AUDIO PROCESSOR

Model DB6400

Advanced FM and Digital Radio 4-Band Audio Processor with Backup Audio Player

The long years of experience at the top level of broadcasting technologies, as well as the undisputable expertise of our engineering team have brought forth a brand new audio processing tool - the DB6400 FM and Digital Radio 4-Band Audio Processor.

The DSP-based Stereo Encoder guarantees precision of the MPX signal with advanced peak control and two independently-configurable composite MPX outputs. The DB6400 offers perfect audio clarity no matter what the source material is. A complete processing architecture: Wide band AGC with “Intelligent Gating”, 4-band Parametric EQ, Bass FX, Treble FX, 4-Band HQ-Sound dynamic processor with Fidelity control and Sound Impact, 4-Band Limiter, FM Limiter with advanced distortion & pre-emphasis control and HD Lookahead Limiter.

Another feature that distinguishes the DB6400 from other products of its category is its Fallback function. This cutting-edge device is able to detect signal loss. In the case of silence at the main audio input, it automatically switches over to a backup source, thus ensuring a constant audio feed. What is more, an email notification is immediately sent which allows for an instant response on the part of your technical support team. Through the use of a standard FTP client, you have the opportunity to update the backup content at will via any PC. An additional asset is the automatic return to the main audio source as soon as the default input is restored. All silence sense parameters are user-defined.

Needless to say, the DB6400 comes with a user-friendly, comprehensive and well-organized user interface. Access is available through the front panel, remotely via TCP/IP and by using the WEB interface through iOS, Android or any other mobile device.

This one-of-a-kind device is the peak of DEVA’s engineering achievements combining simplicity of use, affordability of price and top performance and employing an array of technical parameters not found in any other device of its class.

FEATURES

- Software Control (over local network or the Internet using any Windows® PC)
- L/R Analog inputs and outputs and two independent Composite MPX outputs.
- Extensive set of factory presets and several customizable user presets
- Built-in web server for remote control access via TCP/IP connection
- 4-Band Dynamic Processor with Fidelity and Sound Impact System
- Integrated digital stereo generator with advanced peak control
- Professional AES/EBU, SPDIF and Optical Digital audio inputs
- Level Adjustable, Balanced Analog and Digital Audio Outputs
- Remotely upgradable firmware to ensure improved operation
- SNTP for automatic synchronization of the built-in clock
- Notifications on input/preset change via E-mail and SNMP
- LAN port for full TCP/IP remote control and monitoring
- Bright, wide view angle OLED and full-time LED meters
- Embedded SNMP agent with full device management
- USB communication interface for local connectivity
- Ultra low latency, all-digital DSP based design
- Stereo encoder integrated with audio processing
- Headphone output with front panel level control
- 4-Band Limiter
- 4-Band Parametric EQ
- HD Lookahead Limiter
- Advanced Wide Band AGC
- Easy to use WEB interface
- Bypass and Test tone Mode
- Easy Installation and Setup
- EMI-suppressed XLR connectors
- FM Controlled distortion Limiter
- Apple and Android devices support
- Tight peak control at all outputs
- Advanced Bass & Treble FX Controls
- Built in DSP-based RDS/RBDS encoder
- Protected access to the device settings
- Wide operating voltage range: 100-240V AC
- Externally synchronized output sample rate
- 19” Professional Case for high RF immunity
- Easy setup and control via the front panel

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SPECIFICATIONS

Analog Audio Input	
Connectors	Main - 2 XLR [1] [2]; Auxiliary - DB9 [1] [2]
Configuration	Stereo
Input level (0 dBFS)	[4] -8 dBu to +24 dBu peak
Impedance	Jumper selectable 600Ω / >10kΩ
A/D Conversion	24 bit; 48 kHz sample rate; Differential inputs

Analog Audio Output	
Connectors	2 XLR [1] [2]
Configuration	Stereo. [4] flat, pre- or de-emphasized
Out Level (0 dBFS)	[4] -12 to +24 dBu peak into ≥ 600Ω load
Source Impedance	20Ω
Load Impedance	>= 600Ω, balanced/unbalanced
Signal-to-Noise	>= 110 dB unweighted [5]
Distortion	<= 0.01 THDN [5]
D/A Conversion	24 bit; 192 kHz rate; Differential outputs

Remote Access Interface	
Configuration	TCP/IP via USB or Ethernet interface
USB Connector	USB type B connector
Ethernet Connector	Female RJ45,10/100 Mbps CAT5

Remote Control Interface (GPI)	
Connector	DB-9 male
Configuration	8 LED optocoupler, current limited cathode inputs. Anodes are connected to VCC int.
Control	Selects corresponding user preset if connected to GND

Environmental	
Operating Temperature	0° to 50°C / 32° to 122°F
Humidity	0–95% RH, non-condensing

Power	
Voltage	100-240 VAC, 50-60 Hz, 30VA
Connector	IEC, Fused and EMI-suppressed.

Digital Audio Input	
Connectors	Main - XLR [1] [3]; Auxiliary - DB9 [1] [3]
Configuration	Stereo AES3 standard, up to 24 bit resolution
Sampling Rate	22 kHz to 192 kHz
Input Gain	-20 dB to 20 dB, referenced to 0 dBFS, [4]

Digital Audio Output	
Connector	XLR [1] [3]
Configuration	Stereo AES3 standard, 24 bit resolution. Software selectable flat, pre- or de-emphasized
Sample Rate	Internal - 32,44.1,48,88.2,96,176.4,192kHz. Externally synced to Main AES3 digital input at 32 to 192 kHz. Software selectable.
Word Length	24 bit
Output Ref. Level	-20 to 0 dBFS software selectable

Composite Baseband Output	
Connectors	BNC unbalanced, chasis floating, [1]
Configuration	2 outputs. Independent level control. MPX+MPX, MPX+PILOT or BYPASS
Source impedance	75Ω
Load impedance	50Ω or greater
Output level	-18dBu to +18dBu
Pilot level	0% to 15%
D/A conversion	24 bit, differential
SNR / THD	>80 dB [6] / <0.01% [6]
Stereo Separation	>60dB
Crosstalk	>70dB
Pilot protection	>90dB rel. to 9% pilot injection, ±250 Hz
38 kHz suppression	>80dB (referenced to 100% modulation)

Size and Weight	
Dimensions (W;H;D)	483 x 44 x 180 mm / 19 x 1.875 x 7”
Shipping Weight	540 x 115 x 300 mm / 2.6kg

[1] - EMI suppressed
[2] - Electronically balanced
[3] - Transformer balanced and floating; 110Ω impedance
[4] - Software selectable

[5] - Bypass mode, digital input, flat, 20Hz-15kHz bandwidth, referenced to +12dBu output level
[6] - Bypass mode, flat, 20Hz - 15kHz bandwidth, digital input referenced to -10dBFS, unweighted

WE NEVER SPARE EFFORTS AND RESOURCES TO TURN OUR IDEAS INTO SUCCESSFUL PRODUCTS

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