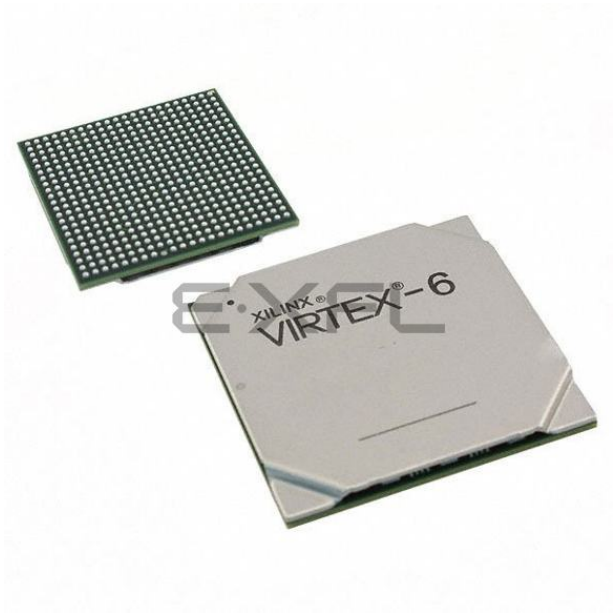
AMD Xilinx - XC6VLX365T-L1FF1759I Datasheet



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Understanding Embedded - FPGAs (Field Programmable Gate Array)

Embedded - FPGAs, or Field Programmable Gate Arrays, are advanced integrated circuits that offer unparalleled flexibility and performance for digital systems. Unlike traditional fixed-function logic devices, FPGAs can be programmed and reprogrammed to execute a wide array of logical operations, enabling customized functionality tailored to specific applications. This reprogrammability allows developers to iterate designs quickly and implement complex functions without the need for custom hardware.

Applications of Embedded - FPGAs

The versatility of Embedded - FPGAs makes them indispensable in numerous fields. In telecommunications.

Details	
Product Status	Active
Number of LABs/CLBs	28440
Number of Logic Elements/Cells	364032
Total RAM Bits	15335424
Number of I/O	720
Number of Gates	-
Voltage - Supply	0.91V ~ 0.97V
Mounting Type	Surface Mount
Operating Temperature	-40°C ~ 100°C (TJ)
Package / Case	1759-BBGA, FCBGA
Supplier Device Package	1759-FCBGA (42.5x42.5)
Purchase URL	https://www.e-xfl.com/product-detail/xilinx/xc6vlx365t-l1ff1759i

Virtex-6 Device Pin-to-Pin Input Parameter Guidelines

All devices are 100% functionally tested. The representative values for typical pin locations and normal clock loading are listed in Table 68. Values are expressed in nanoseconds unless otherwise noted.

Table 68: Global Clock Input Setup and Hold Without MMCM

Symbol	Description	Device	Speed Grade				Units
			-3	-2	-1	-1L	
Input Setup and Hold Time Relative to Global Clock Input Signal for LVCMOS25 Standard. (1)							
T_{PSFD}/ T_{PHFD}	Full Delay (Legacy Delay or Default Delay) Global Clock Input and IFF(2) without MMCM	XC6VLX75T	1.33/ 0.03	1.44/ 0.03	1.75/ 0.03	2.18/ –0.22	ns
		XC6VLX130T	1.31/ –0.08	1.54/ –0.08	1.88/ –0.08	2.31/ –0.12	ns
		XC6VLX195T	1.36/ –0.11	1.60/ –0.11	1.97/ –0.11	2.40/ –0.25	ns
		XC6VLX240T	1.36/ –0.11	1.60/ –0.11	1.97/ –0.11	2.40/ –0.25	ns
		XC6VLX365T	1.79/ –0.28	1.87/ –0.28	2.17/ –0.28	2.48/ –0.24	ns
		XC6VLX550T	N/A	2.22/ –0.12	2.36/ –0.12	2.77/ –0.26	ns
		XC6VLX760	N/A	2.19/ –0.24	2.35/ –0.24	2.71/ –0.21	ns
		XC6VSX315T	1.75/ –0.09	1.85/ –0.09	2.06/ –0.09	2.47/ –0.24	ns
		XC6VSX475T	N/A	2.14/ –0.14	2.31/ –0.14	2.71/ –0.30	ns
		XC6VHX250T	1.93/ –0.22	2.04/ –0.22	2.25/ –0.22	N/A	ns
		XC6VHX255T	1.81/ –0.33	2.11/ –0.33	2.56/ –0.33	N/A	ns
		XC6VHX380T	1.93/ –0.11	2.04/ –0.11	2.25/ –0.11	N/A	ns
		XC6VHX565T	N/A	2.20/ –0.12	2.39/ –0.12	N/A	ns
		XQ6VLX130T	N/A	1.54/ –0.08	1.88/ –0.08	2.31/ –0.12	ns
		XQ6VLX240T	N/A	1.60/ –0.11	1.97/ –0.11	2.40/ –0.25	ns
		XQ6VLX550T	N/A	N/A	2.36/ –0.12	2.77/ –0.26	ns
		XQ6VSX315T	N/A	1.85/ –0.09	2.06/ –0.09	2.47/ –0.24	ns
		XQ6VSX475T	N/A	N/A	2.31/ –0.14	2.71/ –0.30	ns

Notes:

1. Setup and Hold times are measured over worst case conditions (process, voltage, temperature). Setup time is measured relative to the Global Clock input signal using the slowest process, highest temperature, and lowest voltage. Hold time is measured relative to the Global Clock input signal using the fastest process, lowest temperature, and highest voltage.
2. IFF = Input Flip-Flop or Latch
3. A Zero "0" Hold Time listing indicates no hold time or a negative hold time. Negative values can not be guaranteed "best-case", but if a "0" is listed, there is no positive hold time.