Universal Switching Corporation

Specification Sheet DDU32-001

Dual 1x32 Digital Distribution Unit
LVTTL, ECL, PECL, LVPECL, LVDS Versions
Series DDU32

January 2016

General

Timing is everything, especially when talking about critical clock and data signals, or timing and trigger delivery. The DDU32 is a cost effective and purpose built unit for the distribution of digital signals. It comes in a standard dual 1x32 configuration, and is available for many digital signal applications.

Sized in a 1RU package, the unit is designed with rear facing high performance SMB connectors. The unit is rack mountable with an illuminated power switch on the front panel, and all I/O and power connectors on the rear. To assist with providing the slightest amount of skew between all ports, the dual inputs are positioned at the center rear of the unit. Unused outputs do not need to be terminated.

For clock and data distribution applications, many times the skew and alignment of data and clock signals is critical. This unit has a very precise skew design. An optional purpose built trigger and clock alignment feature is available with timing skew of <75ps through all ports.

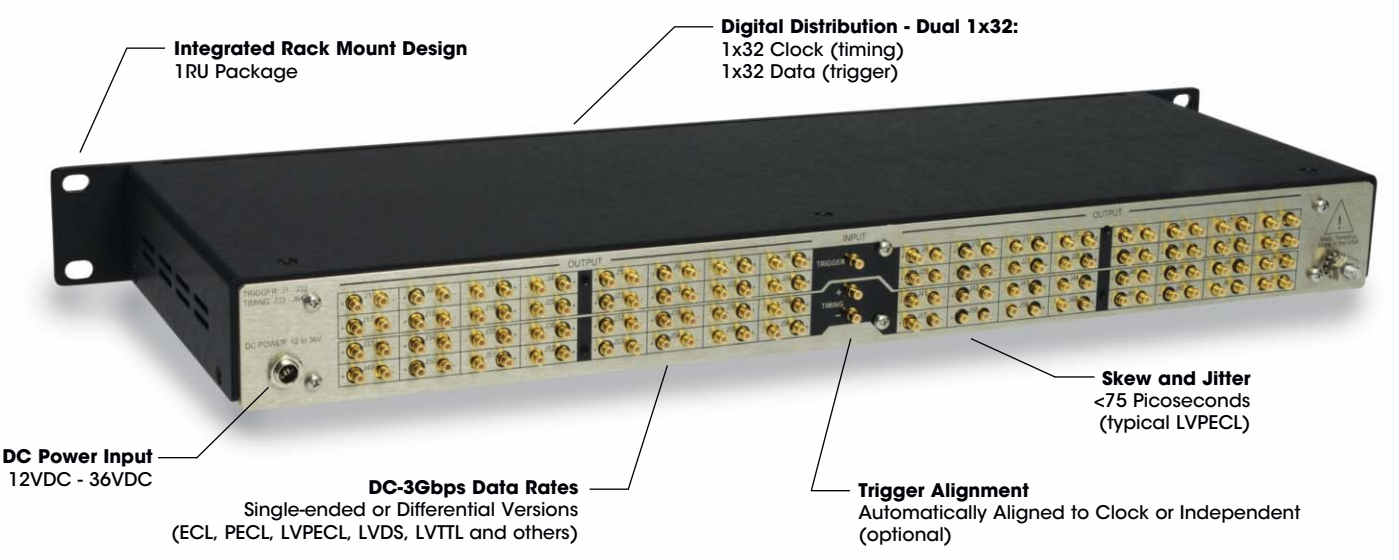
The unit provides an uncompromising combination of high performance and reliable digital distribution coupled with low cost. With a simple compact design, this product can supply over 3Gbps of performance.

Applications

- Radar installations
- Telemetry data distribution systems
- IRIG-B, TTL or PCM clock and data distribution
- Ground station and infrastructure facilities
- Critical event trigger applications

Features

- A choice of digital technology
- Very low channel to channel skew (<75ps)
- High performance SMB signal connectors
- Low cost and precise design
- Integrated rack mount design
- High reliability solid-state technology
- Illuminated power switch
- International AC power input, or direct DC input



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Number Assignment

The following table shows various available configurations of the DDU32. It is available with standard digital distribution, or with a special "trigger" alignment feature. Consult the factory for other combinations or special features.

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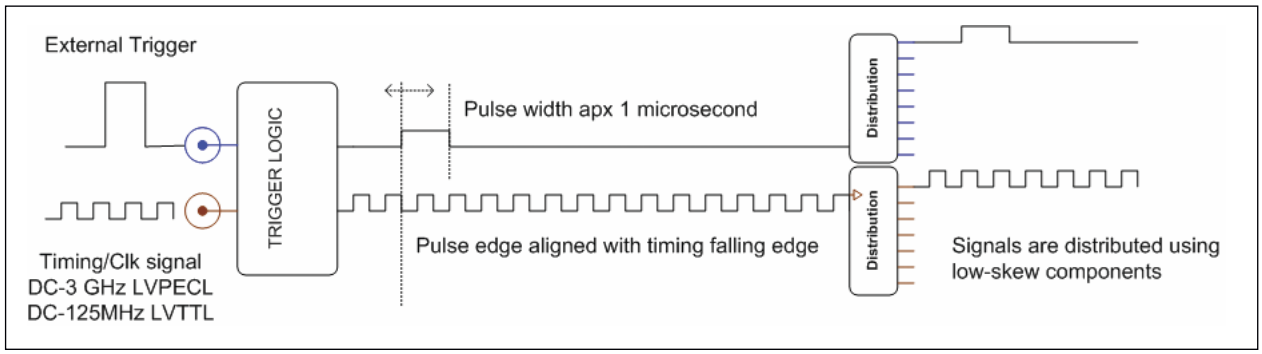
The following convention is used to define the digital signal input and output technology:

1 = LVCMOS (differential), 125Mbps
2 = LVTTL (single-ended), 125Mbps
3 = LVPECL (differential), 3Gbps
4 = LVDS (differential), 3Gbps
5 = LVECL (differential), 2Gbps
6 = PECL (differential), 400Mbps
7 = ECL (differential), 400Mbps

Model	Clock Input (timing)	Clock Output (timing)	Data Input (trigger)	Data Output (trigger)	Trigger Alignment Circuit
DDU32-2222-N	LVTTL (single-ended)	LVTTL (single-ended)	LVTTL (single-ended)	LVTTL (single-ended)	None
DDU32-2121-N	LVTTL (single-ended)	LVCMOS (differential)	LVTTL (single-ended)	LVCMOS (differential)	None
DDU32-2122-T1	LVTTL (single-ended)	LVCMOS (differential)	LVTTL (single-ended)	LVTTL (single-ended)	Yes - 1uS pulse
DDU32-4444-N	LVDS (differential)	LVDS (differential)	LVDS (differential)	LVDS (differential)	None

NOTE: Add -AC to the end of the model number to have an AC power adapter included with the unit (90-264VAC, 47-63Hz).

Optional Trigger Alignment Circuit (simplified)



System DDU32 Specifications

Signal connectors . . . . . .SMB
Signal connector location . . .Rear panel
Power connector . . . . . .2.5mm (center is positive)
Power switch . . . . . .Front panel
Cooling . . . . . .Convection
DC power requirements . . . . .12-36VDC, <20 Watts
Power protection . . . . . .Internal fuse
Weight . . . . . .<8 lbs
Size . . . . . .1.72H x 6.50D x 19.00W (1RU)
Operating temp . . . . . .0 to +60C
Non-operating temp . . . . . .-20 to +85C
Humidity . . . . . .0 to 90% (NC @ +25C)
MTBF . . . . . .>100,000 hours (estimated)
Warranty . . . . . .2 years
Certifications . . . . . .CE EN61010

Universal Switching's policy is one of continuous development. Consequently, the company reserves the right to vary from the descriptions and specifications shown in this publication.

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