Waveform Monitor
Audio & Loudness Logging

PT0800M - Waveform Monitor, Audio & Loudness System

PT0800M Data sheet
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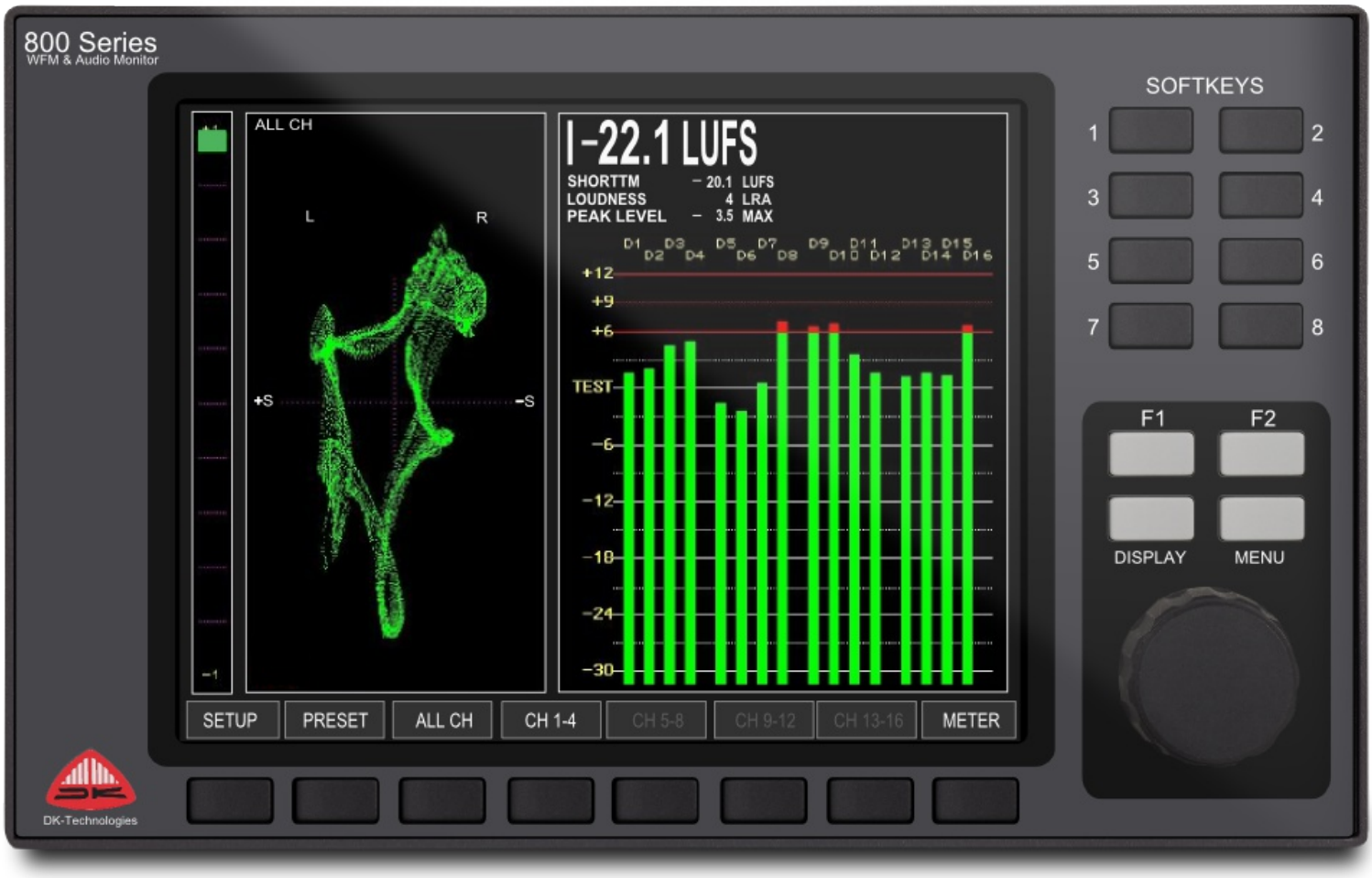
DK-Technologies

Introducing the PT0800M

The PT0800 introduces a unique combination of Audio, Loudness and Waveform monitoring at the highest precision, allowing it to blend into virtually any metering application.

With its modular hardware approach and highly customizable user interface, the PT0800 comes is one of the most versatile Waveform Monitors / Audio and Loudness Meters on the market today.



Bullets & Benefits

- High Bright TFT 6.8”
- 8 User Preset Keys, customizable
- 8 User Soft keys, complete customization
- Modular I/O: SDI, AES, Dolby E etc.
- Up to 64 Audio Inputs/16 outputs
- Full Audio Metering inc. stereo, 5.1 & multiple channels
- Loudness Logging, compliant with all major broadcast standards
- User definable Gamut error settings
- G, R, B, Y, Cb, Cr & Luminance display
- A/B Overlay & A/B Parade display
- Up to 2 or 4 Auto sensing SDI inputs
- Up to 4 Waveforms on single screen
- 2 or 4 Channel Waveform Monitor
- Num. display of user selectable timebase
- Universal 1/2 rack, 3RU or Desktop
- Picture preview
- Up to 4 SDI video inputs , 1 SDI output
- Self-sensing genlock input, Blackburst / Trilevel

Video Waveform Monitoring

The traditional video waveform display is used to show various aspects of the video components. Available video components are R, G, B, Y, Cb and Cr. The horizontal time base on the waveform display is selectable between line, field and frame and the vertical scale shows the signal level in percentage, voltage or hex values. Horizontal as well as vertical zooming is possible.

The parade display is a typical display mode in a monitoring situation. The video components are displayed side by side and amplitude errors are easily detected. In one view, many parameters of the video signal can be monitored to check and optimize the picture quality, e.g. gamut margin, dynamic range, exposure, black level, etc. In parade mode the levels of the different video components can easily be compared - e.g. for checking the white balance. There are three different parade modes which are Y, Cb, Cr, RGB and RGBY. Video overlay is also possible from selected elements on each channel to provide a combined image.

Loudness Logged & Reported

Loudness Industry Standards Compliance

PT0800M adheres to all of the loudness industry standards i.e. BS 1770-3, R128, A/85, ARIB etc.

Loudness Logging & Reporting

The included Logging Application (PC) enables detailed logging and reporting of any loudness as well as True Peak events. The Loudness measures are tracked and instantly stored to a local database.

Any Logging session and Report may be searched, analysed and graphically displayed for further investigation at any point in time.

Data may be exported as PDF or CSV files for further data treatment.

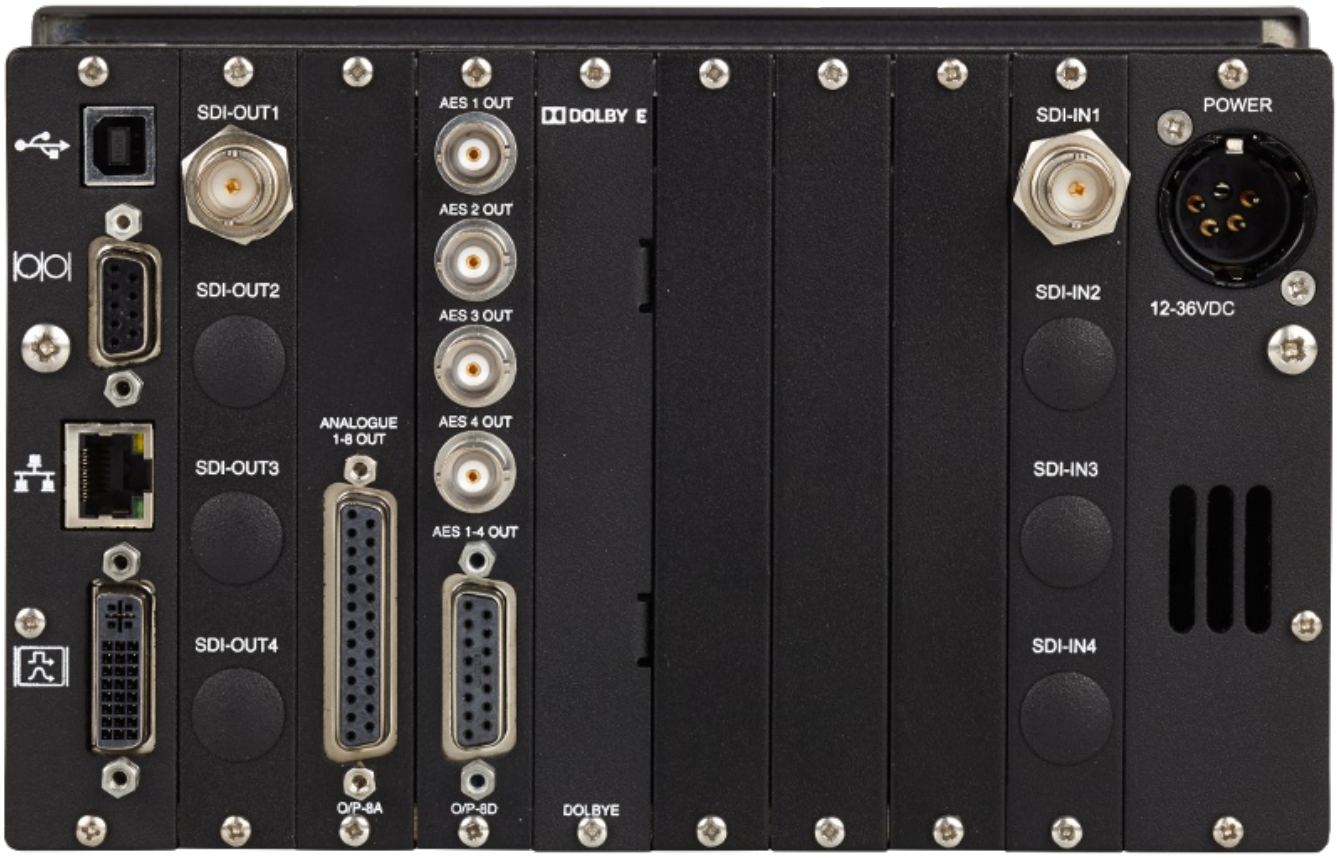
Overall, the Logging Application makes up the perfect background tool allowing you full hindsight on every session.

Dolby E Decoding

Dolby E encodes up to 8 channels of audio plus consumer and professional metadata information and carries it within a digital audio pair in a SDI stream or on a single AES3 audio channel. The PT0800M de-embeds the Dolby encoded signal, decodes that signal back to its constituent parts and then presents full audio metering of the signal and provides an output.
The PT0800M can deliver an audio down mix of the de-embedded and decoded signals derived using the coefficients set in the Dolby metadata. This can provide a health check as well as quality checking. Dolby metadata can also be shown onscreen

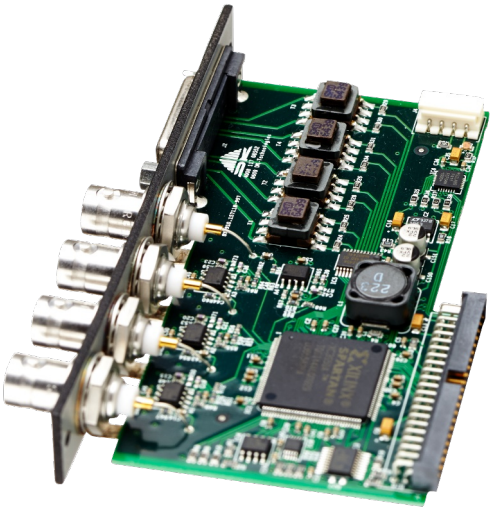
Modular Hardware

The modular hardware structure of the PT0800M allows you to completely deinfe the specific input and output formats, be it Analogue, AES, HD/SD SDI or Dolby E decoding.
Additionally, the PT0800M features both ethernet and USB control and Loudness Logging interfaces alongside the DVI external screen and remote interface.



Hardware Options & Accessories

PT0760M-ANAREF
External Analogue Black Burst/TriLevel reference with loop-through



PT0760M-SDI-2I
2 Channel HD/SD Input Module

PT0760M-SDI-2-4IU
Upgrade from 2-4 Channel HD/SD Video Input Module

PT0760M-O/P-8A
8 Channel Analogue Audio Output Module

PT0760M-O/P-8D
4 Channel Digital Audio Output Module (AES3)

PT0760M-I/P-8A
8 Channel Analogue Audio Input Module

PT0760M-I/P-8D
4 Channel Digital Audio Input Module (AES3)

PT0760M-DOLBYE
Dolby E/D (AC3) Decoder Module

PT0760M-DELAY1
Audio delay of each Audio Channel up to a maximum of 16 Channels for monitoring applications only.

PT0760M-DT/STAND
Desktop Stand for PT0760M

PT0760M-RM/KIT
19" 3RU Rack cabinet to house 2xPT0760M

PT0760M-RM/BLANK
Blank Panel for PT0760M-RM/KIT

Technical Specification

PT0760M-SDI-1I & 2I

SDI input specifications	
SMPTE-Formats	259M, 292M
Connector	BNC, 75Ω (Internally Terminated)
Return Loss	>15dB (5MHz – 1.5GHz)
Input Level	800mVp-p, ±10% (0m Cable)
Equalization Range	259M: 0-280m
(Belden 8281 cable type):	292M: 0-100m

PT0760M-SDI-1O

SDI output specifications	
SMPTE-Formats	259M, 292M
Connector	BNC, 75Ω (Internally Terminated)
Return Loss	>15dB (5MHz – 1.5GHz)
Output Level	800mVp-p, ±10%

PT0760M-ANAREF

External Analogue Video reference	
Connector	BNC, 75Ω (Not internally terminated)
Return Loss	>35dB (5MHz to 30MHz)
Input Level	1Vp-p typical, 2Vp-p (Maximum)
Supports video standards	SDTV: SMPTE 125M
	SMPTE 267M
	ITU-R BT .601 (480I, 576I)
	HDTV: SMPTE 296M(720P)
	SMPTE 274M(1080I/P)
	SMPTE RP 211 (1080PsF)

PT0760M-O/P-8A

8 Channel Analogue Audio Output Module	
Connector	25 pin Female D-Sub
Sample Rate with internal Sync	48kHz
Max. Output Level at 600Ω	+18dB (VCC=12V) +24dB (VCC >20V)
Bit Resolution	24 bit
Frequency Range	30Hz to 20kHz ±0.3dB
Sample rate range with external sync	32 kHz to 50 kHz
Group delay	<0.21 msec
Dynamic range A-weighted	>101 dB
Crosstalk at 1 kHz	< –96 dB
Signal-to-noise ratio	93 dB (typical)
Nominal output impedance	< 5 ohm

PT0760M-O/P-8D

4 Channel Digital Output Module (AES3)	
Connectors	15 pin Female D-Sub (AES3-2003) (AES3-2003)
	4 x BNC (AES3-id2001)
Sample rate with internal Sync	48kHz
Output Level (BNC)	75Ω: 1V
Output Level (D-Sub)	110Ω: 5V (balanced)
Bit Resolution	24 bit

PT0760M-I/P-8A

8 Channel Analogue Audio Input Module (balanced)	
Connector	25 pin Female D-Sub
Sample Rate with internal Sync	48kHz
Max. input Level	+24dB
Bit Resolution	24 bit
Frequency Range	30Hz to 20kHz ±0.3dB
Nominal input impedance	> 20kΩ
Group delay	<0.82 msec
Dynamic range, A-weighted	>103 dB
Crosstalk at 1 kHz	< –96 dB
Signal-to-noise ratio	93 dB (typical)

PT0760M-I/P-8D

4 Channel Digital Input Module (AES3)	
Connectors	15 pin Female D-Sub (AES3-2003) & 4 BNC (AES3-id-2001)
Sample rate internal	48kHz
Sample rate for input module	8kHz – 108kHz
Input Level	>500mV
Bit Resolution	24 bit
Input impedance	110Ω
Group delay	1.75 msec (Max.)
THD & Noise	–103 dB @ 1 kHz (typical)
Dynamic range	>120 dB

General Connectivity

External Display DVI-I (DVI or VGA)	640x480p60, 1280x720p60, 24 bit colour
Monitor, Control & Update	RS232 / USB (-A) / (RJ45)

Power Supply

Power input Connector	XLR4-male
Input Voltage	12-36VDC
Power Usage	15-40W
Physical Characteristics	Height: 133.4 mm
	Width: 215.2 mm
	Depth: 145 mm Max.
Weight	2.5kg (typical)
Environmental Conditions	
Storage temperature	-20° to +70°C
Operating ambient temperature	Operating ambient temperature
Humidity	Non-condensing (IEC 721)