

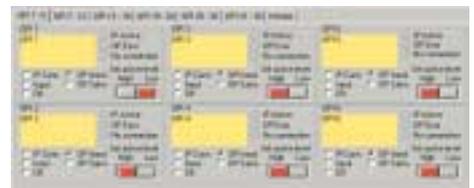
Crystal Vision



GPI CARD

The GPI36 is a 100mm x 266mm module which extends the reach of Crystal Vision's Statesman PC software to any product that can generate or accept GPI signals. This means that both Crystal Vision products without RS422 but with GPI functionality as well as third party equipment can be monitored or controlled using the Statesman PC Control System.

Used exclusively in conjunction with Statesman, the GPI36 gained its name from its 36 bi-directional connections which can individually be assigned as either GPI input or GPI output. The GPI control panel - which fills half of a Statesman GUI - is made up of six tabs, each containing six GPI connection menus which can be named using up to 20 characters for easy identification. An alarm or warning can be set on a high or low level on any of the connections. GPI status is indicated by three virtual LEDs (Output Error, Input Active and No Connection) and a Statesman alarm.



A seventh screen (left) duplicates all these LEDs, allowing the user to view the state of every connection at once.

Five different GPI functions can be set using radio buttons: Input Connection, Input, Off, Output Immediate and Output Salvo. Input Connection is used when the GPI36 is connected to a semiconductor output driver and regularly performs a connection test to see if the input is

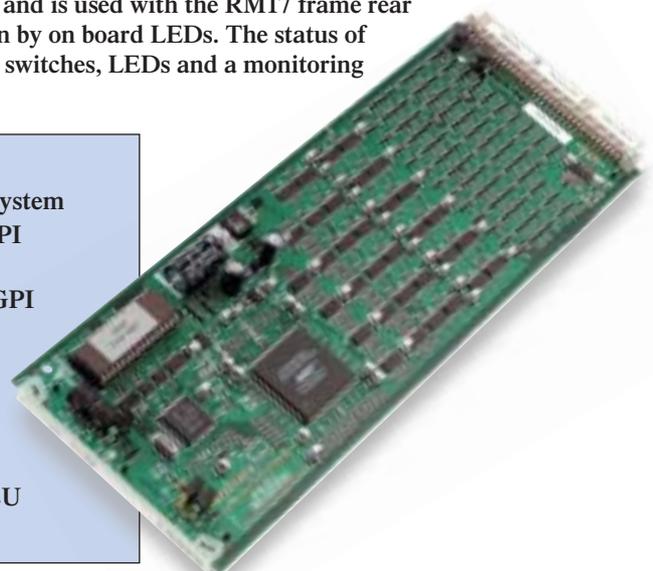


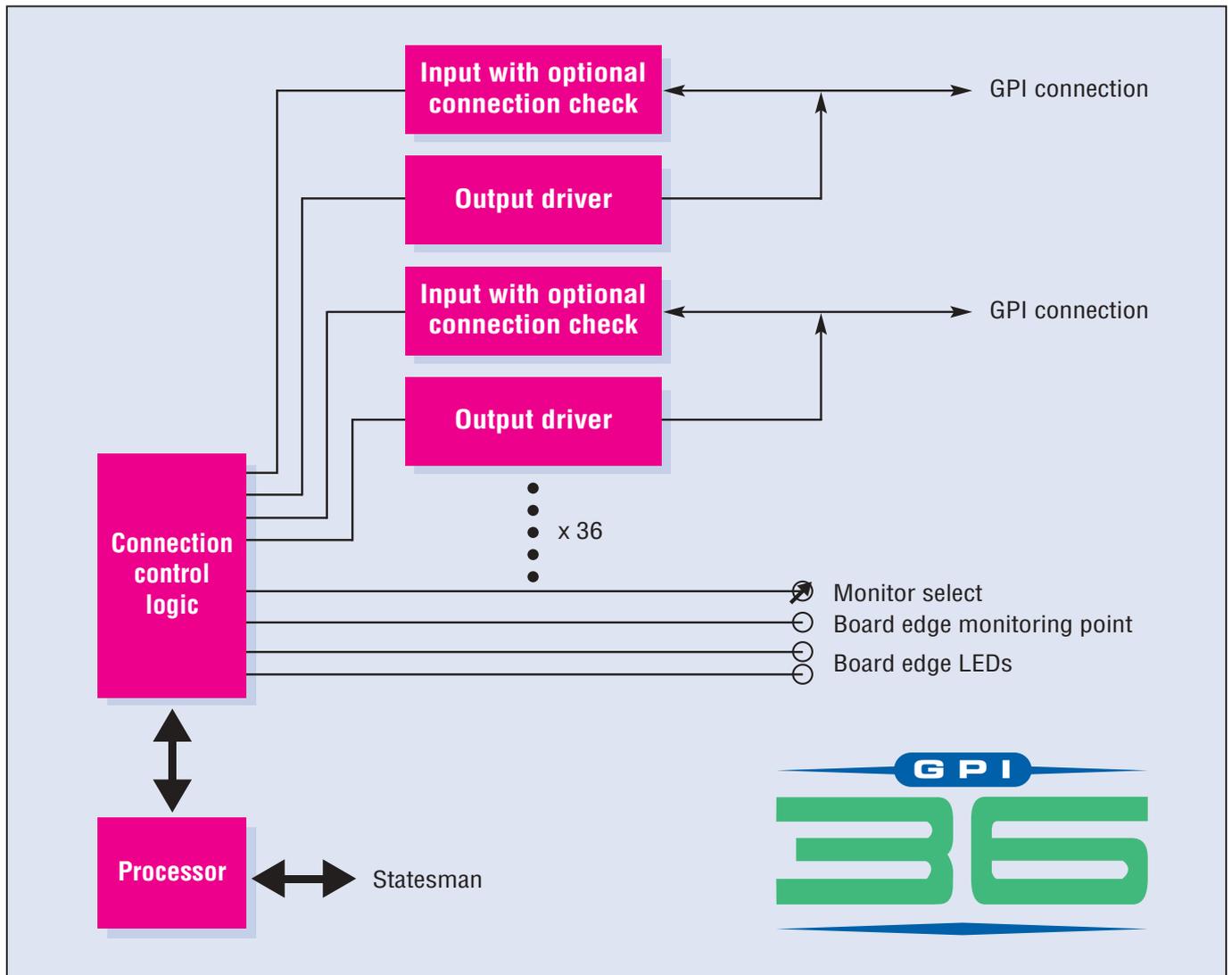
open circuit, allowing you to tell whether the device being monitored has been removed or has faulty wiring. Input does not perform the connection test and is used when the GPI36 is connected to a relay or switch. Off will disable any spurious error message reporting on unconnected GPI lines. Output Immediate will change the state of the GPI output. With Output Salvo all the GPI lines are set to the required state, with changes held pending until a salvo command actions them all simultaneously.

The flexibility of the Statesman software enables the GPI36 to be used in a wide variety of applications. An input to the GPI card can cause an alarm on Statesman, which will be labelled by the user. Among the actions that can be triggered by Statesman is the running of a powerful macro, which can cause a number of changes to any Crystal Vision boards controlled by Statesman. It might be used to switch a router to select an emergency source, or to select a caption to be inserted with a downstream keyer. External equipment can be controlled by GPI outputs from the GPI36, and again these can be tied into macros or alarms from other boards. A single GPI output might be used to drive a warning light which is switched on if any of a number of alarms are active. As with all alarms this can be set to stay on until cleared by the operator, or to switch off when the source of the alarm goes away.

The GPI36 fits in the standard frames (2U, 1U and desk top box) and is used with the RM17 frame rear module. It can be monitored from the card edge, with its status shown by on board LEDs. The status of the 36 GPI lines can also be individually monitored using board edge switches, LEDs and a monitoring point capable of driving an oscilloscope.

- 36 channel GPI card
- Used exclusively in conjunction with Statesman PC Control System
- Allows Statesman to control and monitor any product with GPI functionality, including third party equipment
- 36 bi-directional connections can individually be assigned as GPI input or GPI output
- Alarm or warning can be set on any of connections
- View state of every connection at once
- Set five GPI functions: Input Connection, Input, Off, Output Immediate and Output Salvo
- Space-saving: 100mm x 266mm module allows 12 GPI36s in 2U (six in 1U, two in desk top box)





SPECIFICATION

MECHANICAL

Standard Crystal Vision module 266mm x 100mm
 Weight: 185g
 Power consumption: 1 Watt

GPI INPUTS AND OUTPUTS

36 bi-directional GPI I/O lines

GPI OUTPUT LEVELS

Open collector (or drain): Pull-down to 0 Volts (GND) when ON or open circuit when OFF (with optional pull-up)
 Max off voltage: 30V
 Current limit: 200mA
 Pull-up when off: 10kOhm resistor to internal +5V

GPI INPUT LEVELS

Max voltage: 30V
 Pull-up: 10kOhm resistor to internal +5V
 Typical impedance: 10kOhm
 Level discrimination: A low is detected at voltages below 0.8V, and a high is detected at voltages above 2.4V. Voltages between 0.8V and 2.4V may produce either a high or low input indication
 Disconnection testing: Semiconductor inputs can be tested by checking for the presence of an open-collector (or open-drain)

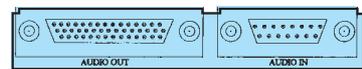
MONITORING

LED display and test point
 Two rotary switches (Tens/Units) on front of card to select GPI line to monitor on LEDs and test point

Yellow LED lights when selected GPI line is low
 Green LED lights when selected GPI line is high
 The test point is capable of driving a 10kOhm, 100pF load with a bandwidth of 100kHz and is current limited to survive an indefinite short to ground

CONTROL

Statesman PC software control only



RM17

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ORDERING INFORMATION

GPI36	36 channel GPI card for use with Statesman
Statesman	PC Control System
Indigo 2	2U frame with passive front panel for up to 12 Crystal Vision modules
Indigo 2A	2U frame with active front panel for up to 12 Crystal Vision modules
Indigo 2S	2U frame with passive front panel fitted with Statesman CPU for up to 12 Crystal Vision modules
Indigo 1	1U frame with passive front panel for up to six Crystal Vision modules
Indigo 1A	1U frame with active front panel for up to six Crystal Vision modules
Indigo 1S	1U frame with passive front panel fitted with Statesman CPU for up to six Crystal Vision modules
Indigo DT	Desk top box with passive front panel for up to two Crystal Vision modules
Indigo DTA	Desk top box with active front panel for up to two Crystal Vision modules
Indigo DTS	Desk top box with passive front panel fitted with Statesman CPU for up to two Crystal Vision modules
RM17	Single slot frame rear module. Allows maximum number of GPI36s in frame (12 in 2U, six in 1U, two in desk top box). Gives access to all 36 GPI connections