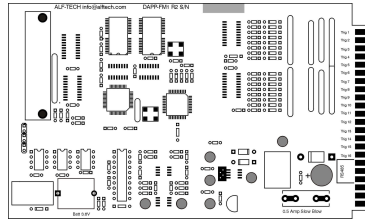




ALFTECH
YOUR PARTNER IN INDUSTRIAL INNOVATION



DAPP-FM1

Digital Audio Programmable Player Release 2

DAPP-FM1

HARDWARE FEATURES

- 16 minutes of near CD quality mono playback, or 34 minutes "high quality" mono voice playback
- Mono, balanced line out
- 16 hardware triggers
- 62 scheduled timer triggered events (optional)
- 62 RS-485 triggered events (optional)
- Each trigger can be individually programmed to be active high or low
- Each trigger can be assigned a priority level
- Programmable via standard PC parallel port

HARDWARE CONNECTIONS

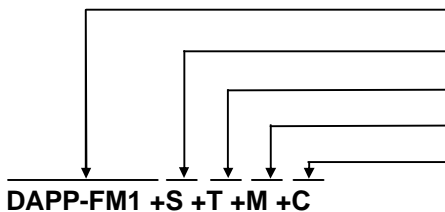
- 24V DC supply input
- 16 hardware triggers
- RS-485 (optional)
- Balanced audio line-out
- PC Parallel port connection

HARDWARE INDICATORS

- Power LED
- System operational LED
- System busy playing LED

HARDWARE ORDERING OPTIONS

Part Number



Description

- Frame Mount form factor, including all features as described above:
- Add: 62 × RS-485 serial triggers, twisted pair input;
- Add: 62 × programmable timers (Weekday(s): Hour: Minute);
- Add: 8 MByte memory, i.e. double the memory capacity;
- Add: 1 × 1.8m DB25Male to DB25Male Parallel Cable (pin-pin)
- (In any combination)

DAPP-CONSOLE

SOFTWARE DESCRIPTION

The DAPP-FM1 is supplied with DAPP-CONSOLE, a Microsoft® Windows based graphical user interface software, which allows easy setup, configuration and programming.

DAPP-CONSOLE uses any MP3 (MPEG 1 or 2, Layer 3 Audio), files for playback. Your audio files can be prepared in any program that can generate a MP3 compatible file.

With each trigger configuration an audio file is imported and thus assigned to an event that triggers its playback.

Optional timers can be programmed to trigger at a certain time of day, and on specific day(s) of the week. Optional RS-485 activated triggers can also be implemented to activate audio playback.

Once your setup and configuration is complete, the DAPP-CONSOLE will download it to the DAPP-FM1. Every audio file can use a different compression level to optimize compression and/or audio output quality.

Each audio file can be tested by playback from within the DAPP-CONSOLE software application.

After downloading and testing, the DAPP-FM1 can be disconnected from the PC, and installed on site. Data retention exceeds 10 years with no battery backup.

DAPP-FM1 DATASHEET AUGUST 2004

Specifications and Information contained in this manual are furnished for informational use only, and are subject to change at any time without notice, and should not be construed as a commitment by ALFTECH. ALFTECH assumes no responsibility or liability for any errors or inaccuracies that may appear in this manual, including the products and the software described in it.
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DAPP-CONSOLE

SOFTWARE REQUIREMENTS

- **Requires an IBM PC/AT Compatible Computer**
 - Available Parallel Port
 - Multi-media Sound Card & Speakers
- **Recommended Platforms:** Optional
MS Windows 2000 / NT4 Sp 3+ / XP with Internet Explorer 5
(or later) at a minimum screen resolution of 800×600 (Small Fonts)
- **Alternative Platforms (Not Recommended):** MS Windows 98 / 98SE / ME, Internet Explorer 5 (or later)

DAPP-FM1

RECOMMENDED OPERATING CONDITIONS

(0° C to + 55 °C)

PARAMETER	CONDITION	MIN	TYP	MAX	UNITS	NOTES
Supply Voltage		22	24	26	V	6
Trigger Voltage		0		24	V	1,6

ABSOLUTE MAXIMUM RATINGS *

Voltage on V Supply, Relative to Ground	0V to +34V
Voltage on Trigger pins, Relative to Ground	-60V to +60V
Operating Temperature	0 °C to +70 °C
Storage Temperature	5 °C to +55 °C

* Exposure to absolute maximum rating conditions for extended periods of time may affect reliability.

ELECTRICAL CHARACTERISTICS

(Over the Operating Range)

PARAMETER	CONDITION	MIN	TYP	MAX	UNITS	NOTES
Supply Current	24V DC		75		mA	
Power Consumption	22V to 26V		1.8		W	
Trigger input Current	Trigger pulled to GND		3.5		mA	
Trigger pull up resistance			6.8		kΩ	
LOW level Trigger Voltage				4	V	1
Minimum Trigger pulse width		30			mS	
Real Time Clock Accuracy	0°C to +40°C		±1		Min/Yr	2
Battery Backup time	Power removed from board		10		days	
Audio Output Level	0 dBFS digital		+3		dBu	3
Output Resistance	Hot or Cold to Gnd		22		Ω	
Frequency Response	22 Hz to 16 kHz		± 1.5		dB	4,5
Signal-to-Noise Ratio	-3 dBFS digital			90	dB	4,5
Total Harmonic Distortion	-3 dBFS digital			0.008	%	4,5
Memory data retention time		10			Yr	

NOTES

1. The trigger inputs should be left floating when not triggered, and must be pulled to GND when triggered, with a relay contact or an open collector transistor;
2. The Real Time Clock may vary to ±4 Min/Yr over 0°C to +85°C;
3. The output level is between the hot and cold terminals. Peak to Peak voltage of 3.096 V, RMS voltage of 1.095 V;
4. These parameters are not guaranteed;
5. Tested with 44100 Hz sample rate, 16 bits and 192 kbps data rate;
6. Power supply and all trigger inputs have reverse voltage protection;

DETAILED PIN DESCRIPTIONS

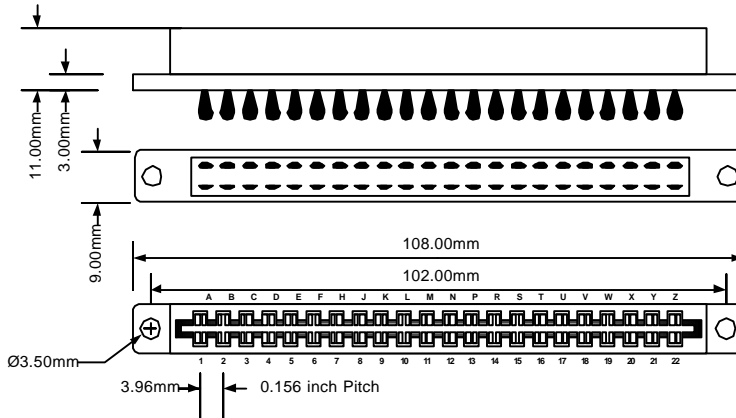
Pin Number	Description COMPONENT SIDE	Pin Number	Description COMPONENT SIDE
A	Trigger Input 1	N	Trigger Input 12
B	Trigger Input 2	P	Trigger Input 13
C	Trigger Input 3	R	Trigger Input 14
D	Trigger Input 4	S	Trigger Input 15
E	Trigger Input 5	T	Trigger Input 16
F	Trigger Input 6	U	RS485 hot
H	Trigger Input 7	V	RS485 cold
J	Trigger Input 8	W	RS485 Ground
K	Trigger Input 9	X	
L	Trigger Input 10	Y	24 volt Supply
M	Trigger Input 11	Z	Ground

Pin Number	Description SOLDER SIDE	Pin Number	Description SOLDER SIDE
1		12	
2		13	Output Hot
3		14	Output Cold
4		15	Output Ground
5		16	
6		17	
7		18	
8		19	
9		20	
10		21	24 volt Supply
11		22	Ground

PHYSICAL CONNECTION

0.156 inch PCB Edge Connector (Not Supplied)

A 22-way double-sided 0.156 inch (3.96 mm) pitch edge connector with solder tag terminations and gold plated contacts is used in Frame Mount Applications.



PHYSICAL LAYOUT AND DIMENSIONS

DAPP-FM1

(All Dimensions in mm)

