

INOGENI



# INOGENI TOGGLE

## User guide

Version 1.0

4/9/21

## VERSION HISTORY

Version	Date	Description
1.0	April 9, 2021	First release

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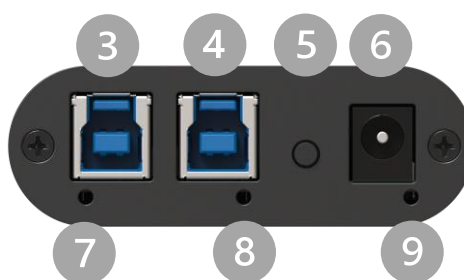
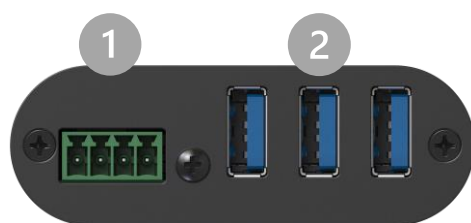
## TYPICAL APPLICATION

Here is a typical connection diagram used for the TOGGLE device in a videoconferencing setup.



## DEVICE INTERFACES

Here are the devices interfaces.



- ① RS232 and GPIN interfaces
- ② 3 x USB-A ports for devices
- ③ Host #1 USB-B port
- ④ Host #2 USB-B port
- ⑤ Push-button
- ⑥ +12V power input
- ⑦ Host #1 led indicator
- ⑧ Host #2 led indicator
- ⑨ Power indicator

## LEDS BEHAVIOR

Here are the leds behavior:

Host leds	
<b>OFF</b>	No host connected.
<b>SOLID</b>	Host currently selected.
<b>BLINK</b>	Host detected but not currently selected.

Power led	
<b>OFF</b>	No power present on board.
<b>SOLID</b>	Power detected.
<b>BLINK</b>	Over-current detected on USB devices.
<b>LED intensity</b>	FULL intensity if power is provided through external power supply. MEDIUM intensity if power is provided through USB host connections.



**IMPORTANT: If all leds are blinking in sync, this means the unit is in the upgrade process. This happens only while you upgrade the unit.**

## OPERATING MODES

There are two modes supported by the device. They will be explained here.

### Automatic

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This is the default mode. This mode will switch automatically to the last connected host. If the current host is disconnected, the device will switch back to the other USB host connection if it is detected. Push-button action and remote control are also supported.

### Manual

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The manual mode will enable you to force a specific USB host. Push-button action and remote control are also supported.

These modes can be set through our INOGENI Control App or through the RS232 interface. The mode will be saved onboard the device.

## SPECIFICATIONS

Here is the complete specification.

Physical details	
<b>Dimensions (W x L x H)</b>	70 x 83 x 23 mm
<b>Power supply</b>	12V
<b>Power consumption</b>	Up to 1.2A
<b>Weight</b>	113 g
<b>Package content</b>	2 x USB 3.0 Type-B to Type-A cables. 1 x terminal block connection. 1 x 12V power supply.
<b>Operating temperature</b>	0° to 45° C (32° to 113° F)
<b>Storage temperature</b>	-40° to 105° C (-40° to 221° F)
<b>Origin</b>	Canada
<b>Warranty</b>	2 years
General specifications	
<b>USB host ports</b>	2 x Type-B USB 3.0/2.0 compatible.
<b>USB device ports</b>	3 x Type-A USB 3.0/2.0 compatible.
<b>Serial interface</b>	Baud rate: 9600 For control purpose. See <b>Serial communication protocol</b> section for more details.
<b>Push-button</b>	Physical switch to select host.
<b>GPIN</b>	Contact-closure control. Controlled by open-drain IO (short to ground) or driven IO. Supported voltage range: 0V to +12V max.
<b>Device current limit</b>	1.8A shared current limit for all 3 x USB device ports. You can monitor current consumption through RS232 and our Control App.
Software	
<b>Operating systems</b>	Compatible with any operating system Windows 7 and above macOS 10.0 and above Linux
<b>Upgrade</b>	Field upgradable through our INOGENI Control App.
<b>Control</b>	Automatic, manual or remote control. Current configuration is saved onboard.

## SERIAL COMMUNICATION PROTOCOL

Here is the complete list of commands provided through the serial connection:

Pinout is indicated on the enclosure.

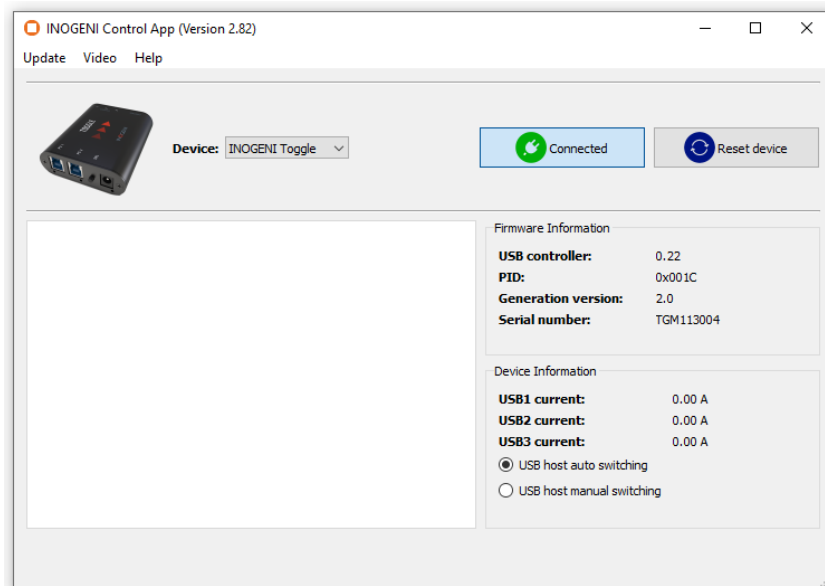
**Baud rate:** 9600

Commands	Arguments	Function description
<b>FW</b>	NA	Get firmware version.
<b>SLCK</b>	0,1	Set/unset button LOCK.
<b>GLCK</b>	NA	Get button LOCK status.
<b>SH</b>	1,2	Select USB host number.
<b>GH</b>	NA	Get USB host selected.
<b>GCAUSE</b>	NA	Get last USB host switching cause.
<b>GHV</b>	1,2	Get USB host voltage.
<b>GDI</b>	1,2,3	Get USB device current.
<b>GDOC</b>	1,2,3	Get device over-current status (HUB).
<b>SAVE</b>	NA	Save settings.
<b>SEV</b>	0,1	Set/clear events (prints).
<b>SM</b>	0,1	Set/unset manual mode.
<b>GM</b>	NA	Get manual mode status.
<b>RST</b>	NA	Reset MCU.
<b>H</b>	NA	Get user help.

All commands will return 2 possible answers: “**ACK**” or “**NACK**” with “**/n/r**” chars.

## INOGENI CONTROL APP

You can use our Control App to monitor firmware information, upgrade your unit using the latest firmware and configure your unit.



## SUPPORT

Engineered by video professionals, for video professionals, it is your most compatible USB 3.0 device. INOGENI expertise at your fingertips:

- **Expert Technical Support team** at [support@inogeni.com](mailto:support@inogeni.com) for immediate help or if you have any technical question about our products.
- Extensive **Knowledge Base** to learn from other customers experiences.

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INOGENI, Inc.  
979 de Bourgogne avenue, suite 530  
Québec  
G1W 2L4 (QC) Canada