



# DPA-10-20-E: 0 – 10 MHz Squarewave Distribution Amplifier



## Key Features

- 0 – 10 MHz TTL Input
- 5,10,15 or 20 x TTL outputs
- Outputs drive 50 ohm loads
- Good channel isolation
- Optional Internal Oscillator
- Ideal for 1 pps distribution. Matched timing outputs.
- Available in other frequencies from 1 to 100 MHz
- Optional Alarm Relay, enabled on alarm condition
- High voltage output option. Up to 0 to 32V output
- Ask if you want any other option

## General Description

The DPA-10-20-E can be used to synchronize up to twenty instruments to a TTL input. The input can be from 0 to 10 MHz. A typical input is the 1 pps output from a GPS receiver or another timing generator.

## Outputs

There can be 5, 10, 15 or 20 outputs in a 1U case or 40 outputs in a 2U case. Each output is isolated from the input and each other. Therefore, the reference oscillator connected to the DPA-10-20-E is protected against load variations, short circuits etc. that may be applied to the outputs. The output frequency is exactly the same as the input.

For a 0 – 2 MHz input, all outputs are aligned to each other to typically within 1 ns for 5 or 10 outputs and 4 ns for 15 or 20 outputs.

## Options

Various options are available. If the option you require is not shown, just email us your requirements and we will advise whether it can be designed.

- Option 01: Increased output level. 0 to > 4.6V into 50 ohms.
- Option 02: G703 compliant outputs. Outputs levels are -1.2V to +1.2V into a 75  $\Omega$  load.
- Option 03: Internal DDS, 0-80 MHz in 1  $\mu$ Hz steps. Adjusted by RS232. This option is usually fitted along with option 02 to give 2.048 MHz G703 outputs from a 10 MHz squarewave input.
- Option 22: High Voltage Output. 0 - 24V output with TTL input.
- Option 23: Internal oscillator. Provides stand alone unit without need for an external input

## Applications

The DPA-10-20-E: 10 MHz Pulse Distribution Amplifier is ideal for use in calibration or standard laboratories, radio repair workshops or production facilities.

## Miscellaneous Information

The DPA-10-20-E is a highly reliable unit with an MTBF of over 60 years. The DPA-10-20-E is housed in a fully screened 19" rack mount case and operates from a 100 - 240 VAC supply (usable 90 – 260 VAC) or external 12 V DC. The DPA-10-20-E is CE marked for sale within the EEC.

### **DPA-10-20-E SPECIFICATIONS**

<b>Specification Parameter</b>	<b>Specification</b>	<b>Comments</b>
<b>Input</b>		
Frequency Range	0 to 10 MHz	Higher frequencies optionally available
Input Impedance (sinewave)	1 k ohm approx	
Input Level	TTL, 0 -3 V minimum	0-5.5V maximum
Connector	BNC	
<b>Outputs</b>		
Output Waveform	TTL	
Number of Outputs	5, 10, 15 or 20 outputs	40 in a 2U case
Output Frequency	Exactly the same as the input frequency	Divided output optionally available
Output level (TTL)	Typically, 0 -3.2V (50 Ω)	0 - 5V into open circuit
Output Level (option 02)	-1.2V to +1.2V into 75 Ω.	G703
DDS Generator (option 03)	0-80 MHz output	Requires 10 MHz squarewave input
Output Level (option 22)	0 - 24V	Source current 25 mA
Duty Cycle (with squarewave input)	Output duty same as input duty	
Jitter (1 second, Allan Deviation)	< 0.8 ps	Typical
Risetime	< 10 ns typical	Typically 4 to 7 ns
Delay Match between outputs (assumes input rise-time < 10 ns)	< 2 ns for 5 or 10 output versions < 10 ns for 15 or 20 output versions	Typically < 1 ns for 5 or 10 outputs Typically < 4 ns for 15 or 20 outputs
Propagation delay (input to output)	< 50 ns	Typically < 30 ns for 0-5V input
Connector	BNC	
<b>General</b>		
Power: AC / DC	100 - 240 VAC	30 Watts max / 1.0Amps with opt 03
Size and weight	483 x 300 x 44 mm and 4.6 kg	Width x Depth x Height
Ambient Operating Temperature	-10°C to +50 °C	

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Full specifications available from [www.ptsyst.com](http://www.ptsyst.com). Specifications and features subject to change without notice (101221)