GPI is a user-programmable General-Purpose Interface for DVStation Mini/Mini² Controller which provides programmable relay contact closures. The contact closures can be opened or closed when a user-configurable alarm is detected. This mechanism provides a cost effective means to monitor the occurrence of an event and also to trigger external equipment on an alarm condition. DVStation-Mini/Mini² contains built-in GPI contacts.
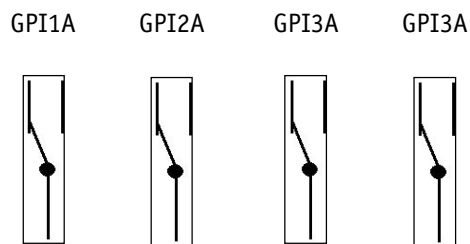
DVStation Mini GPI contacts

DVStation Mini   – 4 pins [1- 4]

DVStation Mini²   – 4 pins [1- 4]

General Purpose Interface contacts which can be customized by the user. The relay contacts can be configured to open or close when triggered by an alarm condition, for example ETR-290 error, RF modulation problem, or service or simple shell script. Additionally, every DVStation comes installed with full source code for the GPI routines to enable customization by end users or system integrators.

Upon boot up, the initial default state for all the GPIs is in the closed position.
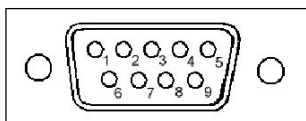
| GPI1A | GPI2A | GPI3A | GPI3A |

Hardware Architecture

The DVStation-Mini/Mini² hardware architecture is built around a multi-purpose 1RU rack mount Pentium computer with a specially built controller board. The board provides a communication path to the external acquisition Pods, connectivity to the optional GPS antenna, and outputs for the GPI contacts.

The GPI contacts are brought out to the rear panel of the DVStation-Mini/Mini². The physical interface for the GPI contacts is a 9 pin D male connector.

The connector pins correspond to four SPDT relay connections which are connected as below:

Alarm Script Programming

Alarm scripts are most often written in a Linux shell script such as bash, csh, or sh. To become available as an alarm action within DVStation, scripts must be copied to the /usr/local/dvstation/bin/ directory. This can be done either via FTP, or through DVStation's Script Management facility on the web browser interface

GPI Commands –

There is one command available to control the status of the GPI contacts.

The general syntax is:
    miniController (gpiopen | gpiclose) n

where:
    gpiopen – open the specified contact
    gpiclose – close the specified contact
    n – the contact number (1-4)

For example,

to open GPI 1:
    miniController gpiopen 1

To close GPI 3:
    miniController gpiclose 3

Initial Configuration–

DVStation can also be configured to run customized scripts upon startup. To do this, create a text file called dvmon.conf.local in the directory /usr/local/dvstation/etc. This file should contain the name of the script files to be executed. All script files named in the dvmon.conf.local file must be located in the /usr/local/dvstation/bin directory.

Script Example–

The sample script below will close GPI 1 for two seconds and then open:

```
#!/bin/csh
/usr/local/dvstation/bin/miniController  gpiclose  1
sleep 2
/usr/local/dvstation/bin/ miniController gpiopen  1

.
```

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Executing Script on specific event

DVStation provides a way to link the scripts to an event in DVStation software. This needs to be done after the script is copied/uploaded to the DVStation script folder mentioned above.

Once the script is preset in the script folder it will be shown in the Alarm Configuration dialog as shown below. In actions list user can select the script which needs to be launched when an event occurs.

GPI Connector Pin-Out

Pin	Description	Group
1	GPI1A	1
2	GPI2A	2
3	GPI3A	3
4	GPI4A	4
5	GND	
6	GPI1B	1
7	GPI2B	2
8	GPI3B	3
9	GPI4B	4

About Pixelmetrix

Pixelmetrix Corporation is the global expert in Preventive Monitoring for digital, cable and IPTV networks. The company provides equipment and network intelligence systems to television broadcasters for the management and monitoring of quality of service and quality of experience. Headquartered in Singapore, Pixelmetrix has offices in the United States and Europe.

Pixelmetrix has been conferred the Frost & Sullivan Industrial Technologies Award 2009, C+T Technology Development Award 2009, Engineering & Technology Emmy® Award 2007, Broadcast

Engineering publication Pick Hit Award 2005 and 2008, TV Technology publication STAR Awards (Superior Technology Award Recipient) 2000, 2004 and 2007, BIRTV Product of the Year Award 2006, Cable-Satellite/Mediacast Product of the Year Awards 2003 and 2004, as well as the Peter Wayne Award 2000, for Best Design and Innovation.

Key Customers

Pixelmetrix enjoys an equal distribution of customers among the world's geographic regions. We have product deployed on all seven continents, including Antarctica.

Key clients of Pixelmetrix include:
- Turner Entertainment (CNN, TCM, et al)
- ESPN
- HBO
- Canal+
- NTT
- Telstra
- NHK
- BBC
- SBC, and others

For More Information

To learn more about the DVStation, request a demo, or learn how Pixelmetrix might help you optimize video network integrity, contact us.

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