SynJet® XFlow 30 Standard Cooler

SynJet cooling technology provides the most reliable thermal management solution available. This cooler has been developed by Nuventix as a general purpose cooling solution for ICs such as FPGAs, microprocessors, and ASICs as well as LED cooling.

- Cools up to 25 W[4]
- Reliable 100K Hours Lifetime
- Energy Efficient
- 5 yr Warranty
- Small Form Factor
- 85°C Operating Temp

Specifications[1]

Thermal & Acoustic

SynJet Setting[2]	Θs-a[3]	TDP[4] (W)	SPL (dBA)[5]	Wire Connections	
Standard	1.63	25	25	Red to +VDC Black to Ground	
PWM at 100% duty cycle				Red to +VDC Black to Ground Blue to PWM Signal	

Electrical

SynJet Setting[2]	Voltage (VDC) +/- 10%	Current (mA)[6]			Pavg (mW)	Voltage (VDC) +/- 10%	Current (mA)[6]			Pavg (mW)
		Imin	Iavg	Ipeak			Imin	Iavg	Ipeak	
Standard PWM at 100% duty cycle	5	20	70	140	350	12	10	46	92	550

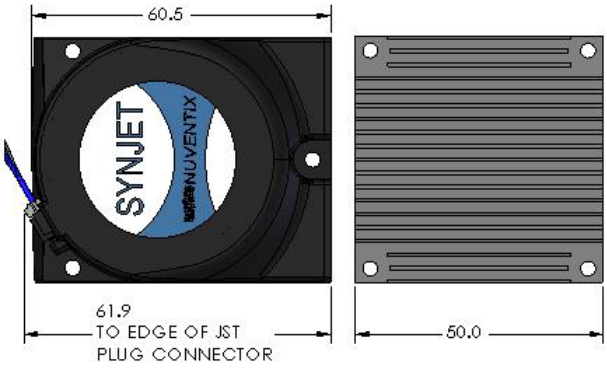
Environmental

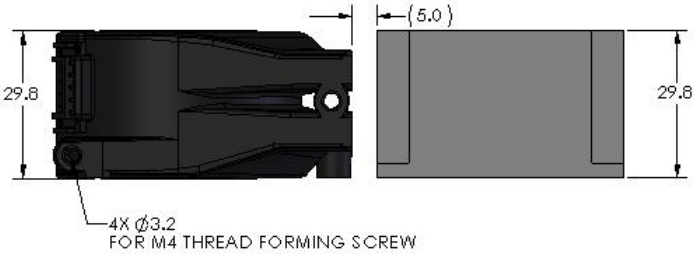
All Settings	Min	Max	Units	Conditions
Operating Temperature	-40	85	°C	Air temperature surrounding cooler
Storage Temperature	-50	95	°C	Air temperature surrounding cooler
Storage Altitude		15K	m	Above sea level
Operating Relative Humidity	5	95	%	Non-condensing
Weight		125	g	SynJet with heat sink
Reliability		100K	hrs	L10 @ 60°C
Regulatory Compliance				RoHS, UL, FCC Part 15 Class B, CE

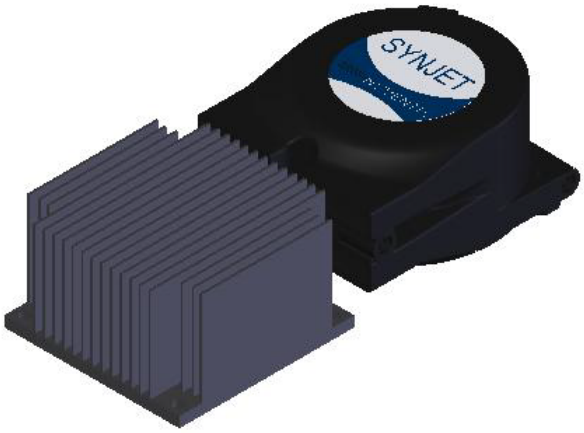
[1] All values are typical at 25ºC unless otherwise stated.
[2] The Level Select model should be used for discrete performance settings. Follow the instructions in the Product Design Guide for adjusting settings.
[3] Thermal resistance values are given as reference only and are measured in free air without airflow obstructions. Thermal resistance is measured from the bottom middle of the heat sink to ambient air measured at the inlet to the SynJet, with a heat source at least 15cm^2 using the reference heat sink. Actual thermal performance may vary by application and final product design should be tested to assure proper thermal performance.
[4] Thermal Design Power is based on a 40ºC temperature rise of heat sink mounting surface above ambient temperature around cooler.
[5] Sound Pressure Level is measured at 1 meter distance per ISO 7779.
[6] The SynJet has a time varying current. The current waveform is sinusoidal and the average current (Iavg) is used to calculate the average power consumption (Pavg) at nominal input voltage (VDC). See the Electrical section in the Product Design Guide for a detailed explanation.

Mechanical

SynJet Cooling Solution

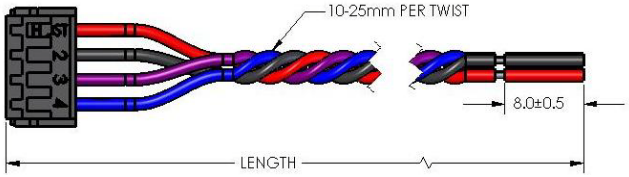






All dimensions are nominal and in mm unless otherwise stated. See product drawings for more detail.

SynJet Wire Harness



Connector Pinout

Pin	Wire Color	Symbol	Description
1	Red	+VDC	5 V or 12 V depending on model
2	Black	GND	Ground
3	Purple	CTRL2	Status signal for PWM model
4	Blue	CTRL1	PWM input for PWM model

IMPORTANT: SynJets should be completely wired to the power supply before the power supply is energized. The power supply should be turned off before the SynJet Cooler is disconnected. SynJet Coolers are not designed for “hot swap” or “hot plug” applications.

Part Numbers

Part Number	Description	Notes
SSCCS-IM005-003	SynJet, XFlow 30, Standard, 5V, PWM, Black	Use PWM input to control performance setting
SSCCS-IM012-002	SynJet, XFlow 30, Standard, 12V, PWM, Black	Use PWM input to control performance setting
HSCCS-CALBL-001	Heat Sink, XFlow 30, Al, Black	Mounting surface does not have mounting holes
WALLS-C4150-001	Wire Harness, 4-Wire, 150 mm Length	Contact sales for other lengths
WALLS-C4600-001	Wire Harness, 4-Wire, 600 mm Length	Contact sales for other lengths