

# Heat Sinks for Multi-Mode Transmitters



## Keep Your Cool

Even the most durable and efficient transmitters need substantial heat mitigation to ensure long life and problem-free operation. We have solutions to keep your equipment within operating-temperature specs, whether in the air or on the ground. Quasonix is... Reinventing Telemetry™.

Quasonix offers several heat sinks for use with TIMTER™ and nanoTX™ transmitters. The heat sink required for a particular transmitter depends heavily on the installation. Factors such as altitude, air temperature, air flow, and mass of the mounting surface have a significant impact on the flow of heat away from the transmitter.

Please contact Quasonix for heat sink recommendations for your particular transmitter. Regardless of the heat sink, Quasonix strongly suggests using a thermal pad, such as Q-Pad® II from Bergquist.

### Bench Heat Sink

Our copper heat sink with fan is compatible with most TIMTER and nanoTX models, with tapped holes to make mounting quick and easy. It includes an AC power supply for North American operation. For ground applications only.

### Airborne IntelliCool™

This heat sink has an integral fan, power supply, and temperature-controlled power-on at +37°C. Two MDM-15 connectors and a provided pigtail cable allow the heat sink to draw power directly from a TIMTER transmitter, eliminating the need for a separate external power supply.

By regulating fan speed to compensate for changes in air pressure/density under high-altitude conditions, Quasonix's IntelliCool heat sink provides excellent thermal protection for a variety of applications.

The male and female heat sink connectors, along with the dual-gender cable, enable connection to any TIMTER transmitter. An SMA extender is included to ensure convenient RF connector access.

# Bench Heat Sink Specifications (QSX-AC-32-HS-12V)

## Overall

Dimension	3.94" (L) x 2.97" (W) x 1.1" (H)
Weight	442 grams

## Fan

Bearing System	Dual ball bearing
CFM	10.48
Connector	5.5 x 2.5 mm
Lead Wire	UL1430 #26AWG
Noise Level	51 dBA
Power	7.2 W
Rated Voltage	12 VDC
Safety Approvals (Standard)	CE, UL
Size	75 mm x 75 mm x 15 mm
Speed	5500 rpm
Static Pressure	17.58 max mmH2O

## Heat Sink

Fin Pitch	1.5 mm
Fin Thickness	~0.45 mm
Material	Copper C1020

## Power Supply

Current Output	1A
Polarization	Positive Center
Power Output	12 W
Voltage Input	100V–240V ~50/60Hz
Voltage Output	+12 VDC



**Bench Heat Sink (P/N QSX-AC-32-HS-12V) –**  
Use for TIMTER, Dual TIMTER, and nanoTX transmitter testing at the bench.

# IntelliCool Heat Sink Specifications

Overall	2 x 3 IntelliCool heat sink	4 x 3 IntelliCool heat sink
Current Draw	15 mA (idle); 140 mA (running) @ 28 V	30 mA (idle); 200 mA (running) @ 28 V
Dimension	3.170" (L) x 2.000" (W) x 1.250" (H)	3.170" (L) x 4.000" (W) x 1.250" (H)
Voltage Input	28 V	28 V
Voltage Range	21 V – 34 V	21 V – 34 V
Weight	150 grams	300 grams

Fans		
Number of Fans	1	2
Bearing System	Dual ball bearing	Dual ball bearing
CFM (per fan)	14.83	14.83
Material	Plastic (UL 94V-0)	Plastic (UL 94V-0)
Noise Level (per fan)	41.5 dBA	41.5 dBA
Regulated Speed	11000 rpm	11000 rpm
Static Pressure	15.26 max mmH2O	15.26 max mmH2O

Heat Sink		
Fin Pitch	0.235"	0.235"
Fin Thickness	0.05"	0.05"
Material	6061-T6	6061-T6
Fin Height	0.940"	0.940"
Number of Fins	9	17



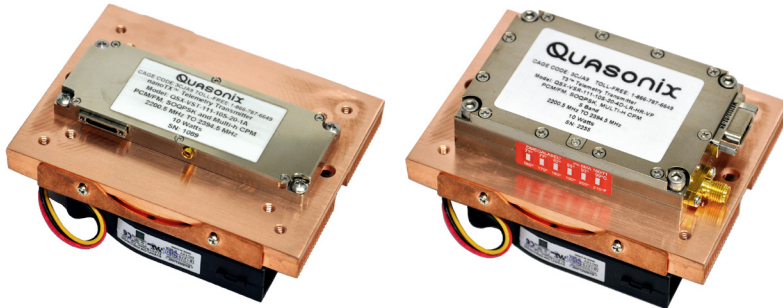
▶ **2 x 3 IntelliCool Heat Sink**  
**(P/N QSX-AC-32-HS-28V-SP)**  
 – For use with Quasonix TIMTER transmitters

**4 x 3 IntelliCool Heat Sink (P/N QSX-AC-34-HS-28V-SP)** –  
 For use with Quasonix legacy side-by-side Dual TIMTER transmitters
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## Sample Heat Sink Applications

It is important that the bottom surface (the face opposite the product label) be securely attached to a baseplate capable of dissipating the power produced by the transmitter model in use. This mounting baseplate must be flat, smooth, and clean.



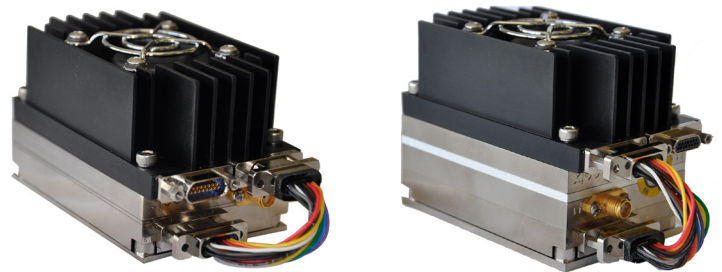
### Bench Heat Sink (P/N: QSX-AC-32-HS-12V)

Shown with mounted nanoTX and standard TIMTER transmitters.

### IntelliCool Heat Sink (2 x 3) (P/N: QSX-AC-32-HS-28V-SP)

Shown with mounted TIMTER 04AB package and TIMTER 07AE package.

MDM-15 connector enables use with either gender on transmitters.



**ATTENTION:** Do not operate the transmitter without a proper heat sink. Failure to do so may lead to permanent damage to the unit and will void the warranty.

Overheating can occur in a matter of seconds when a transmitter is not properly heat-sinked. In absolutely no case should any type of stickers or labels be applied to the bottom surface of the transmitter.

### IntelliCool Heat Sink (4 x 3) (P/N: QSX-AC-34-HS-28V-SP)

Shown with mounted TIMTER 24xx package MDM-15 connectors enable use with either gender on transmitters.

SMA extender(s) ensure convenient RF connector access.



# Quasonix

All Quasonix products are under U.S. Dept. of Commerce jurisdiction. Transmitters are categorized as EAR99.  
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