



**HawkEye**

# IQASI82 Dual ASI TS monitor and switch

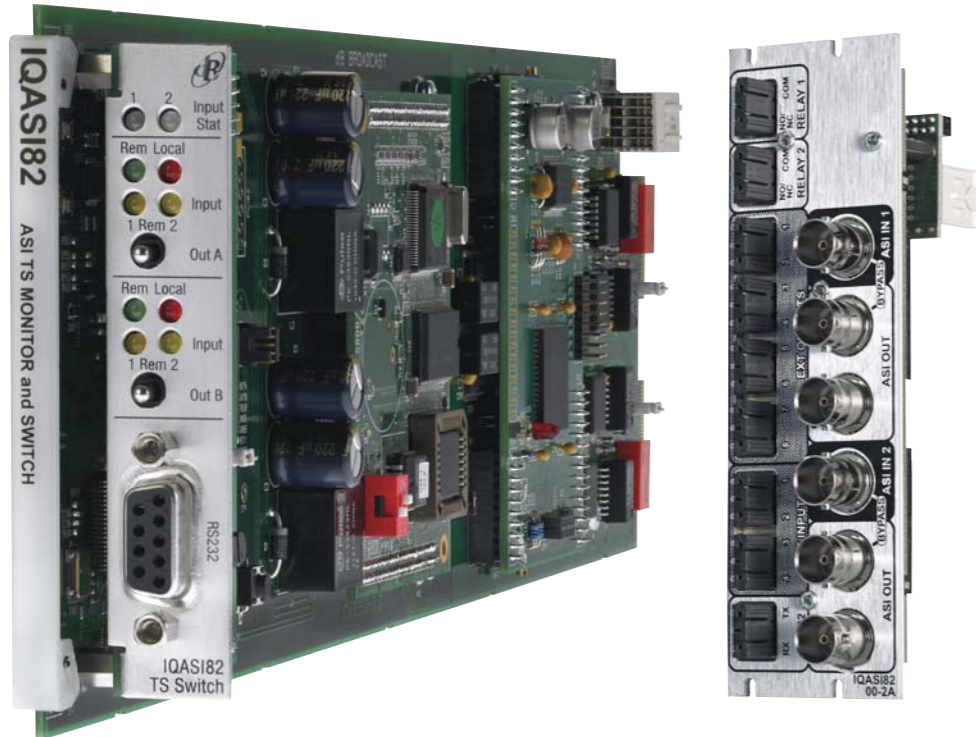


INNOVATE

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# Hawkeye IQASI82 Dual ASI Transport Stream monitor and switch



The Hawkeye IQASI82 has been designed for continuous monitoring and switching of two ASI transport streams in a broadcast environment. These can be completely separate streams, or related streams arranged in a main and redundant configuration. Each stream is independently monitored. Automatic operation is configurable by the user and switching between inputs is near-seamless.

### Near-seamless switching

Near-seamless switching is a technique developed by dB Broadcast that minimises disruption to the output stream by maintaining TS synchronisation when switching between sources.

It guarantees:

- True-seamless switching between co-timed identical streams.
- TS sync loss prevention when switching similar or radically different streams.
- TS sync loss prevention on cable-pull or other error with the main input, provided the reserve input is good.

When switching transport streams, the extent to which service disruption is reduced depends on the nature of the streams as well as the decoder employed. In general, the more closely related the input streams, the smoother is the switching operation.

### Monitoring

Various critical levels within the Transport Stream are monitored and the user defines which of these affect alarms (available features depends upon module type).

The implemented measurements are fully compliant with the Digital Video Broadcasting (DVB) measurement guidelines ETSI TR 101 290. This standard is also commonly used when monitoring ATSC signals. The series supports 188 byte, 204 byte, packet, byte and burst mode ASI.

### Local serial configuration

The IQASI82 series of modules is configured using the S080 Windows software for local 'standalone' setup, the RollCall Network Management System from SAM or the integral command-line interface. This includes selecting standard measurements, defining the external alarms, specifying elementary streams to be monitored and selecting the switching method.

- The S080 software or RollCall Network Management System provide a fully featured graphical interface.
- The command-line interface uses a straightforward protocol with full online help and provides an entry point for integration with existing software systems. The full protocol is available on request to enable speedy development of third-party drivers.

Connection is via standard RS232 through front and rear panel connectors, or via Ethernet.

### 2x2 switch modes

The input Transport Streams (1, 2) are routed to the main outputs (A, B) under the control of the integrated 2x2 TS switch. There are 4 switching modes, all configurable by the user.

- Main/Reserve - In the event of an input failure, the good input is routed to both outputs.
- Preview - Output B always takes the opposite input to A. Therefore in the event of an input failure, the inputs are routed so that the transmission output (A) will continue to receive a good signal, whilst the failed input is routed to output B. When both inputs are good, output B previews the standby input.
- Biased - Switches the output away from a failed input to a good input, and back again when the preferred input comes good again. Various biasing options exist.
- Unbiased - After a switch is made, the output stays on the new input indefinitely whilst it remains healthy. This minimises the number of switches.

The main outputs are designed to feed a broadcast chain. For this reason they are protected against power failure using a bypass relay. In the event of power failure, the module routes Input 1 to output A and input 2 to output B.

All variants also feature a pair of auxiliary ASI outputs to allow a decoder or secondary monitoring device to be attached. Such a device can be used to provide a visual confirmation of the input or output routing.

### Control

There are several methods to control the integral 2x2 switch, including the front panel switches, the general purpose inputs/outputs (IO), one or both serial ports and

the integral controller. These modes have a fixed order of priority with 1 being the highest priority.

- Priority 1: local - front panel switching.
- Priority 2: remote ext - GPIO closing contacts.
- Priority 3: remote serial - RollCall control or front/rear serial port switching. The front panel serial port is designed for on-site access, the rear port for fixed installations.
- Priority 4: auto - The module's monitoring system. It can be enabled or disabled using the configuration commands.

### RollCall control

Multiple modules can be controlled and monitored from a single Ethernet port using the RollCall control and monitoring software from SAM. The RollCall system provides control and monitoring for the IQASI82 series plus the SAM product range with the additional capability of monitoring third party equipment via SNMP, serial or GPI interfaces.

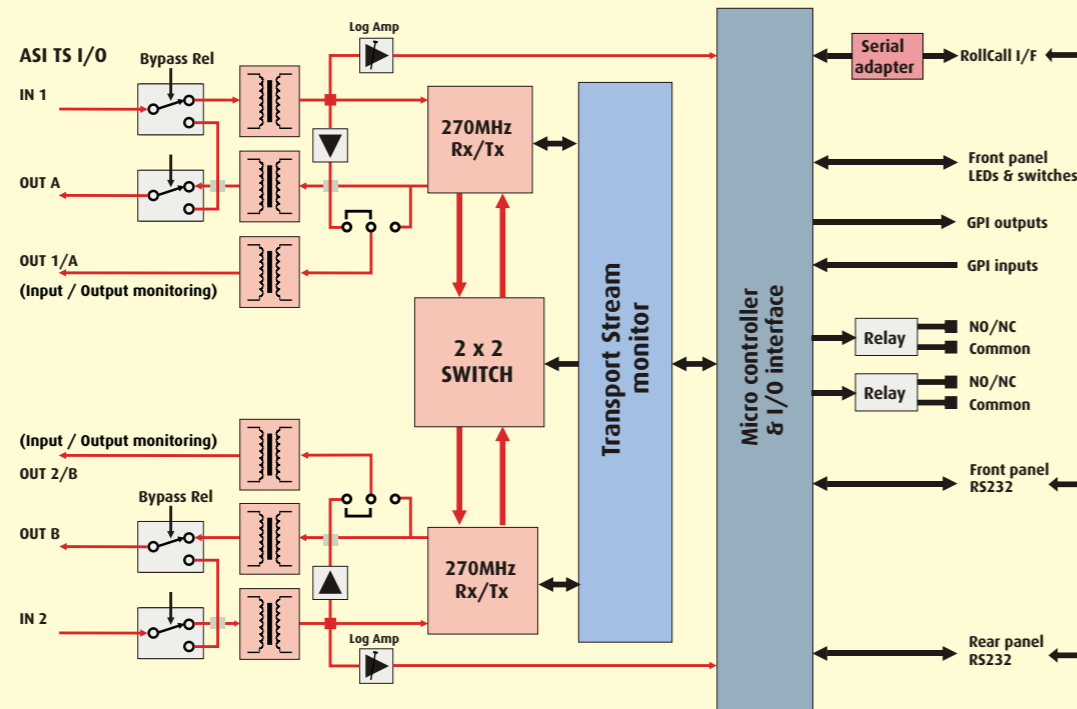
### Alarms

The module is fully configurable using dB Broadcast's S080 Windows configuration software, SAM RollCall system or the command-line interface, ensuring that alarms only activate under conditions specified by the user. For each transport stream there are 3 user configured alarms and others giving the status of the switch.

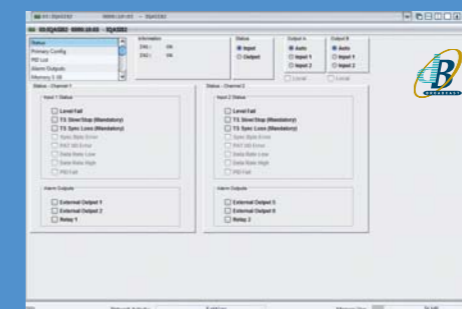
### Frames

The IQASI82 series of modules can be housed in frames from dB Broadcast and the SAM. Both 1U (IQH1A) and 3U (IQH3B) chassis are available, with single or dual PSUs.

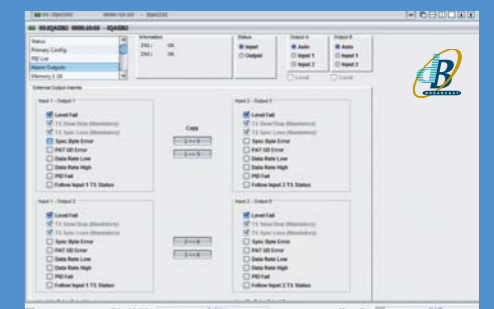
## The IQASI82 Dual ASI Transport Stream monitor with 2x2 Switch



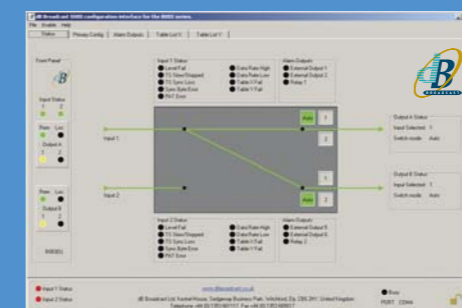
## External control and monitoring



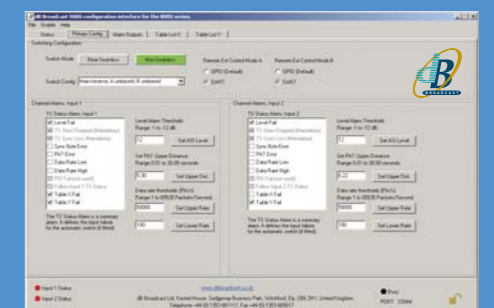
RollCall Status menu



RollCall Alarm outputs



S080 Status menu



S080 Primary configuration



