UltriGPI

Solution brief

UltriGPI

16 GPI I/O Network Bridge

UltriGPI is a compact, networked General Purpose Interface (GPI) bridge designed to solve real control and integration challenges by combining GPIs, protocol translation and functional logic in one package. It links traditional contact closures with devices and broader control systems over IP-based protocols, giving facilities a powerful way to automate events, trigger devices, translate tally information, and streamline inter-system communication.

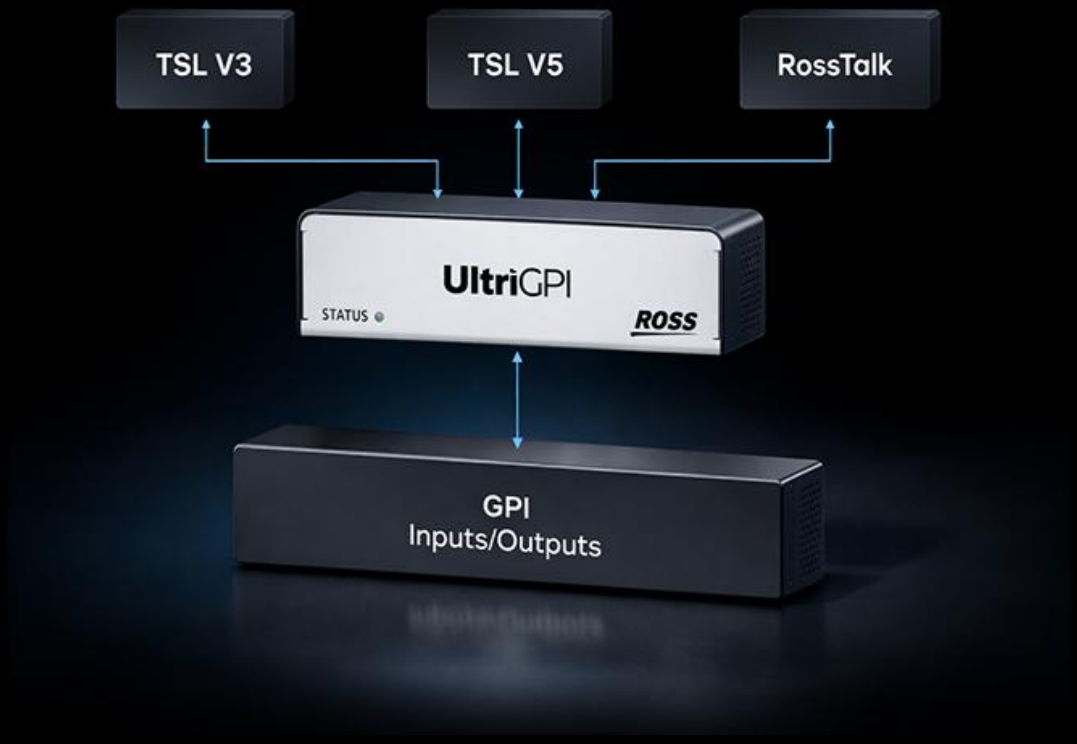
Typical Applications

Convert between TSL messages and GPI I/O

- Drive Ultriscape UMD text or tally indicators by translating GPI activity into TSL v3 or v5 messages.
- Receive switcher tallies over TSL and convert them to GPI outputs for talent lamps, on-set indicators, or other hardware that relies on physical tally signaling.

Convert RossTalk messages to GPI outputs and GPI inputs to RossTalk or plain text messages

- Configure a RossTalk protocol server or client for bidirectional translation between RossTalk virtual GPIs and physical GPIs.
- Convert GPI inputs to triggers for equipment that can accept plain text ASCII - integrate with automation, fire macros or initiate scripts.



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GPI inputs to Router Take functions

- Perform router takes on up to five destinations based on a single or configurable combination of GPI inputs.
- Support shading and other rapid workflows by routing specific cameras with a single "tap-switch" action.
- Trigger predefined routes for redundancy, failover, or any other scenario initiated by GPI outputs.

GPI Router

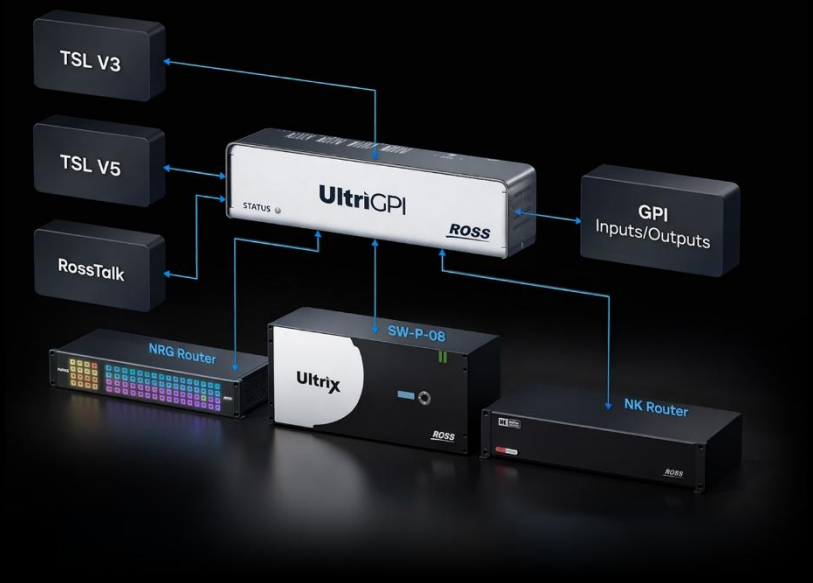
- Internally route any GPI inputs to any GPI outputs, expanding or virtualizing GPI output distribution without extra hardware.
- Recondition output characteristics as needed, such as inverting logic or generating timed pulses.

For adding physical GPI to tally control systems driven by Ultricore-Tally, please refer to the TXP-16.

Features

Multi-Protocol Support

UltriGPI's protocol support allowing flexible bridging between software protocols and physical GPIs. It can operate as a client or server for RossTalk, TSL v3 and TSL v5, enabling broad interoperability. For router control, UltriGPI supports SW-P-08 and NK protocols, providing straightforward integration with Ultrix/Ultricore, NRG, NK and many third-party routers and control systems.



Easy to Install and Power

UltriGPI's compact enclosure allows flexible placement in space-limited environments. It can rest on any flat surface, stack neatly with other units, and operate in almost any orientation while taking up very little space. Low power consumption and passive cooling make it simple to manage with no regular maintenance required. Its rugged design is built for continuous operation, providing reliable GPI functionality wherever it's needed. UltriGPI can be powered from a DC supply or PoE, drawing only 5 watts. Choose the option that best fits the setup, or connect both when redundant power input is desired. GPI wiring uses detachable terminal blocks that provide fast installation, secure retention and consistent contact pressure, ensuring reliable connections that hold up over time.

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Function Sets

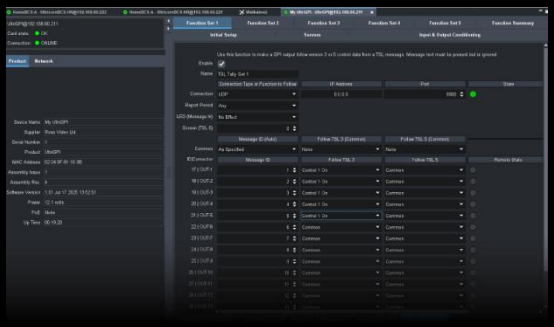
Function Sets let UltriGPI group multiple protocol and GPI actions into independent, customizable logic blocks. Each set can mix RossTalk, TSL or GPI routing functions, enabling tailored control workflows without external scripting. This delivers flexible automation, cleaner integration with routers and multiviewers, and efficient reuse of the same GPIs for different tasks, increasing system capability while keeping configuration simple and scalable.

Router Control

UltriGPI enables flexible, highly configurable GPI-driven routing that supports a wide range of operator and automation workflows. A simple push-button or contact closure can drive router takes for fast source selection in camera comparison, shading or other rapid tasks. Multi-GPI logic can also be applied for applications such as joystick control. A single GPI trigger can execute straightforward routes or more complex predefined router states across up to five destinations on one or more routers.

DashBoard Monitoring and Control

DashBoard ensures that initial setup is completed quickly, while advanced capabilities such as function set logic and granular customization settings are easily managed through intuitive interfaces. Real-time monitoring provides clear insight into key operating parameters, including GPI activity and protocol messaging status. DashBoard centralizes control, enhances visibility and simplifies troubleshooting and day-to-day operation.



Specifications

GPI Inputs	
Number of Inputs	16 pull-to-ground
Open Circuit Voltage	+5 VDC
Activation Current	1.5 mA
Connector Type	16-pin pluggable terminal block, spring clamp
GPI Outputs	
Number of Outputs	16 pull-to-ground with fuse protection
Open Circuit Voltage	+15 VDC maximum
Maximum Sink Current	100 mA
Connector Type	16-pin pluggable terminal block, spring clamp
Network	
Number of Ports	1
Standards	10/100 BASE-T
Connector	RJ-45
Power	
Inputs	Dedicated DC input and/or PoE via network RJ45
DC Power Supply (included)	Wide range 90-264 VAC / 47-63 Hz input, 15 VDC output
DC Input Range	9-30 VDC
PoE Support	IEEE 802.3af
Power Consumption	Maximum 5 W
Physical	
Dimensions	4.69" x 6.36" x 1.73", 119mm x 162mm x 44mm

Ordering Information

ULTRIGPI	16 I/O GPI bridge, includes power supply
ULTRIGPI-PS	Spare/replacement power supply for UltriGPI