



DAP Plus Series

Digital to Analog Processor

The Digital to Analog Processor Plus (DAP Plus # 6295) is a complete single channel solution for delivering digital television programming over existing analog networks. The two additional features that differentiate the DAP Plus are the Broadcaster Firmware package and the ability to add an optional Asynchronous Serial Interface (ASI) output. The DAP Plus is a perfect transition unit for existing analog processors to ensure uninterrupted delivery of off-air signals from new digital broadcast sources.

The cornerstone of the Broadcaster Firmware package is the ability to process Active Format Description (AFD) that is inserted by some broadcasters. Broadcasters deploy AFDs to control the timing of Aspect Ratio switches more accurately than using MPEG signaling alone.

The ASI Output version of the DAP Plus (DAP Plus ASI, #6295 10) presents two ASI outputs that can be used to feed a digital multiplexer, like the Blonder Tongue DQMx Series, and still have a local monitoring port. These ASI streams run simultaneously with the analog output making the unit a future proof solution for processing any 8VSB or QAM sources. The ASI outputs will present ALL program streams from the 8VSB or QAM source, while the analog output will only present one program stream. The ASI outputs will maintain all channel identification information that is transmitted by the source.

Input and output tuning is easily accomplished with either the front panel menu interface or via the optional Remote Network Card (DAP Plus RNC #6295 12); only one per headend is needed for complete configuration and control. The DAP Plus supports standard EIA CATV, IRC, HRC and Broadcast channel plans in the 54—864 frequency range. The DAP Plus can have both the ASI output and the Remote Network Card options at the same time (DAP Plus A/R #6295 22)

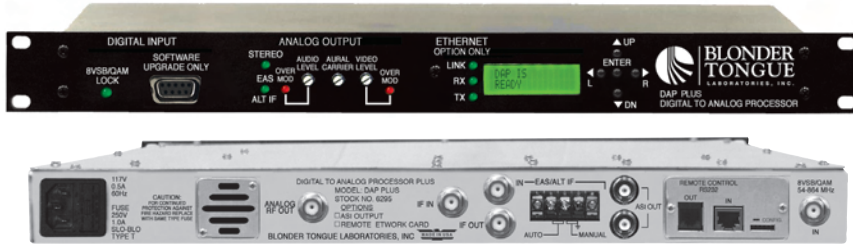
- Decodes HDTV or SDTV Digital Signals and Modulates to Analog for Transmission to Traditional TVs
- The ASI Output Version Decodes HDTV or SDTV Digital Signals and Provides Dual ASI Outputs
- Accepts All ATSC Digital Input Standards, 8VSB, 64 QAM, 256 QAM
- Outputs All Broadcast and CATV Channel Assignments in the 54-864 MHz Range
- Remotely Configure All DAPs in a Headend with Optional Remote Network Card in one DAP unit.
- Emergency Alert System (EAS) feature which can also be used as an alternate IF input
- Broadcaster Firmware Load Embraces AFD Control



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LABORATORIES, INC.

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Features

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Specifications

Input — 8VSB Mode

Tuning Range:
UHF 14-69, VHF 2-13 or CATV 2-135
Data Rate: 19.392 Mbps
Input Level: -20 to +20 dBmV
Modulation Type: 8VSB ATSC Compliant
Input Connector: "F" Female

Input — QAM Mode

Tuning Range: CATV 2-135
Data Rate:
QAM 64 Annex B: 26.9 Mbps,
Auto Detection
QAM 256 Annex B: 38.8 Mbps,
Auto Detection
Input Level: -20 to +20 dBmV
Input Connector: "F" Female

Output — RF

Frequency Range: 54-864 MHz
Channels: CATV, VHF, UHF (STD, HRC, IRC)
FCC Offset (pre-programmed): 0, +12.5, or 25 kHz
Output Level - Min: +60 dBmV
Output Level Range: +50 to +60 dBmV (0.2 dB steps)
Aural/Visual Carrier Ratio: -15, ±5 dB
Visual Carrier Frequency Tolerance
Standard Channels: ±20 kHz (max, 0° to 50° C)
FCC Aeronautical Channels:
±5 kHz (max, 0° to 50° C)
4.5 MHz Aural Inter-carrier Frequency Tolerance:
±150 Hz (0° to 50° C)
Channel Selectivity
Adjacent Aural and Below: -40 dB
Adjacent Picture and Above: -40 dB ±5 dB
Spurious Outputs: -63 dBc
C/N Ratio In-Channel: 63 dB (4 MHz BW)
Broadband Noise: -77 dBc (4 MHz BW)
Output Impedance: 75 Ω
Output Return Loss: 15 dB

Output -ASI

(DAP PLUS ASI & DAP PLUS A/R Only)
Number of Outputs: 2
Output Impedance: 75 Ω
ASI Standard: EN50083-9
(V2:3/98) DVB ASI
Data Bit Rate: 270 Mbps
Transport Stream Rate:
160 Mbps Max.

IF

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

Video

Frequency Response fv-0.5 MHz to fv+4.2 MHz: 1.5 dB P/V
P-P Video to RMS Hum Ratio: 65 dB
Video Signal-to-Noise Ratio, Weighted: 58 dB
Differential Gain: 2.0% (@ 87.5 %)
Differential Phase: 1.0°
C/L Delay Inequality: Meets FCC Requirements
Overmodulation Indicator: 87.5, ±2.5 %

Audio

Frequency Range: 20 Hz to 20 kHz
Frequency Response: ±1.0 dB (reference to standard 75 μ pre-emphasis)
Audio Signal-to-Noise:
60 dB (@25 KHz Dev.)
Total Harmonic Distortion: 0.6 %
Overmodulation Indicator: 50, ±2 kHz

General

Power Requirements
Voltage: 117, ±10% VAC
Frequency: 60 Hz
Power: 36 W
Fuse: 1.0 A
Temperature Range: 0 to +50 °C

Mechanical

Dimensions (W x H x D):
19.0 x 1.75 x 14.5 in.
483 x 44 x 368 mm
Weight: 7 lbs., 3.18 kg

Connectors

ATSC/QAM: "F" Female
IF Output: "F" Female
IF Input: "F" Female
RF Output: "F" Female
EAS/ALT IF: "F" Female
Remote Control: In/Out RJ-11
Optional ASI Outputs: BNC Female
Optional Network Card:
In RJ-45 / Out RJ-11

Controls

Video Level: Control
Aural Carrier Level: Control
Audio Level: Control
LCD: 2 Line x 16 Character Display
5 Push Button Navigation Switches

Indicators

Video Over Modulation: LED, Red
Audio Over Modulation: LED, Red
EAS/ALT IF: LED, Red
Stereo: LED, Green
Ethernet Option:
Link: LED, Green
RX: LED, Green
TX: LED, Green

Ordering Information

Stock No.	Model	Description
DAP PLUS	6295	Digital to Analog Processor, Upgradeable Chassis, Broadcaster Firmware
DAP PLUS ASI	6295 10	Digital to Analog Processor, ASI & Analog Outputs, Broadcaster Firmware
DAP PLUS RNC	6295 12	Digital to Analog Processor, Remote Network Card, Broadcaster Firmware
DAP PLUS A/R	6295 22	Digital to Analog Processor, ASI Outputs, Remote Network Card, Broadcaster Firmware



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