4000 BARRANCA PARKWAY
SUITE 250
IRVINE, CA 92604

Dear Customer,

Thank you for purchasing PROTEUS-UHD.

Please read pages 5, 6 and 19 of the User Manual (see attached) to quickly familiarize yourself with our product.

The full User Manual is in the *Videologix\Documents* folder.

Best regards,

GLOSSARY TERMS

Term	Definition
OSD	On Screen Display. ProteusWizard can be used to design your OSD
CSV	Comma-Separated Values. A CSV string consists of a unique header followed by up to 16 comma-separated values
CS	Checksum
SCS	Software Communication Specification
UM	User Manual
GPI	General Purpose Input pin
GPI-HW	Hardware based GPI inputs. All 5 GPI-HW are provided via Expansion Port
GPI-SW	Software based GPI inputs. All 16 GPI-SW are set/clear via command $VL43
WIDGET	A graphic object that is designed to provide a specific piece of information such as time, date, depth, pressure, heading…

INSTALLATION

1. Plug the micro-SD Card Reader (it contains a micro-SD card) into your PC
2. The micro-SD has a folder called ***Videologix***. Copy this folder into the *Windows* ***Documents*** folder
3. Confirm that the folder ***Documents\Videologix*** now exists on your PC
4. Both apps referenced in this document—***ProteusWizard*** and ***ProteusApp***—are in the ***Documents\Videologix*** folder
    - Do not rename the folder.
    - Do not move or modify its location
5. For the ***ProteusWizard*** app to function as WYSIWYG, it is important to set your PC display scale to 100%. Here's how:
    - **Right-click** on your Desktop and select **Display settings**.
    - Scroll down to the **Scale and layout** section.
    - Set **Scale** to **100% (Recommended)**.
    - Close the settings window.

EXTERNAL INTERFACES

COMMUNICATION

COM PORTS

PROTEUS-UHD has four serial ports that allow for direct communication with external sensors or systems, making it highly adaptable for various applications

PORT	Location		Expansion port	Intended to Interface with	Baud rate
COM1	Micro-USB	Rear Panel micro-USB	-	**PC**: Send SCS commands, **Configure Proteus-UHD**	921600, N,8,1
COM2	RS232	Rear Panel DB9	2=RX, 3=TX, 5=GND	Various sensors	4800-921600, N,8,1
COM3	RS232	Internal TB (J12)	1=RX, 3=TX, 2=GND	Various sensors	4800-921600, N,8,1
COM4	RS232	Expansion Port	1=RX, 2=TX, 5=GND	Various sensors	4800-921600, N,8,1
COM5	RS232	Expansion Port	3=RX, 4=TX, 5=GND	Various sensors	4800-921600, N,8,1
COM6	RS485	Expansion Port	14=RX+, 15=RX-, 5=GND	Various sensors	4800-921600, N,8,1
COM7	Mini-USB	Front Panel mini-USB	-	**PC**: Send SCS commands, **Update firmware**	921600, N,8,1

When using a USB serial adaptor to communicate with COM2-6 at 460,800 or 921,600, ensure it is capable of 921.6 Kbps

ETHERNET PORT

Ethernet port can be used to send commands defined in SCS *or CSV strings*

- Networking: Static or DHCP IPv4 addressing
- Subnet Mask: Configurable. Default 255.255.255.0
- Default Gateway: 0.0.0.0
- UDP protocol. Port # is hardcoded as 9999

CONFIGURE PROTEUS-UHD

- Follow the setup shown in Figure 1 (Page 19) and adhere to the instructions provided on that page to complete the preparation.
- Press the **Config** button to configure various settings such as baud rate, IP address, CSV headers. When finished, press **OK** to save and exit.
- Press the **Sync** button. When prompted, select any Wizard file such as **Videologix\Tutorial\ Wizard RTC**
- All your configuration settings have been now loaded into Proteus
- To learn more about Proteus, go through the entire *Tutorial* section.

Pressing Alt + h (On the keyboard attached to PROTEUS) will display all configuration settings on the monitor attached to PROTEUS.

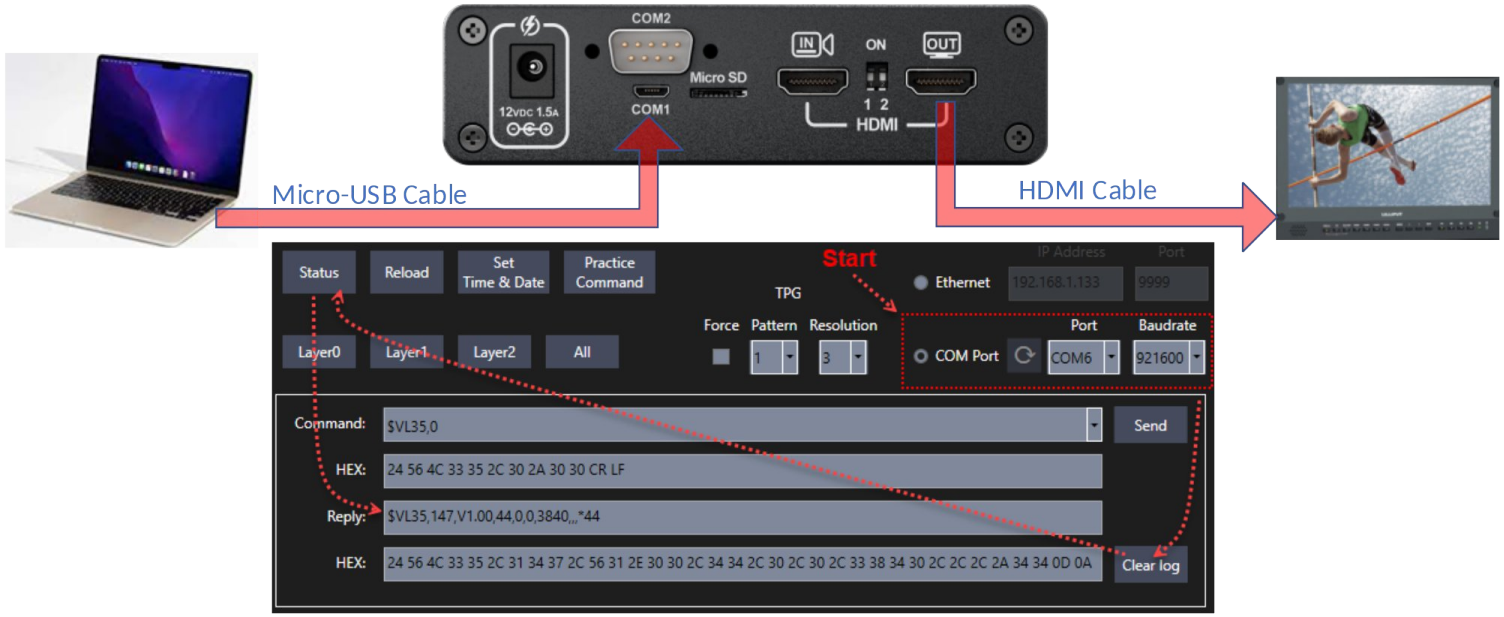
TUTORIAL

Follow the eight steps below to **Configure** Proteus or **Prepare** it for the tutorials:

1. Connect **micro-USB*** cable from PC to Proteus **COM1** (micro-USB on the rear panel). *Do not connect to mini-USB on the front panel*
2. Connect Proteus HDMI Output to a monitor capable of displaying 2K or 4K resolution (Preferably 4K)
3. Apply power to Proteus & monitor. The video should appear on your monitor within 8 seconds
4. Launch *ProteusApp*
5. Select COMx (associated with micro-USB cable) and set the baud rate to 921600
6. Press **Clear Log** and **Status** buttons to confirm communication link is working. You should see $VL35,147,V1.00,.. in the **Reply** box
7. If your monitor can *only* display 2K, press the **Config** button and set **Video Pattern Res** to 1080p. Press **Ok** to save & exit
8. Press **Sync** button. When prompted, select any Wizard file i.e. **Videologix\Tutorial\ Wizard RTC.** Monitor shall now display selected OSD

Launch *ProteusWizard* to proceed with the tutorials.

Figure 1



*Proteus-UHD uses the ***FT234XD*** chip for its micro-USB interface.*
The necessary driver should install automatically via Windows Update when the system is connected to the internet.
If the driver is not installed automatically, you can download and install it manually from the FTDI website: https://ftdichip.com/drivers/

APPENDIX C - KEYBOARD COMMANDS

Keyboard command	Description
Alt + 1 or Ctrl + 1	Edit user text ID#1
Alt + 2 or Ctrl + 2	Edit user text ID#2
Alt + 3 or Ctrl + 3	Edit user text ID#3
Alt + 4 or Ctrl + 4	Edit user text ID#4
Alt + 5 or Ctrl + 5	Edit user text ID#5
Alt + 6 or Ctrl + 6	Edit user text ID#6
Alt + 7 or Ctrl + 7	Edit user text ID#7
Alt + 8 or Ctrl + 8	Edit user text ID#8
Alt + 9 or Ctrl + 9	Edit user text ID#9
ESC	Refresh screen
Alt + h or Ctrl + h	Display system configuration
Alt + s or Ctrl + s	Start displaying sensor data stream arriving on COM2, COM3, COM4, COM5, mini-USB, Ethernet
Alt + t or Ctrl + t	Stop displaying sensor data stream arriving on COM2, COM3, COM4, COM5, mini-USB, Ethernet
Alt + Ctrl + Shift + I	Display Network parameters (MAC address, IP address, Subnet, Gateway)