Crystal Vision

Cleanit

Profanity delay system

Cleanit is a flexible and budget-friendly video and audio profanity delay system for live broadcasts.

Cleanit allows a live content stream to be delayed by up to 20 seconds (in HD), giving your operator time to react and prevent the broadcast of unwanted or offensive video or audio material. It's perfect at preventing expletives, obscene gestures, wardrobe malfunctions, bloopers, competitor mentions, coughing fits or technical problems from making it to air – whether regulations insist on protection of content or you want to control exactly what you broadcast.

Control is simple and intuitive – using either a computer GUI or a smart button box, with both manual and automatic control of the video and audio cover/uncover functions.

Cleanit is available in different versions to suit all requirements – whether you want the standard functionality or a more elaborate custom system designed specifically for your application.

With Cleanit, you can get the perfect level of protection needed for your production.

* Flexible profanity delay system for live video and audio

* Use it with a variety of SDI sources: works with 3Gb/s, HD and SD video and with embedded audio or discrete AES or analogue audio

* Equally suited to traditional broadcasting or social media webcasts

* Purchase as much or as little protection as needed – available in four different versions

* Main programme can be delayed by up to ten seconds in 3Gb/s, 20 seconds in HD or 110 seconds in SD

* Audio protection includes audio mute or shuffle

* Video protection includes video freeze or black

* Easy to add any custom functionality you need (with Cleanit Custom)

* Manual and automatic activation of cover/uncover functions

* Simple control and status monitoring using VisionWeb from your web browser or SBB-4 smart button box

* Saves you space, with one Cleanit in a desk top box, and up to three in 1U or six in 2U

Cleanit allows a video and audio content stream to be delayed to prevent the broadcast of unwanted or offensive material, with both audio and video covers available. The programme signal can be delayed by up to ten seconds in 3Gb/s, 20 seconds in HD or 110 seconds in SD. This delay gives the operator – who is monitoring the live feed – time to react and remove the unwanted content.

Cleanit is an easy-to-use fully integrated solution which is based on the Crystal Vision Indigo range of modular products and frames. Different packages are available – allowing you to purchase as much or as little protection as needed for your application. The three standard versions of Cleanit (see page three) take care of the most common applications, muting or shuffling either embedded or discrete AES or analogue audio, along with video freeze or black. Choose Cleanit Custom and we'll design a custom solution for you, understanding your application and adding whatever extra functions you need to the mix.

CHOOSE A FRAME

Once you've selected the most suitable version of Cleanit for you, you need to select a frame to house it in. One standard Cleanit will fit in a desk top box, ideal for those wanting a portable system. 1U ears can be fitted to the desk top box to facilitate mounting in a control desk, while the IDT-RK rack mounting kit allows it to be fitted in a 19" rack if required. For multi-channel applications (or for those wanting power supply redundancy), up to three channels of Cleanit can fit in a 1U frame or six in a 2U frame – making the most of your rack space.

CHOOSE YOUR CONTROL

The two control options for Cleanit make configuration and operation easy and ensure that you always know the status of your audio and video.

VisionWeb Control is a free-of-charge way of operating Cleanit from a web browser running on any device connected to the same network. The simplified VisionWeb GUI makes it easy to set the delay timings and activate the video and audio covers, as well as providing feedback status of when the system has been initiated and when it returns to normal operation.

The SBB-4 smart button box is perfect for live operation. With four big buttons to press, it features clear text (using LCD graphics) and colour indications of function and status – such as a button flashing orange while counting down and flashing red while the audio is muted. The SBB-4 works in conjunction with VisionWeb, with – for example – VisionWeb providing the delay time variables and status information. The SBB-4 connects to the Crystal Vision frame via Ethernet and uses PoE for convenience.

All versions of Cleanit include flexible customisation of the control GUIs and button box to satisfy your individual requirements. You will be asked which of the controls should be visible on the VisionWeb GUI and what functionality to assign to the push buttons on the SBB-4.

VisionWeb

SBB-4

PROTECTING YOUR PROGRAMME

Both audio and video covers are available – either independently or simultaneously. To mask the unwanted audio, the operator can mute the audio, shuffle to another embedded source or (with Cleanit Custom) to an external discrete source. To mask the unwanted video, the operator can freeze or black the video or (with Cleanit Custom) insert a graphic or switch to another live or recorded source. The cover/uncover functions can be activated either manually or automatically and be either delayed or immediate.

Manual delayed cover/uncover

Using manual delayed cover/uncover is ideal when you don't want to lose more of your programme than is necessary and you have an operator able to concentrate on this task, as it involves them both starting and stopping the mute or freeze. Delay timings can be set for the delayed mute or freeze and the delayed unmute or unfreeze.

Here's an example timeline for a system using manual delayed cover/uncover for a three second obscenity. Here we've set the programme video delay to ten seconds, the mute delay to eight seconds and the unmute delay to ten seconds. We assume that the operator has one second of reaction time before muting and unmuting.

Time zero	Obscenity starts
1 second	Operator presses the delayed mute control (after one second reaction time)
3 seconds	Obscenity finishes
4 seconds	Operator presses delayed unmute control (after one second reaction time)
9 seconds	System mutes (due to delayed mute setting of eight seconds + one second muting reaction time)
10 seconds	Obscenity reaches delayed programme output (NB. System has already been muted for a second)
13 seconds	Obscenity finishes on delayed programme output
14 seconds	System unmutes (due to delayed unmute setting of ten seconds + one second of unmuting reaction time since obscenity finished at '3 seconds')

Automatic delayed cover/uncover

Using automatic delayed cover/uncover is ideal when your operator is multi-tasking and only wants one button to press to clean the air. With this option you will need to choose suitable delay settings in advance, with the delay timer counting down to audio mute (or video freeze) then continuing to count to unmute (or unfreeze). With this option, you have fixed the expected length of the obscenity. If the obscenity is longer than expected, you have other measures in place to get rid of it – for example, moving the microphone or having the profanity delay system set to automatically drop the offensive caller.

Here's an example timeline for a system using automatic delayed cover/uncover. We don't know how long the obscenity is going to last so we have guessed appropriate settings. Here we've set the programme video delay to ten seconds, the mute delay to eight seconds and the unmute delay to 13 seconds. We assume that the operator has one second of reaction time before muting.

Time zero	Obscenity starts
1 second	Operator presses the delayed mute control (after one second reaction time)
3 seconds	Obscenity finishes
9 seconds	System mutes (due to delayed mute setting of eight seconds + one second reaction time)
10 seconds	Obscenity reaches delayed programme output (NB. System has already been muted for a second)
13 seconds	Obscenity finishes on delayed programme output
14 seconds	System unmutes (due to automatic delayed unmute setting of 13 seconds + one second of muting reaction time)

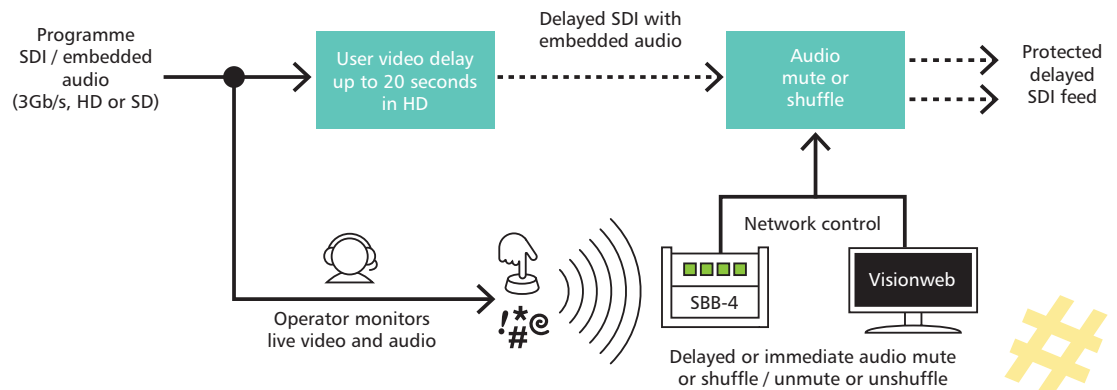*Manual instant cover/uncover*

This is ideal for emergency situations where you have missed the profanity. You can immediately mute the output using Instant mute or Instant mute and freeze and immediately unmute the output using Instant unmute.
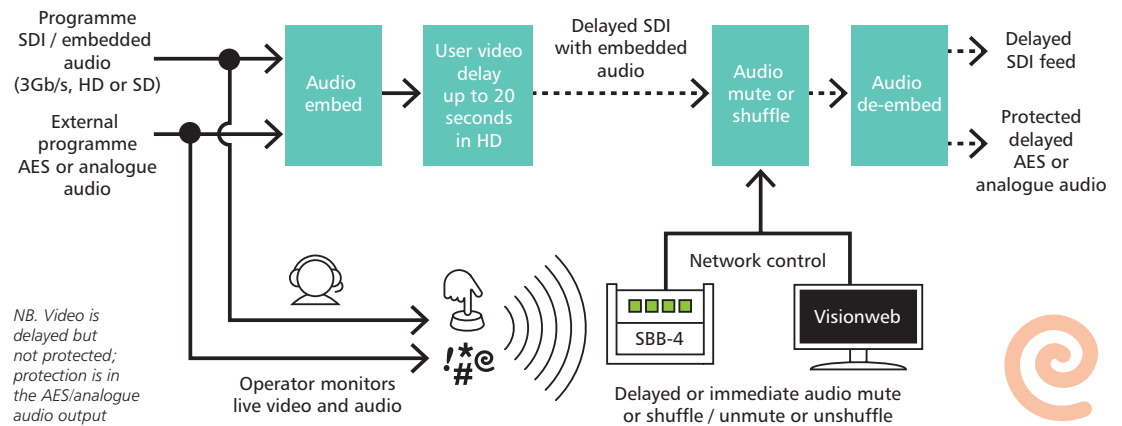
Cleanit 1

FOR EMBEDDED AUDIO COVER

Profanity delay system for video containing embedded audio. The audio cover allows for audio mute of up to 16 channels of embedded audio; alternatively Cleanit 1 can easily be modified to perform audio shuffle instead. See the comparison chart and specification for the full product details.

Programme SDI / embedded audio (3Gb/s, HD or SD)

User video delay up to 20 seconds in HD

Delayed SDI with embedded audio

Audio mute or shuffle

Protected delayed SDI feed

Network control

SBB-4

Visionweb

Operator monitors live video and audio

Delayed or immediate audio mute or shuffle / unmute or unshuffle
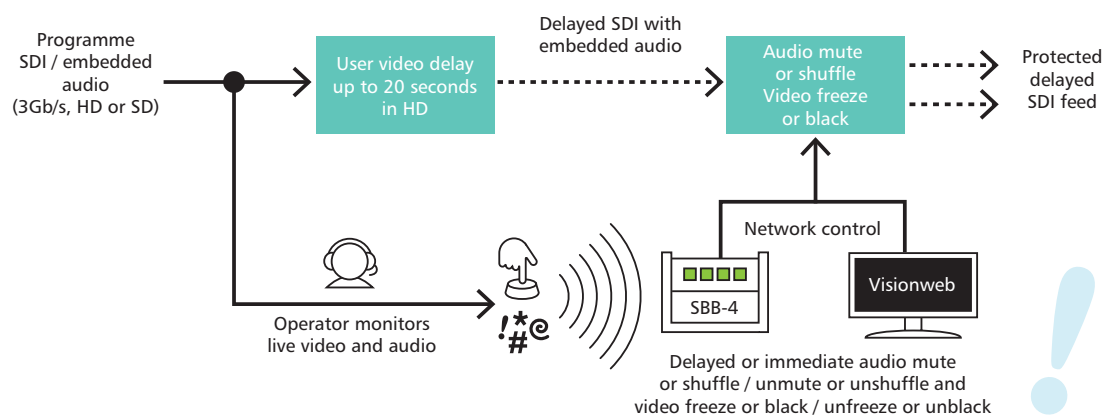
Cleanit 2

FOR DISCRETE AUDIO COVER

Profanity delay system for video and discrete AES or analogue audio. The audio cover allows for audio mute of up to eight channels of 110 ohm AES or four channels of analogue audio; alternatively Cleanit 2 can easily be modified to perform audio shuffle instead. See the comparison chart and specification for the full product details.

Programme SDI / embedded audio (3Gb/s, HD or SD)

External programme AES or analogue audio

Audio embed

User video delay up to 20 seconds in HD

Delayed SDI with embedded audio

Audio mute or shuffle

Audio de-embed

Delayed SDI feed

Protected delayed AES or analogue audio

NB. Video is delayed but not protected; protection is in the AES/analogue audio output

Network control

SBB-4

Visionweb

Operator monitors live video and audio

Delayed or immediate audio mute or shuffle / unmute or unshuffle

Cleanit 3

FOR BOTH EMBEDDED AUDIO AND VIDEO COVER

Profanity delay system for video containing embedded audio. The audio and video cover allows for audio mute of up to 16 channels of embedded audio as well as video freeze; alternatively Cleanit 3 can easily be modified to perform audio shuffle and/or video black instead. See the comparison chart and specification for the full product details.

Programme SDI / embedded audio (3Gb/s, HD or SD)

User video delay up to 20 seconds in HD

Delayed SDI with embedded audio

Audio mute or shuffle Video freeze or black

Protected delayed SDI feed

Network control

SBB-4

Visionweb

Operator monitors live video and audio

Delayed or immediate audio mute or shuffle / unmute or unshuffle and video freeze or black / unfreeze or unblack

Cleanit Custom

FOR THE CUSTOM COVER YOU NEED

Need something different? Then you need Cleanit Custom. With Cleanit Custom, the system would be specified, priced and built in a custom manner to meet your exact requirements. Why you might need Cleanit Custom...

- To insert a stored video graphic or audio file.
- To insert a video graphic or audio file from an external clipstore.
- To switch cleanly to another source.
- To get fibre input or output.
- To use discrete 75 ohm AES.
- To get extra video outputs.
- To get video outputs in different formats.
- To use discrete audio as your shuffle source.
- To add additional delay to your programme.
- To synchronise your programme.

Or whatever else you need to do! Just get in touch and we'll come up with the best solution for you.

WHICH VERSION OF CLEANIT DO YOU NEED?

The table shows just *some* examples of Cleanit Custom features – many possibilities are available!

Feature	Cleanit 1	Cleanit 2	Cleanit 3	Cleanit Custom
Input formats (50Hz and 59.94Hz where unspecified)	625, 525, 720p50, 720p59.94, 1080i50, 1080i59.94, 1080PsF23.98, 1080PsF24, 1080p50 and 1080p59.94	625, 525, 720p50, 720p59.94, 1080i50, 1080i59.94, 1080PsF23.98, 1080PsF24, 1080p50 and 1080p59.94	625, 525, 720p50, 720p59.94, 1080i50, 1080i59.94, 1080PsF23.98, 1080PsF24, 1080p50 and 1080p59.94	Depends on chosen configuration
Maximum SD delay: 110 secs (625 line) or 91 secs (525 line) / 2750 frames	●	●	●	Depends on chosen configuration (more delay or less delay is available depending on application and budget)
Maximum HD delay: 20 secs (1080i50, 720p50, 1080PsF23.98 and 1080PsF24) or 16 secs (1080i59.94 and 720p59.94) / 500 frames	●	●	●	Depends on chosen configuration (more delay or less delay is available depending on application and budget)
Maximum 3Gb/s delay: 10 secs (1080p50) or 8 secs (1080p59.94) / 500 frames	●	●	●	Depends on chosen configuration (more delay or less delay is available depending on application and budget)
Programme video delay adjustable in seconds	●	●	●	●
Number of protected delayed video outputs	2	1 (NB. Video is delayed but not protected; audio protection is in discrete AES/analogue output)	2	Depends on chosen configuration (a custom solution could have additional outputs if needed, as well as different formats of those protected outputs)
Fibre I/O				Available as Cleanit Custom option
Video framestore synchroniser			●	Cleanit Custom could include synchronisation of the protected programme
Analogue reference			SD Black and Burst or HD tri-level syncs	If using synchronisation in chosen configuration
Use with embedded audio	●		●	Depends on chosen configuration
Use with discrete 110 ohm AES		●		Depends on chosen configuration
Use with discrete 75 ohm AES				Available as Cleanit Custom option
Number of audio channels delayed and protected	16	AES input: 8 Analogue input: 4	16	A custom solution could be designed to meet any requirement regarding the number of audio channels protected
Number of external I/O channels available for embedding/de-embedding		AES input: 8 (using two DIOP4) Analogue input: 4 (using one 3G-AIP2 and one 3G-AOP2)		A custom solution could be designed to meet any requirement regarding the number of audio channels protected
Audio mute or shuffle	●	●	●	Depends on chosen configuration
Use external audio as source of replacement audio for shuffling				Available as Cleanit Custom option
Video freeze or black			●	Depends on chosen configuration (in addition, a custom solution could be used to switch to an alternative video source for cover)
Insert stored graphic				Available as Cleanit Custom option
Cleanly switch to another source				Available as Cleanit Custom option
Manual activation of delayed cover and delayed uncover	●	●	●	●
Auto activation of delayed cover/uncover	●	●	●	●
Manual activation of instant cover and instant uncover for missed profanities	●	●	●	●
Number of Cleanit systems fitting in frame	1 in desk top box, 3 in 1U and six in 2U	1 in desk top box, 3 in 1U and six in 2U	1 in desk top box, 3 in 1U and six in 2U	Depends on chosen configuration
Power redundancy available	● (Use Indigo 1SE-DP or Indigo 2SE)	● (Use Indigo 1SE-DP or Indigo 2SE)	● (Use Indigo 1SE-DP or Indigo 2SE)	● (Use Indigo 1SE-DP or Indigo 2SE)
VisionWeb and SBB-4 smart button box control options	●	●	●	●

Cleanit 1

VIDEO INPUT

One 3Gb/s or HD or SD input with embedded audio

270Mb/s or 1.5Gb/s or 3Gb/s serial compliant to SMPTE 259, SMPTE 292-1 and SMPTE 424/425-A

The video formats supported are 625, 525, 720p50, 720p59.94, 1080i50, 1080i59.94, 1080PsF23.98, 1080PsF24, 1080p50 and 1080p59.94

3Gb/s cable equalisation up to 80m using Belden 1694A. HD/SD cable equalisation up to 140m with Belden 1694A or equivalent (approx. 100m with Belden 8281)

Input return loss: -15dB for 50MHz to 1.5GHz

Auto data rate and video format selection

Input is electrical BNC. For fibre input, contact us about Cleanit Custom instead

VIDEO OUTPUTS

Two reclocked, protected and delayed 3Gb/s, HD or SD outputs with embedded audio

270Mb/s or 1.5Gb/s or 3Gb/s serial compliant to SMPTE 259, SMPTE 292-1 and SMPTE 424/425-A. Output follows the input format

Output is electrical BNC. For fibre output, contact us about Cleanit Custom instead

STANDARD DEFINITION DELAY

Minimum delay: 3 lines

Maximum delay: 110 seconds/2750 frames (625 line); 91 seconds/2750 frames (525 line)

Programme delay adjustable in seconds

HIGH DEFINITION DELAY

Minimum delay: 2 lines

Maximum delay: 20 seconds/500 frames (1080i50/720p50/1080PsF 23.98/1080PsF24); 16 seconds/500 frames (1080i59.94/720p59.94)

Programme delay adjustable in seconds

3GB/S DELAY

Minimum delay: 2 lines

Maximum delay: 10 seconds/500 frames (1080p50); 8 seconds/500 frames (1080p59.94)

Programme delay adjustable in seconds

AUDIO MUTE AND SHUFFLE

Group 1 is the default mute group

Default operation is for audio mute. The system can be modified to perform audio shuffle instead or to mute additional channels of audio

USER SETTINGS FOR PROFANITY DELAY

Programme video delay in seconds (range is from one second to the maximum available for the video frame rate)

Delay to audio mute from initiation in seconds

Delay to audio unmute from initiation in seconds

Manual delayed mute/unmute

Auto delayed mute/unmute

Instant mute/unmute

In above settings, mute can be replaced with shuffle

Custom controls are available on request

ANCILLARY DATA/ EMBEDDED AUDIO

Passes entire video stream, including embedded audio and HANC and VANC

STATUS MONITORING

Signal presence and alarm monitoring of signals

Status of profanity delay operation and audio status

CONTROL

VisionWeb Control is available via the web server on the frame and allows operation using a standard web browser on a PC or tablet. A custom GUI will be configured for each order to provide the controls required

Optional SBB-4 smart button box connects to the frame via Ethernet and provides four programmable LCD switches. The SBB-4 uses information from VisionWeb for delay timings etc. The four switches will be configured for each order to provide the controls required. Uses Power over Ethernet so must be used with PoE enabled switch

Cleanit 2

VIDEO INPUT

One 3Gb/s or HD or SD input

270Mb/s or 1.5Gb/s or 3Gb/s serial compliant to SMPTE 259, SMPTE 292-1 and SMPTE 424/425-A

The video formats supported are 625, 525, 720p50, 720p59.94, 1080i50, 1080i59.94, 1080PsF23.98, 1080PsF24, 1080p50 and 1080p59.94

3Gb/s cable equalisation up to 80m using Belden 1694A. HD/SD cable equalisation up to 140m with Belden 1694A or equivalent (approx. 100m with Belden 8281)

Input return loss: -15dB for 50MHz to 1.5GHz

Auto data rate and video format selection

Input is electrical BNC. For fibre input, contact us about Cleanit Custom instead

VIDEO OUTPUTS

One reclocked and delayed 3Gb/s, HD or SD output (NB. Protection is in the AES/analogue audio output)

270Mb/s or 1.5Gb/s or 3Gb/s serial compliant to SMPTE 259, SMPTE 292-1 and SMPTE 424/425-A. Output follows the input format

Output is electrical BNC. For fibre

AUDIO INPUTS AND OUTPUTS

Package is either analogue or digital. Must be specified at order

Analogue input:

Two analogue stereo pairs or four mono channels. 24 bit quantising A to Ds. High input impedance (20 kohm) balanced

Input level range: 0dBFS = +28dBu max / 0dBFS = +12dBu min

Factory set default: 0dBFS = +18dBu or +24dBu by on board link

Signal to noise - 99dB (+18dBu) rms., 22Hz to 22kHz typ.

Total harmonic distortion: 0.004% THD+N rms., 22Hz to 22kHz typ.

Interchannel crosstalk: -110dB at 1kHz, -90dB at 20kHz, rms., typ.

Analogue output:

Two analogue stereo pairs or four mono channels. 24 bit quantising D to As. Low output impedance (66 ohm) balanced

Input level range: 0dBFS = +28dBu max / 0dBFS = +12dBu min

Factory set default: 0dBFS = +18dBu or +24dBu by on board link

Signal to noise: 99dB (+18dBu) rms., 22Hz to 22kHz typ.

Total harmonic distortion: 0.002% THD+N rms., 22Hz to 22kHz typ.

Interchannel crosstalk: -110dB at 1kHz, -90dB at 20kHz, rms., typ.

Digital input:

Four 24 bit stereo pairs

Standard package set for 110 ohm AES/EBU balanced

For 75 ohm AES3-id unbalanced, contact us about Cleanit Custom instead

Asynchronous audio to video 48kHz + or - 50ppm

Total harmonic distortion: With asynchronous inputs: < 0.0001% (-120dB)

Digital output:

Four 24 bit stereo pairs

Standard package set for 110 ohm AES/EBU balanced

For 75 ohm AES3-id unbalanced, contact us about Cleanit Custom instead

Asynchronous audio to video 48kHz + or - 50ppm

Total harmonic distortion: With asynchronous inputs: < 0.0001% (-120dB)

STANDARD DEFINITION DELAY

Minimum delay: 3 lines

Maximum delay: 110 seconds/2750 frames (625 line); 91 seconds/2750 frames (525 line)

Programme delay adjustable in seconds

HIGH DEFINITION DELAY

Minimum delay: 2 lines

Maximum delay: 20 seconds/500 frames (1080i50/720p50/1080PsF

23.98/1080PsF24); 16 seconds/500 frames (1080i59.94/720p59.94)

Programme delay adjustable in seconds

3GB/S DELAY

Minimum delay: 2 lines

Maximum delay: 10 seconds/500 frames (1080p50); 8 seconds/500 frames (1080p59.94)

Programme delay adjustable in seconds

AUDIO MUTE AND SHUFFLE

Group 1 is the default mute group

Default operation is for audio mute. The system can be modified to perform audio shuffle instead or to mute additional channels of audio

USER SETTINGS FOR PROFANITY DELAY

Programme video delay in seconds (range is from one second to the maximum available for the video frame rate)

Delay to audio mute from initiation in seconds

Delay to audio unmute from initiation in seconds

Manual delayed mute/unmute

Auto delayed mute/unmute

Instant mute/unmute

In above settings, mute can be replaced with shuffle

Custom controls are available on request

ANCILLARY DATA

Passes entire video stream, including all ancillary data

STATUS MONITORING

Signal presence and alarm monitoring of signals

Status of profanity delay operation and audio status

CONTROL

VisionWeb Control is available via the web server on the frame and allows operation using a standard web browser on a PC or tablet. A custom GUI will be configured for each order to provide the controls required

Optional SBB-4 smart button box connects to the frame via Ethernet and provides four programmable LCD switches. The SBB-4 uses information from VisionWeb for delay timings etc. The four switches will be configured for each order to provide the controls required. Uses Power over Ethernet so must be used with PoE enabled switch

Cleanit 3

VIDEO INPUT

One 3Gb/s or HD or SD input with embedded audio

270Mb/s or 1.5Gb/s or 3Gb/s serial compliant to SMPTE 259, SMPTE 292-1 and SMPTE 424/425-A

The video formats supported are 625, 525, 720p50, 720p59.94, 1080i50, 1080i59.94, 1080PsF23.98,

1080PsF24, 1080p50 and 1080p59.94

3Gb/s cable equalisation up to 80m using Belden 1694A. HD/SD cable equalisation up to 140m with Belden 1694A or equivalent (approx. 100m with Belden 8281)

Input return loss: -15dB for 50MHz to 1.5GHz

Auto data rate and video format selection

Input is electrical BNC. For fibre input, contact us about Cleanit Custom instead

VIDEO OUTPUTS

Two reclocked, protected and delayed 3Gb/s, HD or SD outputs with embedded audio

270Mb/s or 1.5Gb/s or 3Gb/s serial compliant to SMPTE 259, SMPTE 292-1 and SMPTE 424/425-A. Output follows the input format Output is electrical BNC. For fibre output, contact us about Cleanit Custom instead

STANDARD DEFINITION DELAY

Minimum delay: 3 lines

Maximum delay: 110 seconds/2750 frames (625 line); 91 seconds/2750 frames (525 line)

Programme delay adjustable in seconds

HIGH DEFINITION DELAY

Minimum delay: 2 lines

Maximum delay: 20 seconds/500 frames (1080i50/720p50/1080PsF 23.98/1080PsF24); 16 seconds/500 frames (1080i59.94/720p59.94)

Programme delay adjustable in seconds

3GB/S DELAY

Minimum delay: 2 lines

Maximum delay: 10 seconds/500 frames (1080p50); 8 seconds/500 frames (1080p59.94)

Programme delay adjustable in seconds

ANALOGUE REFERENCE

Tri-level syncs or analogue Black and Burst or video

3Gb/s, HD or SD source can use either type of reference

AUDIO MUTE AND SHUFFLE

Group 1 is the default mute group Default operation is for audio mute. The system can be modified to perform audio shuffle instead or to mute additional channels of audio

VIDEO FREEZE AND BLACK

Default operation is for video freeze. The system can be modified to perform video black instead

USER SETTINGS FOR PROFANITY DELAY

Programme video delay in seconds (range is from one second to the maximum available for the video frame rate)

Delay to audio mute/video freeze from initiation in seconds

Delay to audio unmute/video unfreeze from initiation in seconds

Manual delayed mute/unmute (audio only)

Manual delayed mute/freeze (audio and video)

Auto delayed mute/unmute (audio only)

Auto delayed mute/unmute and freeze/unfreeze (audio and video)

Instant mute/unmute (audio only)

Instant mute/unmute and freeze/unfreeze (audio and video)

In above settings, mute can be replaced with shuffle and freeze replaced with black

Custom controls are available on request, including control of video freeze (or black) on its own

ANCILLARY DATA/ EMBEDDED AUDIO

Passes entire video stream, including embedded audio and HANC and VANC

STATUS MONITORING

Signal presence and alarm monitoring of signals

Status of profanity delay operation and audio status

CONTROL

VisionWeb Control is available via the web server on the frame and allows operation using a standard web browser on a PC or tablet. A custom GUI will be configured for each order to provide the controls required

Optional SBB-4 smart button box connects to the frame via Ethernet and provides four programmable LCD switches. The SBB-4 uses information from VisionWeb for delay timings etc. The four switches will be configured for each order to provide the controls required. Uses Power over Ethernet so must be used with PoE enabled switch

Cleanit Custom

Custom solutions are available to meet specific customer requirements. The specification will change depending on the options chosen.

ORDERING INFORMATION

Cleanit 1	Profanity delay system for video/embedded audio. Allows for audio mute or shuffle of up to 16 channels of embedded audio. Package includes ViViD 3G-20, TANDEM 310, RM41 and RM47 rear modules, connecting BNC links and VisionWeb web browser control. Frame and optional smart button box need to be ordered separately
Cleanit 2	Profanity delay system for video/discrete AES or analogue audio. Allows for audio mute or shuffle of up to eight channels of 110 ohm AES or four channels of analogue audio. Package includes ViViD 3G-20, TANDEM 320, RM41 and RM71 rear modules, audio piggybacks (either two DIOP4 for AES or one 3G-AIP2 and one 3G-AOP2 for analogue audio – please specify), connecting BNC links and VisionWeb web browser control. Frame and optional smart button box need to be ordered separately
Cleanit 3	Profanity delay system for video/embedded audio. Allows for audio mute or shuffle of up to 16 channels of embedded audio and for video freeze or black. Package includes ViViD 3G-20, SYNNER 310, RM41 and RM47 rear modules, connecting BNC links and VisionWeb web browser control. Frame and optional smart button box need to be ordered separately
Cleanit Custom	Any profanity delay system for video/embedded or discrete audio that does not fall into packages 1-3
Indigo DTSE	Desk top box with active front panel featuring smart CPU for one Cleanit profanity delay system. Includes one fixed power supply
Indigo 1SE-DP	1U frame with active front panel featuring smart CPU for up to three Cleanit profanity delay systems. Includes two fixed PS-80i power supplies for redundancy
Indigo 2SE	2U frame with active front panel featuring smart CPU for up to six Cleanit profanity delay systems. Requires one or two PSU-160i power supplies
PSU-160i	160 Watts power supply for Indigo 2SE frame. Indigo 2SE requires either one PSU-160i or two PSU-160i if power supply redundancy is required
IDT-RK	Rack mounting kit allowing Indigo DTSE to be mounted in a 19" rack
SBB-4	Smart button box with four programmable LCD switches. It is powered by PoE (Power over Ethernet) and therefore needs to be connected to a PoE enabled switch

Crystal Vision