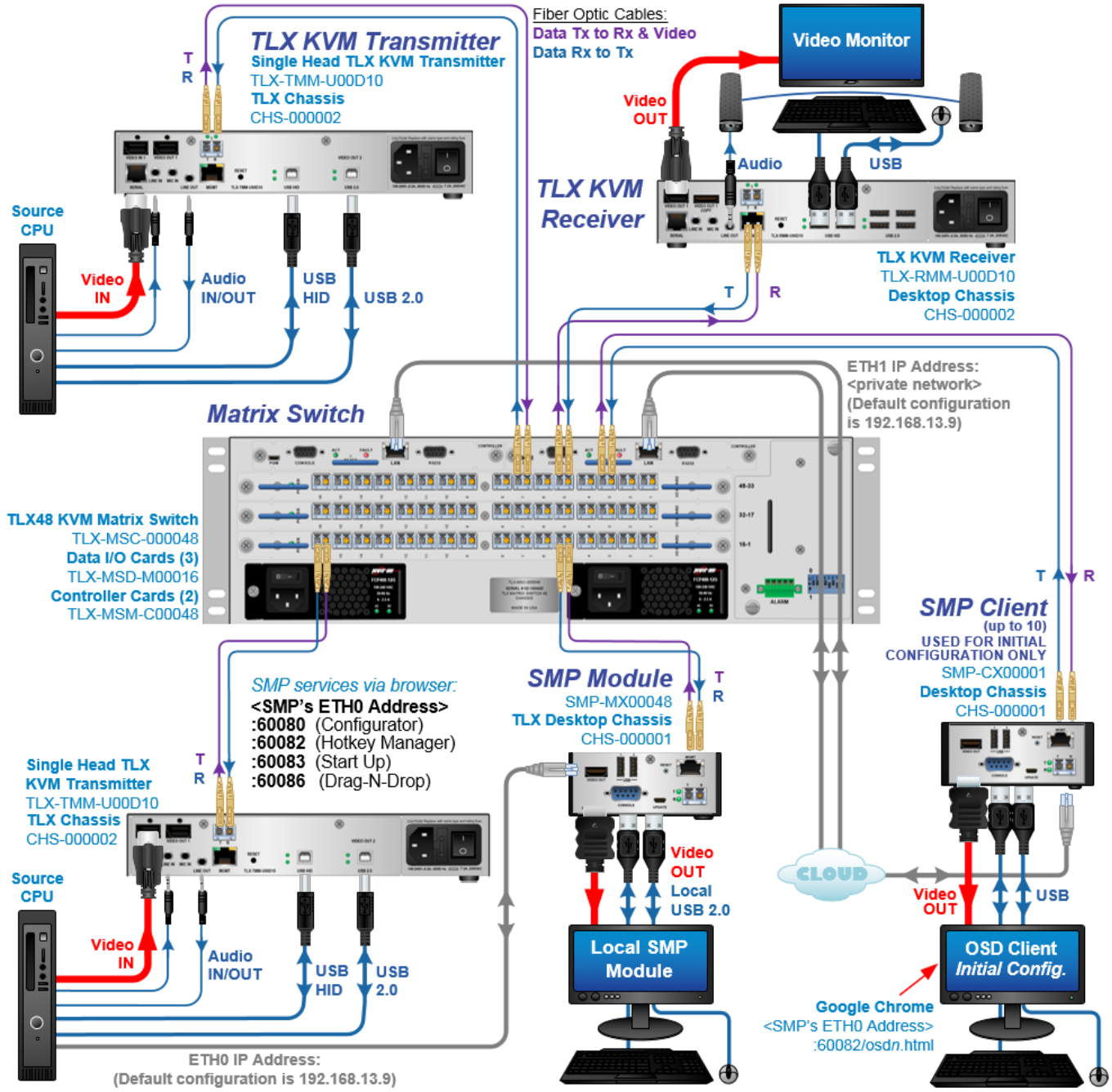
The 6G SMP Module and SMP Client fit into a single slot of any TLX-Series Chassis and provides an On Screen Display (OSD) via a browser connection to the SMP Appliance.



A typical 6G System Management Portfolio Application can include up to 10 SMP Clients

The 10G System

The 10G SMP Module and SMP Client fit into a single slot of any TLX-Series Chassis and provides an On Screen Display (OSD) via a browser connection to the SMP Appliance.



A typical 10G System Management Portfolio Application can include up to 10 SMP Clients

Ordering Information

Use the following numbering system to determine the part number for the particular model that you need. Each of the available features has its own code letter as demonstrated below. *Note that only the four variable place-holders are color coded in this example:*

SMP Appliance, SMP Client and SMP Module Part Numbering:

SMP Appliance

SMP-A000XXX	6G, Multi-Mode, XXX Port Package
SMP-AX00XXX	10G, Multi-Mode, XXX Port Package
SMP-A0S0XXX	6G, Single-Mode, XXX Port Package
SMP-AXS0XXX	10G, Single-Mode, XXX Port Package

SMP Client

SMP-C000001	6G, Multi-mode
SMP-CX00001	10G, Multi-mode
SMP-C0S0001	6G, Single-mode
SMP-CXS0001	10G, Single-mode

SMP Module

SMP-M000XXX	6G, Multi-Mode, XXX Port Package
SMP-MX00XXX	10G, Multi-Mode, XXX Port Package
SMP-M0S0XXX	6G, Single-Mode, XXX Port Package
SMP-MXS0XXX	10G, Single-Mode, XXX Port Package

Port Packages: XXX = 012, 024, 048, 080, 160, 320, 640

Regulatory & Safety Compliance

Safety Requirements

Symbols found on the product

Markings and labels on the product follow industry-standard conventions. Regulatory markings found on the products comply with domestic and many international requirements.

Regulatory Compliance

Thinklogical's® products are designed and made in the U.S.A. These products have been tested by a certified testing laboratory and found to be compliant with the following standards (both domestic USA and many international locations):

North America

Safety
ANSI/UL60950-1: 1st Edition (2003)
CAN/CSA C22.2 No. 60950-1-03
CENELEC EN 60950-1, 1st Edition (2001)

LASER Safety

CDRH 21CFR 1040.10
Class 1 LASER Product
IEC60825:2001 Parts 1 and 2
Class 1 LASER Product

Electromagnetic Interference

FCC CFR47, Part 15, Class A
Industry Canada ICES-003 Issue 2, Revision 1

Australia & New Zealand

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.

European Union

Declaration of Conformity
Manufacturer's Name & Address: **Thinklogical, LLC®**
100 Washington Street
Milford, Connecticut 06460 USA

These products comply with the requirements of the Low Voltage Directive 72/23/EEC and the EMC Directive 89/336/EEC.

Standards with Which Our Products Comply

Safety

CENELEC IEC 60950-1 2nd Ed. 2005

Electromagnetic Emissions

EN55022: 1994 (IEC/CSPIR22: 1993)
EN61000-3-2/A14: 2000
EN61000-3-3: 1994

Electromagnetic Immunity

EN55024: 1998 Information Technology Equipment-Immunity Characteristics
EN61000-4-2: 1995 Electro-Static Discharge Test
EN61000-4-3: 1996 Radiated Immunity Field Test
EN61000-4-4: 1995 Electrical Fast Transient Test
EN61000-4-5: 1995 Power Supply Surge Test
EN61000-4-6: 1996 Conducted Immunity Test
EN61000-4-8: 1993 Magnetic Field Test
EN61000-4-11: 1994 Voltage Dips & Interrupts Test

Supplementary Information

The following statements may be appropriate for certain geographical regions and might not apply to your location.

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigencies du Règlement sur le matérial brouilleur du Canada.

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 corrective measures.

Note: 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 in which case the user may be required to take adequate corrective measures at their own expense.

Note: This Class A digital apparatus complies with Canadian ICES-003 and has been verified as being compliant within the Class A limits of the FCC Radio Frequency Device Rules (FCC Title 47, Part 15, Subpart B CLASS A), measured to CISPR 22: 1993 limits and methods of measurement of Radio Disturbance Characteristics of Information Technology Equipment.

Note: The user may notice degraded audio performance in the presence of electro-magnetic fields.

Product Serial Number

Thinklogical products have a unique serial number, which includes a date-code, printed on an adhesive label that is affixed to the unit. The format for the date-code is *2 digits for the month*, dash, *2 digits for the year*, plus *at least four digits for a unique unit number*. For example: **05-160127** indicates the unit was built in the **5**th month of 20**16**, and is unit number **127**.

Connection to the Product

Connections and installation hardware for our products use industry-standard devices and methods. All wiring connections to the customer equipment are designed to minimize proprietary or customized connectors and cabling. Power connections are made with regionally appropriate power cords and approved methods.

Thinklogical Support

How to Contact Us

Customer Support

Thinklogical® is an engineering company and you will receive the information you require directly from our most knowledgeable engineers.

We believe that the first line of support comes from the design engineers that developed each particular product.

Therefore, your questions or issues will be handled promptly by our in-house engineers who are most familiar with your products.

Thank you for choosing Thinklogical® products for your application.

We appreciate your business and are dedicated to helping you successfully use our products.

thinklogical® is always here to help you.

To contact us, please use the following telephone numbers and internet-based methods:

Website

Check out our website for current product offerings, support information and general information about all of the products we offer.

Our internet website offers product information on all current systems, including technical specification sheets and installation guides (for viewing online or for download), product diagrams showing physical connections and other information you might need.

Internet: **www.thinklogical.com**

Note: Most online documents are stored as Adobe Acrobat "PDF" files. If you do not have the Adobe Acrobat reader needed to view PDF files, visit www.adobe.com for a download.

Email

Thinklogical® is staffed **Monday through Friday from 8:30am to 5:00pm**, Eastern Time Zone. We will do our best to respond to your email inquiries promptly. Please use the following email addresses:

info@thinklogical.com – Information on Thinklogical® and our products.

sales@thinklogical.com – Sales Department - orders, questions or issues.

support@thinklogical.com – Product support, technical issues or questions, product repairs and request for Return Authorization.

Telephone

Thinklogical Operator	**1-203-647-8700**
Product & Customer Support:	**1-203-647-8798**
US Commercial & Canada Sales:	**1-203-647-8715**
US Federal Government Sales:	**1-203-647-8716**
Toll Free in the Continental US:	**1-800-291-3211**
International Sales (Europe, Middle East, Africa)**:**	**1-203-647-8704**
International Sales (Asia Pacific, Central & Latin America)**:**	**1-203-647-8734**

Please contact our expert sales staff in Milford, CT. We are here Monday through Friday from 8:30am to 5:00pm, Eastern Time Zone. We'll provide a representative's direct dial phone number when you call.

If leaving a voice message, please provide a preferred time to call back so we may reach you at your convenience.

Our switchboard attendant will direct your call during regular business hours. We have an automated attendant answering our main telephone switchboard after regular business hours and holidays. Please leave voice messages for individuals at any time.

Fax

Our company facsimile number is **1-203-783-9949**. Please indicate the nature of the fax on your cover sheet and provide return contact information.

Product Support

Thinklogical's® support personnel are available **Monday through Friday from 8:30am to 5:00pm**, Eastern Time Zone. If your application requires assistance at some time outside of our normal business hours, please contact us beforehand and we will do our best to make arrangements to help you with your Thinklogical® products.

Warranty

Thinklogical, LLC® warrants this product against defects in materials and workmanship for a period of one year from the date of delivery. Thinklogical, LLC® and its suppliers disclaim any and all other warranties.

Note: Thinklogical, LLC® products carry a one year warranty, with longer term available at time of purchase on most products. Please refer to your product invoice for your products Warranty Terms & Conditions.

Defect remedy shall be the repair or replacement of the product, provided that the defective product is returned to the authorized dealer within a year from the date of delivery.

If you wish to return your device, contact the Thinklogical, LLC® authorized dealer where you purchased the device, or if you purchased directly, call Thinklogical, LLC® at **1-800-291-3211** (USA).

Return Authorization

If you need to return your Thinklogical® product to us for any reason, please get a

Return Merchandise Authorization Number (RMA#)

from Thinklogical's Product Support Department (1-203-647-8798) before sending the unit in.

In the event you must return a product to Thinklogical® directly, please contact **Customer Support** at **1-800-291-3211** or **1-203-647-8700**. Customer Support will ask you to describe the problem and will issue you a **R**eturn **M**erchandise **A**uthorization number (RMA#). Pack the device in its original box, if possible, and return it with the RMA# printed on the outside of the box.

Note: DO NOT return a product to Thinklogical® without a *Return Merchandise Authorization*.

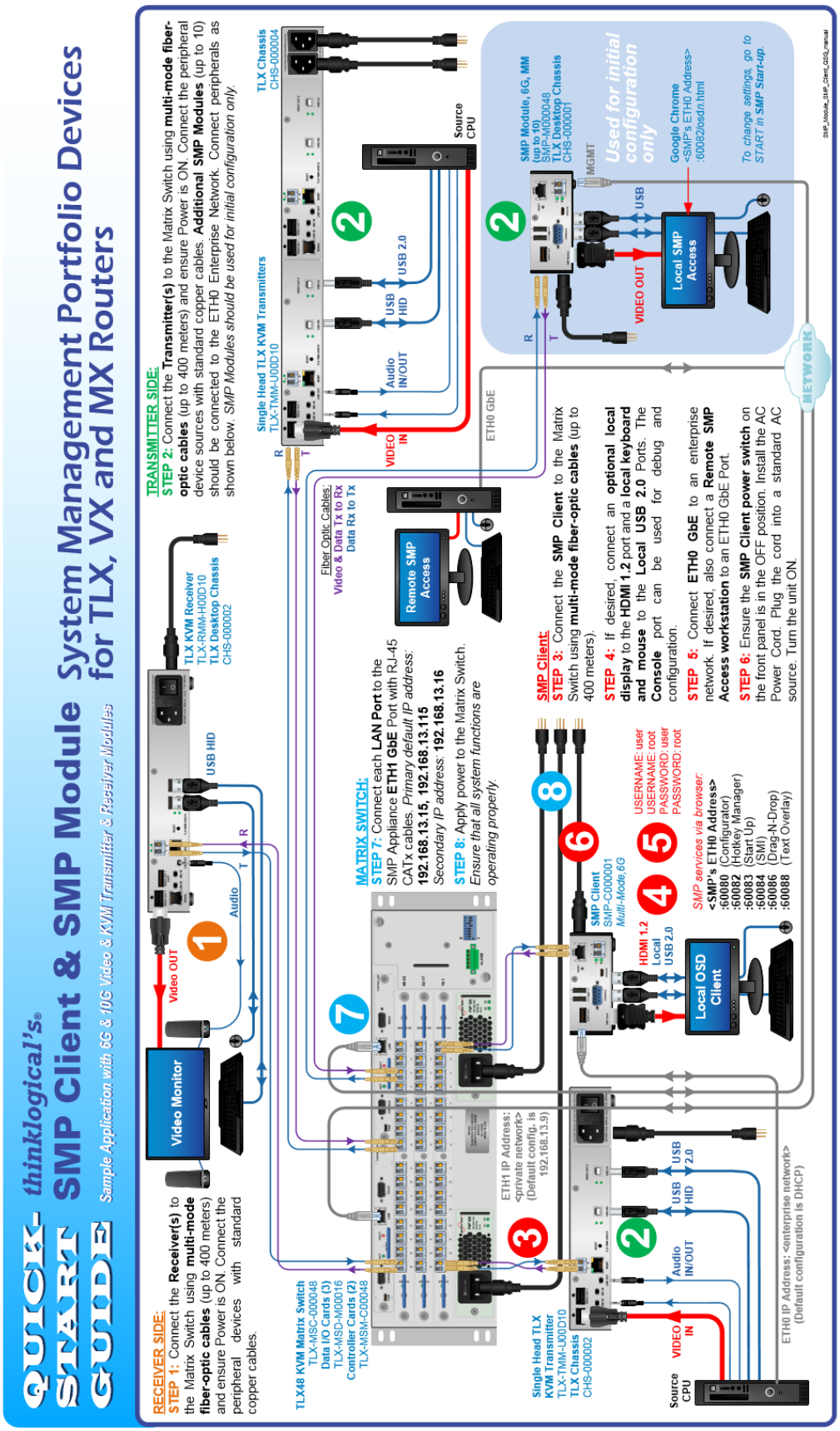
Our Addresses

If you have any product issues or questions or need technical assistance with your Thinklogical® system, please call us at **1-800-291-3211 (USA only)** or **1-203-647-8700** and let us help. If you need to write us or return a product, please use the following address: Return address for products with Return Material Authorization:

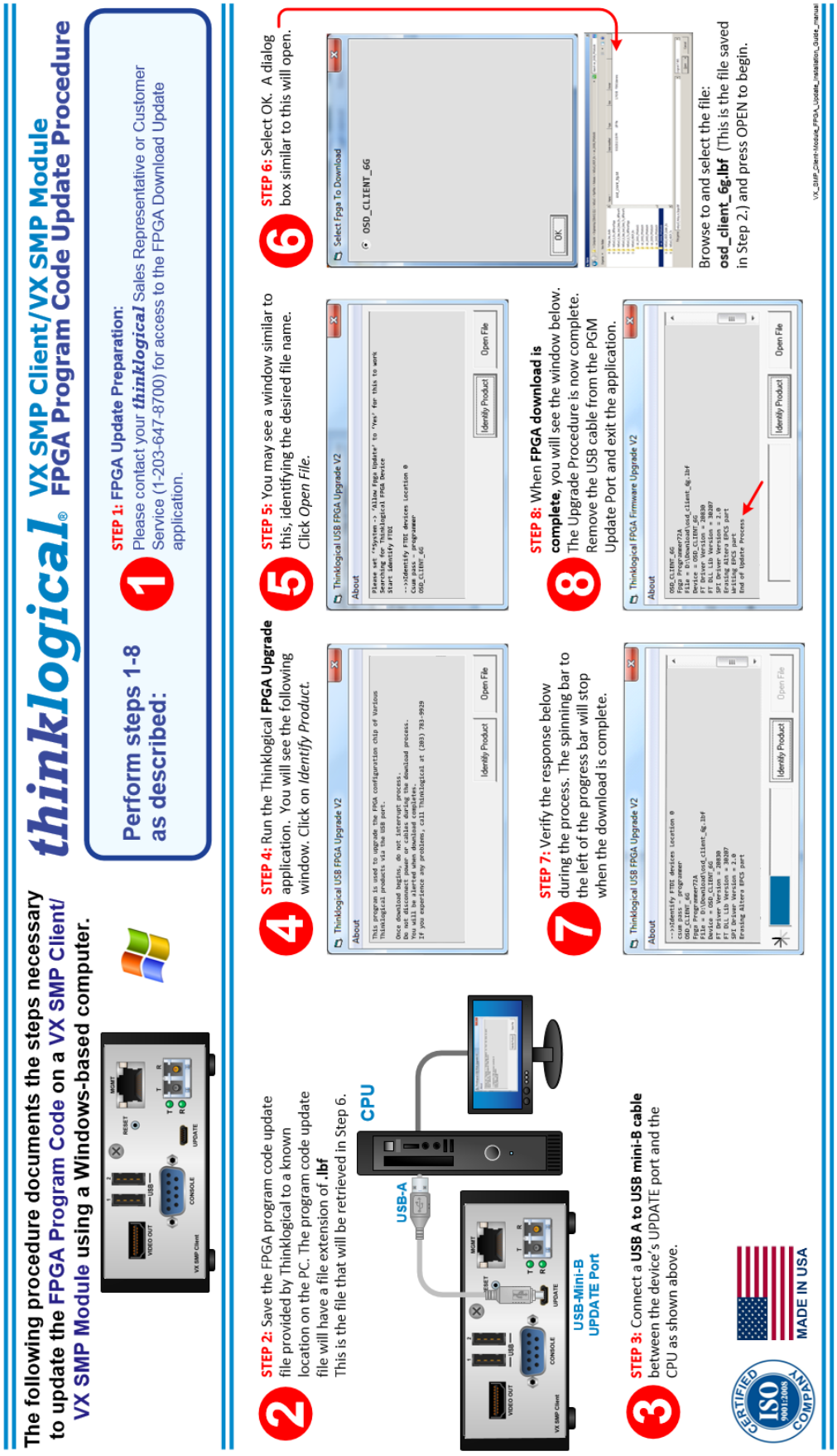
Thinklogical, LLC®
Attn: *RMA#*
100 Washington Street
Milford, CT 06460 USA

Website: www.thinklogical.com
Facebook: www.facebook.com/ThinklogicalUSA
LinkedIn: www.linkedin.com/company/thinklogical
Google+: http://plus.google.com/u/0/109273605590791763795/about
YouTube: www.youtube.com/user/thinklogicalNA
Twitter: @thinklogical

APPENDIX A: SMP Module/SMP Client Quick Start Guide



Appendix B: VX SMP Module /VX SMP Client FPGA Program Code Upgrade Procedure



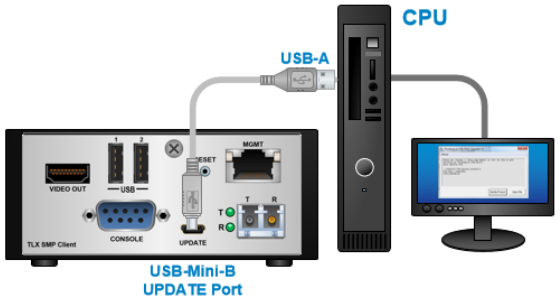
The following procedure documents the steps necessary to update the FPGA Program Code on a TLX SMP Client/ TLX SMP Module using a Windows-based computer.

thinklogical® TLX SMP Client/TLX SMP Module FPGA Program Code Update Procedure

Perform steps 1-8 as described:

1 **STEP 1: FPGA Update Preparation:** Please contact your ***thinklogical*** Sales Representative or Customer Service (1-203-647-8700) for access to the FPGA Download Update application.

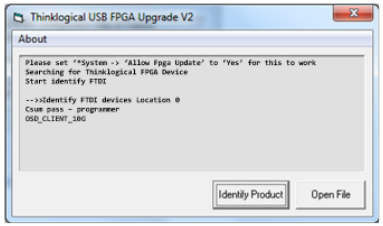
2 **STEP 2:** Save the FPGA program code update file provided by Thinklogical to a known location on the PC. The program code update file will have a file extension of **.lbf**
This is the file that will be retrieved in Step 6.



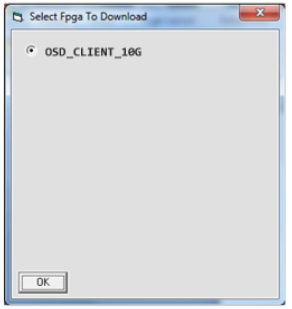
3 **STEP 3:** Connect a **USB A to USB mini-B cable** between the device's UPDATE port and the CPU as shown above.

4 **STEP 4:** Run the Thinklogical **FPGA Upgrade** application. You will see the following window. Click on *Identify Product.*

5 **STEP 5:** You may see a window similar to this, identifying the desired file name. Click *Open File.*

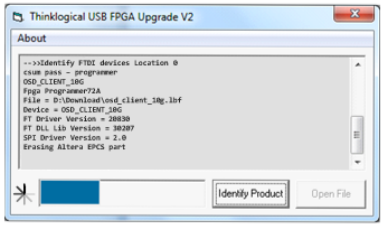


6 **STEP 6:** Select OK. A dialog box similar to this will open.

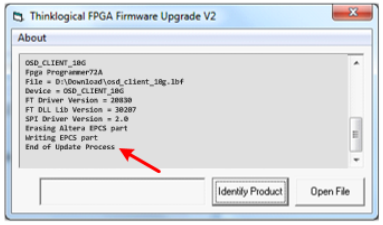


Browse to and select the file: **osd_client_10g.lbf** (This is the file saved in Step 2.) and press OPEN to begin.

7 **STEP 7:** Verify the response below during the process. The spinning bar to the left of the progress bar will stop when the download is complete.



8 **STEP 8:** When **FPGA download is complete**, you will see the window below. The Upgrade Procedure is now complete. Remove the USB cable from the PGM Update Port and exit the application.



CERTIFIED ISO 9001:2008 COMPANY

MADE IN USA

TLX_SMP_Client-Module_FPGA_Update_Installation_Guide_manual

Appendix D: FPGA Download Installation Procedure