# **PX5** USB HID to Stereo Audio Interface PCI Express Mini Card

- » PCI Express Mini Card form factor
- » USB interface for maximum compatibility
- » HID interface to operating system
- » 1 stereo input and 1 stereo output
- » Differential line inputs and outputs
- » Designed for cable lengths of up to 150 m
- » -40°C to +85°C

## Analog Audio Interface

The PX5 is a PCI Express Mini Card providing an industrygrade USB HID to analog audio interface. It supports one differential stereo audio IN and one differential stereo audio OUT channel at line level.

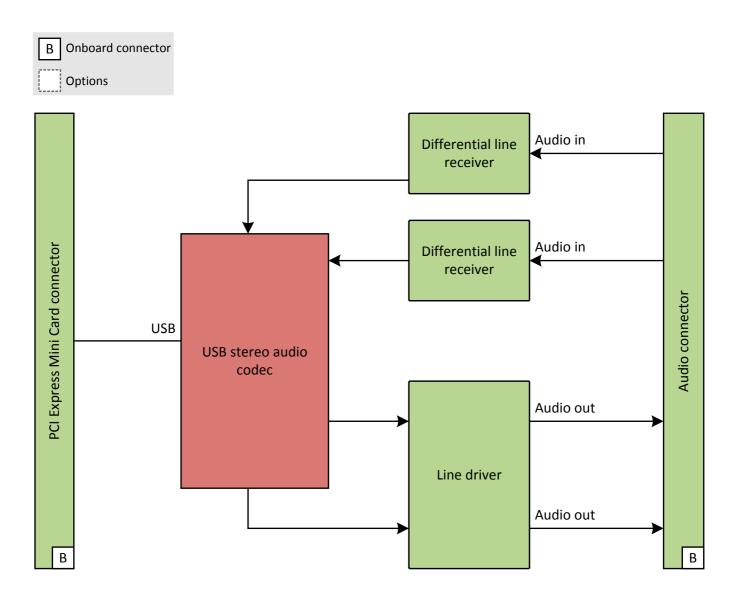


## **Rugged Design for Rail and Aerospace**

Thanks to its standardized form factor the PX5 can be used as an audio extension for CompactPCI and CompactPCI Serial systems as well as box and panel PCs. Its rugged and compact design makes it especially suitable for the rail and aerospace markets, for example for ELA systems, in-flight and rolling stock entertainment systems, cockpit-to-passenger communication in planes, inter-phone or intercom systems.











Audio	<ul> <li>Analog signal configuration <ul> <li>1 stereo audio IN</li> <li>1 stereo audio OUT</li> </ul> </li> <li>Input port line drivers: differential line in</li> <li>Output port line drivers: differential line out</li> <li>Input signal-to-noise ratio <ul> <li>80 dB</li> </ul> </li> <li>Input dynamic range <ul> <li>80 dB</li> </ul> </li> <li>Output signal-to-noise ratio <ul> <li>80 dB</li> </ul> </li> <li>Output signal-to-noise ratio</li> <li>80 dB</li> </ul> <li>Output dynamic range <ul> <li>80 dB</li> </ul> </li> <li>Output dynamic range <ul> <li>80 dB</li> </ul> </li> <li>Output dynamic range <ul> <li>80 dB</li> </ul> </li>
Product Standard	PCI Express Mini Card: Full-Mini; USB 2.0
Electrical Specifications	<ul> <li>Supply voltage <ul> <li>Module is powered through PCI Express Mini Card interface only (3.3 V)</li> </ul> </li> <li>Output voltage <ul> <li>2 Vrms max. with 150 Ohm resistive load</li> </ul> </li> <li>Input impedance <ul> <li>24 kOhm</li> </ul> </li> <li>Output impedance <ul> <li>100 Ohm max.</li> </ul> </li> <li>Cable length <ul> <li>150 m max.</li> </ul> </li> <li>Power consumption <ul> <li>3 W max.</li> </ul> </li> </ul>
Mechanical Specifications	<ul> <li>Dimensions: 30 mm x 50.95 mm x 5 mm (PCI Express Full-Mini Card)</li> <li>Weight: 8 g (PX5 only); 15 g (PX5 with cable)</li> </ul>
Environmental Specifications	<ul> <li>Temperature range (operation): <ul> <li>-40°C to +85°C, compliant with EN 50155, class T1, T2, T3 or TX</li> </ul> </li> <li>Temperature range (storage): -40°C to +85°C</li> <li>Cooling concept <ul> <li>Air-cooled, 1.0 m/s min.</li> </ul> </li> <li>Relative humidity (operation): max. 95% non-condensing (EN 50155/EN 60068-2-30)</li> <li>Relative humidity (storage): max. 95% non-condensing (EN 50155/EN 60068-2-30)</li> <li>Altitude: -300 m to +3000 m</li> <li>Shock: EN 50155 (12.2.11) / EN 61373 category 1 class B body mounted</li> <li>Vibration: EN 50155 (12.2.11) / EN 61373 category 1 class B body mounted</li> </ul>
Reliability	MTBF: 500 000 h @ 40°C according to IEC/TR 62380 (RDF 2000)
Safety	<ul> <li>Flammability (PCBs)</li> <li>UL 94 V-0</li> </ul>
EMC	<ul> <li>EN 50121-3-2 (table 4) (EMC in rolling stock)</li> <li>EN 61000-4-2/EN 50121-3-2 (table 9) (ESD)</li> <li>EN 61000-4-3/EN 50121-3-2 (table 9) (electromagnetic field immunity)</li> <li>EN 61000-4-4/EN 50121-3-2 (table 8) (burst)</li> <li>EN 61000-4-6/EN 50121-3-2 (table 7) (immunity to conducted disturbances)</li> </ul>





#### Germany

#### MEN Mikro Elektronik GmbH

Neuwieder Straße 3-7 90411 Nuremberg Phone +49-911-99 33 5-0

sales@men.de www.men.de

#### USA

#### MEN Micro Inc.

860 Penllyn Blue Bell Pike Blue Bell, PA 19422 Phone 215-542-9575

sales@menmicro.com www.menmicro.com France

### MEN Mikro Elektronik SAS

18, rue René Cassin ZA de la Châtelaine 74240 Gaillard Phone +33-450-955-312

sales@men-france.fr www.men-france.fr

China

#### MEN Mikro Elektronik (Shanghai) Co., Ltd.

Room 808-809, Jiaxing Mansion, No. 877 Dongfang Road 200122 Shanghai Phone +86-21-5058-0961

sales@men-china.cn www.men-china.cn

*Up-to-date information, documentation and ordering information:* www.men.de/products/px5/

MEN is not responsible for the results of any actions taken on the basis of information in the publication, nor for any error in or omission from the publication. MEN expressly disclaims all and any liability and responsibility to any person, whether a reader of the publication or not, in respect of anything, and of the consequences of anything, done or omitted to be done by any such person in reliance, whether wholly or partially, on the whole or any part of the contents of the publication.

The correct function of MEN products in mission-critical and life-critical applications is limited to the environmental specification given for each product in the technical user manual. The correct function of MEN products under extended environmental conditions is limited to the individual requirement specification and subsequent validation documents for each product for the applicable use case and has to be agreed upon in writing by MEN and the customer. Should the customer purchase or use MEN products for any unintended or unauthorized application, the customer shall indemnify and hold MEN and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim or personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that MEN was negligent regarding the design or manufacture of the part.

In no case is MEN liable for the correct function of the technical installation where MEN products are a part of.

© 2018 MEN Holding

**Contact Information** 

