SynJet® XFlow 30 Cooler 40 W

SynJet cooling technology provides the most reliable thermal management solution available. This versatile cooling solution has been developed by Nuventix, for cooling a wide array of devices such as Microprocessors, FPGAs, Network Chips, and LEDs. The XFlow 30 can be used with the reference heat sink or used with a customer designed heat sink for cooling higher power devices.

- High operating temperature up to 85°C
- Cools up to 40W
- 100K Hours Lifetime
- Energy Efficient

Specifications[1]

Thermal & Acoustic

SynJet Setting[2]	Θs-a[3]	TDP[4] (W)	SPL (dBA)[5]
High Performance PWM at 100% duty cycle	1.0	40	38

Electrical

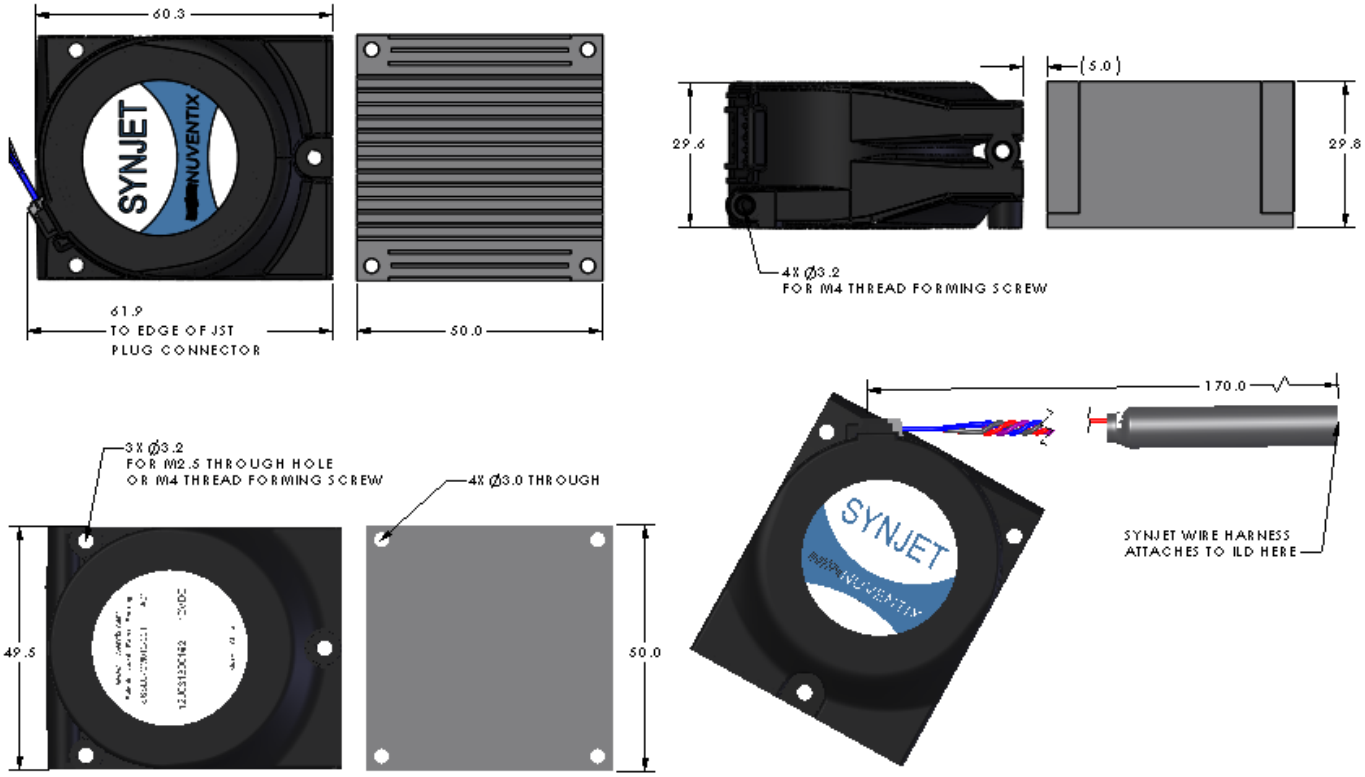
SynJet Setting[2]	Voltage (VDC) +/- 10%	Current (mA)[6]			Pavg (mW)	Voltage (VDC) +/- 10%	Current (mA)[6]			Pavg (mW)
		Imin	Iavg	Ipeak			Imin	Iavg	Ipeak	
High Performance PWM at 100% duty cycle	5	20	200	400	1.0	12	10	100	200	1.2

Environmental

All Settings	Min	Max	Units	Conditions
Operating Temperature	-40	85	°C	Air temperature surrounding cooler
Storage Temperature	-40	85	°C	Air temperature surrounding cooler
Storage Altitude		15K	m	Above sea level
Operating Relative Humidity	5	95	%	Non-condensing
Weight		135	g	SynJet with Heatsink
Reliability		100K	hrs	L10 @ 60°C
Regulatory Compliance				CE, UL, FCC Part 15 Class B, RoHS

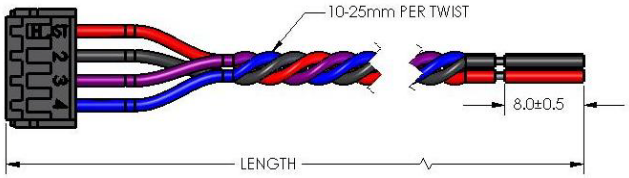
[1] All specifications are typical at 25ºC unless otherwise stated.
[2] The XFLow 30 will operate at maximum cooling level by applying power only or can be used with a PWM control to change the cooling level.
[3] Thermal resistance values are given as reference only and are measured in free air without 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 12 cm^2 using 40W 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



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

SynJet Wire Harness



Connector Pinout

Pin	Symbol	Description
1	+VDC	Input voltage; 5V or 12V depending on model
2	GND	Ground
3	CTRL2	Status signal
4	CTRL1	Input for PWM control

Part Numbers

Part Number	Description	Notes
SSCCS-IM005-002-D	SynJet, XFlow 30, High Performance PWM, 5V, ILD	Use with PWM input to control cooling level
SSCCS-IM012-001-D	SynJet, XFlow 30, High Performance PWM, 12V, ILD	Use with PWM input to control cooling level
HSCCS-CALBL-001	Heatsink, 40 W, Chip Cooler 30, Al, Black	
WALLS-C4150-001	SynJet Wire Harness, 4 wire, 150 mm length	