



**BLONDER
TONGUE**
LABORATORIES, INC.

DAP SERIES

DIGITAL/ANALOG PROCESSOR

1x 8VSB/QAM ► 1x ANALOG RF/2x ASI

DAP (Digital/Analog Processor) accepts one input in 8VSB (digital off-air) or QAM (digital cable) format, and delivers one output in modulated analog RF format. DAP PLUS is the same as DAP, but includes the **AFD** broadcast package. AFD (Active Format Description) is a standard set of codes embedded in the video stream and used by digital television broadcasters to optimally display a 16:9 video format on an analog television set designed for 4:3 video format.

Both DAP and DAP PLUS can be equipped with an optional RNC module (Remote Network Card) for remote monitoring and control operations. One RNC module can monitor and control up to sixty-four DAP/DAP PLUS units installed in a headend. Additionally, DAP PLUS can be equipped with an optional ASI module (Asynchronous Serial Interface) that delivers two identical ASI stream outputs, allowing a seamless migration to an all-digital platform.

Remote Monitoring & Control via RNC Module



8VSB OR QAM



DAP
MODULATED
Analog RF

-OR-

DAP PLUS
SAME AS DAP
with **AFD**

-OR-

DAP PLUS ASI
SAME AS DAP PLUS
with **2x ASI**

FEATURES

- Agile Broadcast (UHF, VHF) and CATV (Standard, HRC, and IRC) channel assignments in the 54-864 MHz range
- Supports EAS (Emergency Alert System) input which can also be used as an IF (Intermediate Frequency) input
- Automated scanning captures all available off-air or cable programs present on the input signal
- Supports both the Primary and the SAP (Secondary Audio Program) audio programs
- Output power level range of +50 to +62 dBmV adjustable in 0.2 dB increments
- Supports Closed Captioning (EIA-608)

ORDERING INFORMATION

Model	Stock #	Description
DAP	6290	Digital-to-Analog Processor
DAP PLUS	6295	Digital-to-Analog Processor with AFD
DAP PLUS ASI	6295-10	DAP PLUS equipped with ASI module
DAP PLUS RNC	6295-12	DAP PLUS equipped with Remote Network Card (RNC) Module
DAP PLUS A/R	6295-22	DAP PLUS equipped with both the ASI and the RNC Modules
DAP RNC	6290-RNC	DAP equipped with Remote Network Card (RNC) Module

SPECIFICATIONS

INPUT

Connector:	"F" Female
Standards	
8VSB:	ATSC Digital Television A/53E
QAM:	ITU-T J.83 - Annex B (64 and 256 QAM)
8VSB Mode	
Tuning Range:	VHF (NTSC Ch. 2-13), UHF (NTSC Ch. 14-69)
Data Rate:	19.392 Mbps
Bandwidth:	6 MHz
Power Level:	-20 to +20 dBmV
QAM Mode	
Tuning Range:	CATV (NTSC Ch. 2-135)
Data Rate:	38.8 Mbps (QAM 256); 26.97 Mbps (QAM 64) — Auto Detect
Bandwidth:	6 MHz
Power Level:	-20 to +20 dBmV

IF (INTERMEDIATE FREQUENCY)

Connector:	"F" Female Input / "F" Female Output
Aural Frequency:	41.25 MHz
Visual Frequency:	45.75 MHz
Composite Loop Output	
Aural Carrier Level:	+20 dBmV
Visual Carrier Level:	+35 dBmV
Impedance:	75 Ω Input / 75 Ω Output
Return Loss:	16 dB Input / 15 dB Output
EAS/ALT IF	
Input Level:	+38 dBmV @ 45.75 MHz
Switch Isolation:	Greater than 60 dB

GENERAL

Dimensions (W x D x H):	19.0 x 18.625 x 1.75 inches (483 x 473 x 44 mm)
Power:	110 VAC/60 Hz (Fuse: 1 amp, 250 VDC, SloBlo)
Power Dissipation:	36 W
Weight:	7 lbs (3.2 kg)
Operating Temperature:	32 to 122 °F (0 to 50 °C)
Storage Temperature:	-13 to 158 °F (-25 to 70 °C)
Operating Humidity:	0 to 95% RH @ 35 °C max, non-condensation
Storage Humidity:	0 to 95% RH @ 35 °C max, non-condensation

RELATED PRODUCTS

Model	Description
AQM	ASI-to-QAM Modulator; Six modulators in 2RU
AQD	8VSB/QAM-to-Baseband Demodulator; Eight demodulators in 3RU
DQMx	4x1 ASI and 8VSB/QAM-to-QAM Multiplexer; 1RU

OUTPUT

Connectors	
Standard RF Output:	"F" Female
Optional ASI Output:	2 x BNC Female
Standard RF Output	
Frequency Range:	54 to 864 MHz
NTSC Channels:	UHF, VHF, CATV (Standard, HRC, & IRC)
Power Level:	+60 dBmV (120 dB μ V)
Power Level Range:	+50 to +62 dBmV (in 0.2 dB increments)
Broadband Noise:	-77 dBc (@ +60 dBmV output level, 4 MHz bandwidth)
Spurious:	-63 dBc
Impedance:	75 Ω
Return Loss:	15 dB
Aural/Visual Carrier Ratio:	-15 dB \pm 5
4.5 MHz Aural Inter-carrier Freq. Tolerance:	\pm 150 Hz; 32 to 122 °F (0 to 50 °C)
Channel Selectivity	
Adjacent Aural & Below:	-40 dB
Adjacent Picture & Above:	-40 dB \pm 5
Visual Carrier	
Frequency Tolerance	
Standard Channels:	\pm 20 kHz; 32 to 122 °F (0 to 50 °C)
FCC Aeronautical Channels:	\pm 5 kHz; 32 to 122 °F (0 to 50 °C)
Video Carrier	
Frequency Response:	1.5 dB Peak-to-Valley (fv-0.5 to fv+4.2 MHz)
Video-to-RMS Hum Ratio:	65 dB Peak-to-Peak
Signal-to-Noise Ratio:	58 dB (Weighted)
Differential Gain:	2.0% @ 87.5%
Differential Phase:	1.0 degree
Over-mod. Indicator:	87.5% \pm 2.5
Chrom./Luminance Delay:	Per FCC Requirements
Audio Carrier	
Frequency Response:	\pm 1.0 dB (referenced to 75 μ sec pre-emphasis)
Frequency Range:	20 Hz to 20 kHz
Signal-to-Noise Ratio:	60 dB @ 25 kHz Deviation
Total Harmonic Distortion:	0.6 %
Over-mod. Indicator:	50 kHz \pm 2
Optional ASI Output (DAP PLUS ONLY)	
Standard:	DVB-ASI; 50083-9
No. of Streams:	Two identical streams
Data Bit Rate:	270 Mbps
Transport Stream Rate:	160 Mbps (Max)
Output Impedance:	75 Ω

ALARMS/MONITORING/CONTROL

Indicators:	8VSB/QAM Lock (Green LED) Stereo Audio (Green LED) EAS or Alternate IF activated (Red LED) Audio Over-modulation (Red LED) Video Over-Modulation (Red LED)
Local Monitoring:	Front-panel, 16-character, 2-line LCD screen
Local Control:	Front-panel Navigational Key-pad Audio & Video Modulation Adjustment Aural Carrier Adjustment
Remote Monitoring/Control:	GUI-based menu via Web browser (Available if the optional RNC module is installed)