

# VT085

## Advanced Secure Keyboard, Video and Mouse (KVM) Transmitter



VT085

## Key Features

- VT085 in conjunction with the VT086 forms a complete secure remote KVM over fiber (VT085 is the transmitter side)
- USB 2.0 encoded over Fiber with USB white listing for secure USB devices
- DP++, DP (Display Port) or HDMI over Fiber
- Capable of video overlay at the output
- Lossless video encoding/decode
- Utilizing LC style Fiber (single TX/RX)
- Glass to glass latency of less than 20ms
- Rugged I/O connectors
- Encrypted package over Fiber for secure communication between the receiver and transmitter
- Serial port for configuration and management
- Secure Key capable

## Benefits

- VadaTech 3<sup>rd</sup> Generation KVM
- Compact size with low (15W) power consumption
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader



**vadatech**  
THE POWER OF VISION



# VT085

VT085, when used in conjunction with a VT086, forms a complete KVM extension over a secure LC Fiber link. Data is encoded using a proprietary algorithm which, together with the use of fiber, combats interception of sensitive data.

The VT085 encodes the USB2.0 as well as dual DP++, Display Port (DP) or HDMI and transmits the data over LC fiber. The video can be up to 4K resolution on each of the two video inputs. The output (VT086 side) has video overlay capability with the overlay images being programmable and controlled over Ethernet by the user. Video encode/decode is lossless. The VT085 configuration and management are available via serial port.

The VT085/VT086 encoding/decoding and data processing is done in hardware for a very low latency protocol. The glass to glass latency is less than 20ms.

The module supports white listing of attached USB devices. The host USB can only numerate approved devices, preventing unauthorized access. It can also store a secure key to ensure the unit cannot be compromised.

The module utilizes ruggedize I/O connectors for harsh environments.

The VT085 is orderable with a fanless enclosure or optionally as a board-level product without enclosure. This allows customers to fully integrate the unit into their own user console



Figure 1: VT085

## Block Diagram

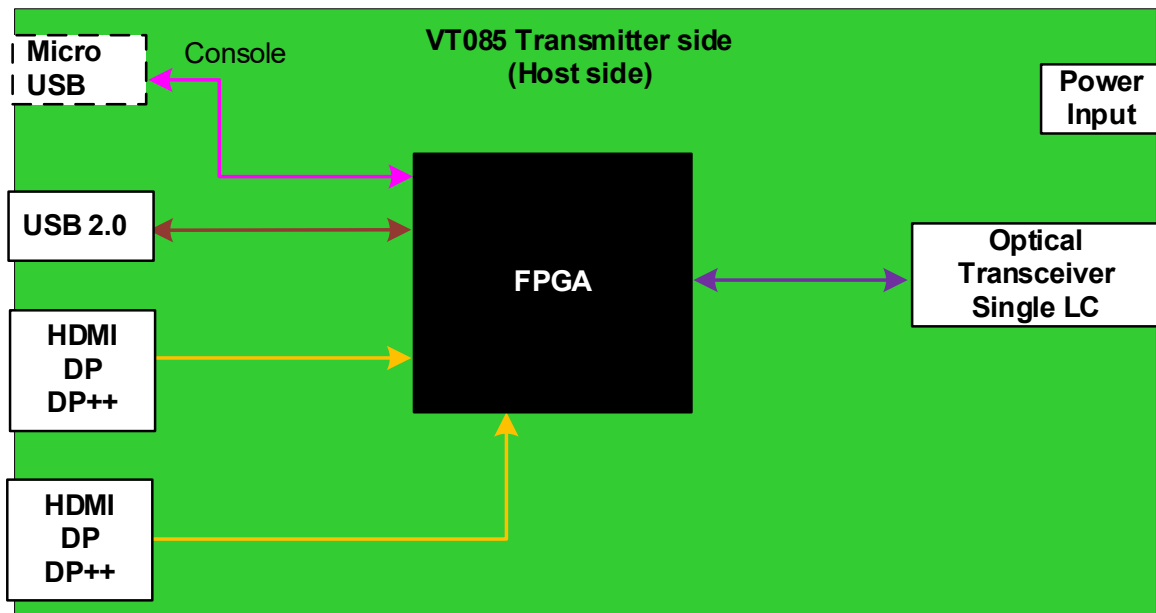


Figure 2: VT085 Functional Block Diagram



Figure 3: Conduction cool deployment example

## VT085/VT086 Connectivity

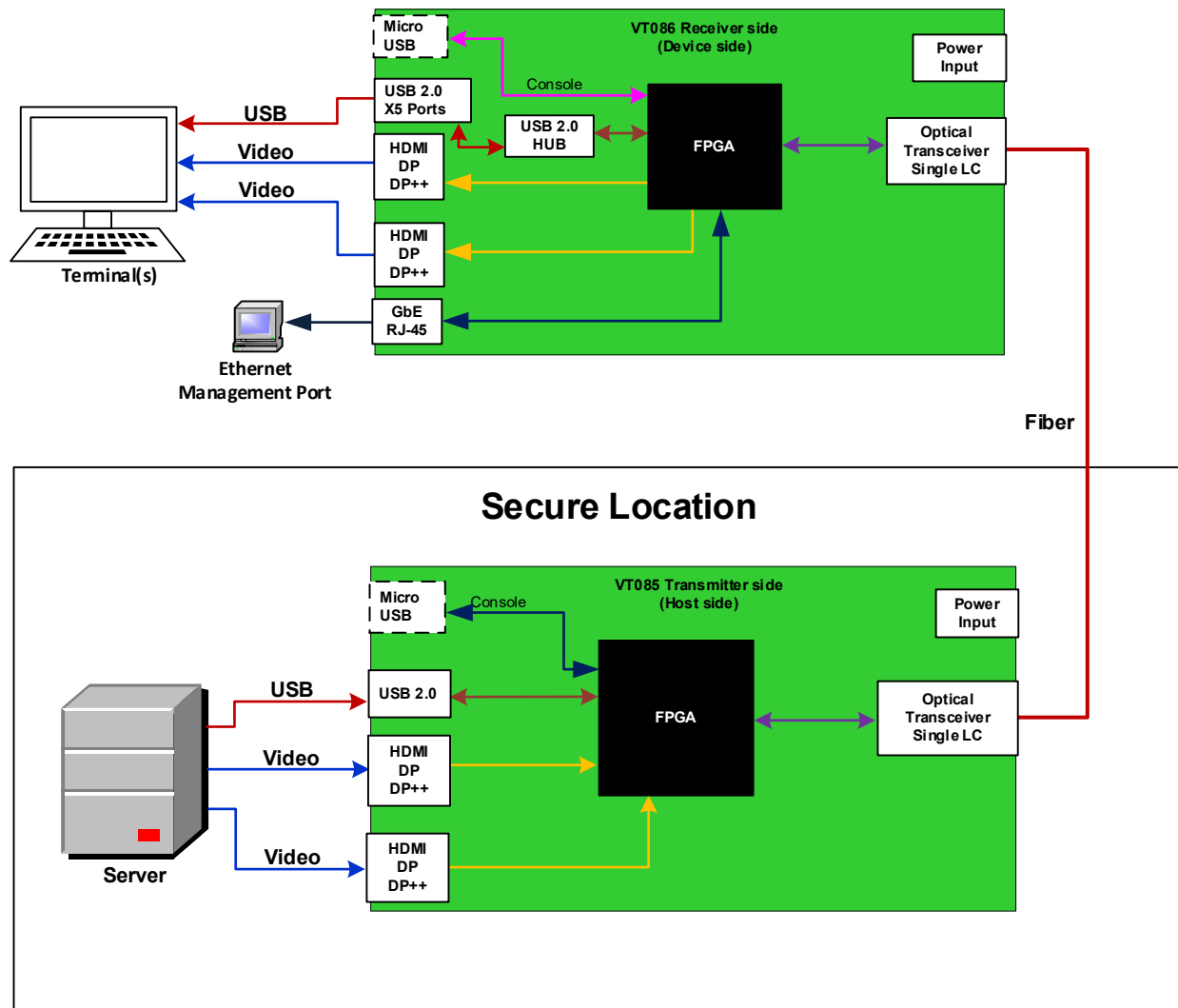


Figure 4: VT085/VT086 Connectivity Block Diagram

# Specifications

Architecture		
Physical	Dimensions	Width: 5.89" (149.6 mm) bare module without the enclosure
		Depth 4.43" (112.5 mm) bare module without enclosure
Type	KVM	KVM over Fiber (Transmitter side)
Standards		
Module Management	IPMI	IPMI v2.0 and PICMG 3.0 and VITA
Configuration		
Power	VT085	15W
Environmental	Temperature	See <a href="#">Ordering Options</a>
		Storage Temperature: -40° to +90°C
	Vibration	Operating 9.8 m/s <sup>2</sup> (1G), 5 to 500 Hz on each axis
	Shock	Operating 30G each axis
	Relative Humidity	5 to 95% non-condensing
Others	Mechanical	Conduction cool with enclosure
Other		
MTBF	MIL Hand book 217-F@ TBD hrs	
Certifications	Designed to meet FCC, CE and UL certifications, where applicable	
Standards	VadaTech is certified to both the ISO9001:2015 and AS9100D standards	
Warranty	Two (2) years, see <a href="#">VadaTech Terms and Conditions</a>	

## INTEGRATION SERVICES AND APPLICATION-READY PLATFORMS

VadaTech has a full ecosystem of OpenVPX, ATCA and MTCA products including chassis platforms, shelf managers, AMC modules, Switch and Payload Boards, Rear Transition Modules (RTMs), Power Modules, and more. The company also offers integration services as well as pre-configured Application-Ready Platforms. Please contact VadaTech Sales for more information.

# Ordering Options

## VT085 – ABC-000-0HJ

A = Video Input*		
0 = DP++ 1 = DP** 2 = HDMI**		
B = Enclosure		H = Temperature Range
0 = No Enclosure 1 = Enclosure with Fan 2 = Enclosure Fan less		1 = Commercial (-5° to 55°C) 2 = Industrial (-20° to 65°C) 3 = Extended (-40° to 75°C)
C = Input Power Adapter		J = Conformal Coating
0 = No Input Power Adaptor 1 = +5V AC Adapter		0 = No coating 1 = Humiseal 1A33 Polyurethane 2 = Humiseal 1B31 Acrylic

### Notes:

\*Both Video Inputs must be identical.

\*\*Minimum order qty required.

## Related Products

ATC128



- Dual socket 24-core Intel® Xeon® Platinum Processors - Scalable Performance (SP)
- Multiple SKU support (i.e. 8256, 8253, 6238T, 6230T, 5220T, 5218T, 4209T, etc.)
- Twelve banks of DDR4 for up to 384 GB with ECC per socket (total of 768 GB)

ATC342



- AdvancedTCA Video Mixer (Windowing)
- External Input: 4 Analog and 1 DVI-I (Analog or 24-bit Digital)
- External Output: Analog daisy-chain and 1 DVI-I (Analog and 24-bit Digital)

VT835



- 19" rack mount 3U ATCA Hybrid AMC Chassis
- 1x ATCA slot, 8 mid-size AMC slots and 2x ATCA RTM slots
- 40G or 10G fabric across the backplane

# Contact

## VadaTech Corporate Office

198 N. Gibson Road, Henderson, NV 89014

Phone: +1 702 896-3337 | Fax: +1 702 896-0332

## Asia Pacific Sales Office

7 Floor, No. 2, Wenhua Street, Neihu District, Taipei 114, Taiwan

Phone: +886-2-2627-7655 | Fax: +886-2-2627-7792

## VadaTech European Sales Office

VadaTech House, Bulls Copse Road, Southampton, SO40 9LR

Phone: +44 2380 016403

[info@vadatech.com](mailto:info@vadatech.com) | [www.vadatech.com](http://www.vadatech.com)

# Choose VadaTech

## We are technology leaders

- First-to-market silicon
- Constant innovation
- Open systems expertise

## We commit to our customers

- Partnerships power innovation
- Collaborative approach
- Mutual success

## We deliver complexity

- Complete signal chain
- System management
- Configurable solutions

## We manufacture in-house

- Agile production
- Accelerated deployment
- AS9100 accredited



## Trademarks and Disclaimer

The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedTCA™ and the AdvancedMC™ logo are trademarks of the PCI Industrial Computers Manufacturers Group. All rights reserved. Specification subject to change without notice.

© 2020 VadaTech Incorporated. All rights reserved.

DOC NO. 4FM737-12 REV 01 | VERSION 1.6 – AUG/21

