



Intel® Xeon® W-3175X Processor Thermal Design Power (TDP) and Power Rail DC Specifications

Datasheet Addendum

Revision 001

January 2019



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Revision History

Revision Number	Description	Revision Date
001	Initial Release	January 2019

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1 Preface

The purpose of this Addendum is to provide Intel® Xeon® W-3175X Processor TDP and Power Rails DC Specifications.

Intel® Xeon® W-3175X Processor is based on the following collaterals:

Document Title	Document Number
Intel Xeon® Processor Scalable Family Datasheet, Volume 1	336062
Intel® Xeon® Processor Scalable Family Datasheet, Volume 2	336063
Intel® Xeon® Processor Scalable Family Specification Update	336065

The Addendum redefines the TDP, Package Turbo, Processor Power Rails DC Specs and Processor Thermal Specs explained in the tables below.

Table 1. TDP Specification

Segment and Package	Processor IA Cores	Configuration	Processor IA Core Frequency	Thermal Design Power (TDP)
HEDT/WS, FCLGA3647	28 Cores	Base	3.1 Ghz	255W

Table 2. Package Turbo Specification

Processor IA Cores	Parameter	Default
28 Cores	PL1 Tau	32 Seconds
	PL1	255 W
	PL2	510 W

Table 3. Processor Power Rails DC Specification

Symbol	Description	Max	Unit
VCCin ICCmax	Processor Core ICC	327	A
VCCsa ICCmax	System Agent ICC	16	A
VCCio ICCmax	Processor IO ring ICC	21	A
VCCD ICCmax	Processor DRAM interface ICC	8	A
VCC33 ICCmax	Processor 3.3 rail ICC	0.075	A
DC LL	DC Load Line within VR regulation capability	0.85	mOhms
AC LL	AC Load Line	0.85	mOhms
Pmax	Instantaneous CPU package power Max under virus condition	970	W
C6 Power	CPU power in C6 state	12	W



Table 4. Processor Thermal Specification

Processor Name	TDP	Heat Sink FF	C1E Offset Disable	Tcontrol (°C)	TCASE (°C)	Tjunction (°C)	Correction Factor (°C/W)
W-3175X	255 W	Liquid	0	10	70	85	0.006

Table 5. Processor VCCin Specification

Processor Name	Parameter	Min	Typ	Max	Comment
W-3175X	VCCin	$VID - (RLL * I_{out}) + 0.022$	$VID - (RLL * I_{out})$	$VID - (RLL * I_{out}) - 0.022$	Processor Input Voltage with respect to VSS. RLL = 0.85 mOhms VID = 1.9V Iout = 320A

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