

# PX4 – Mobile Phone Voice Interface PCI Express® Mini Card

- **1 USB audio streaming controller for mobile wireless cards**
- **1 slot for additional PCI Express® Mini Card**
- **Mobile phone functionality with UMTS, LTE, Edge, GPRS, etc.**
- **SIM card socket integrated**
- **-40..+85°C screened**
- **Prepared for conformal coating**



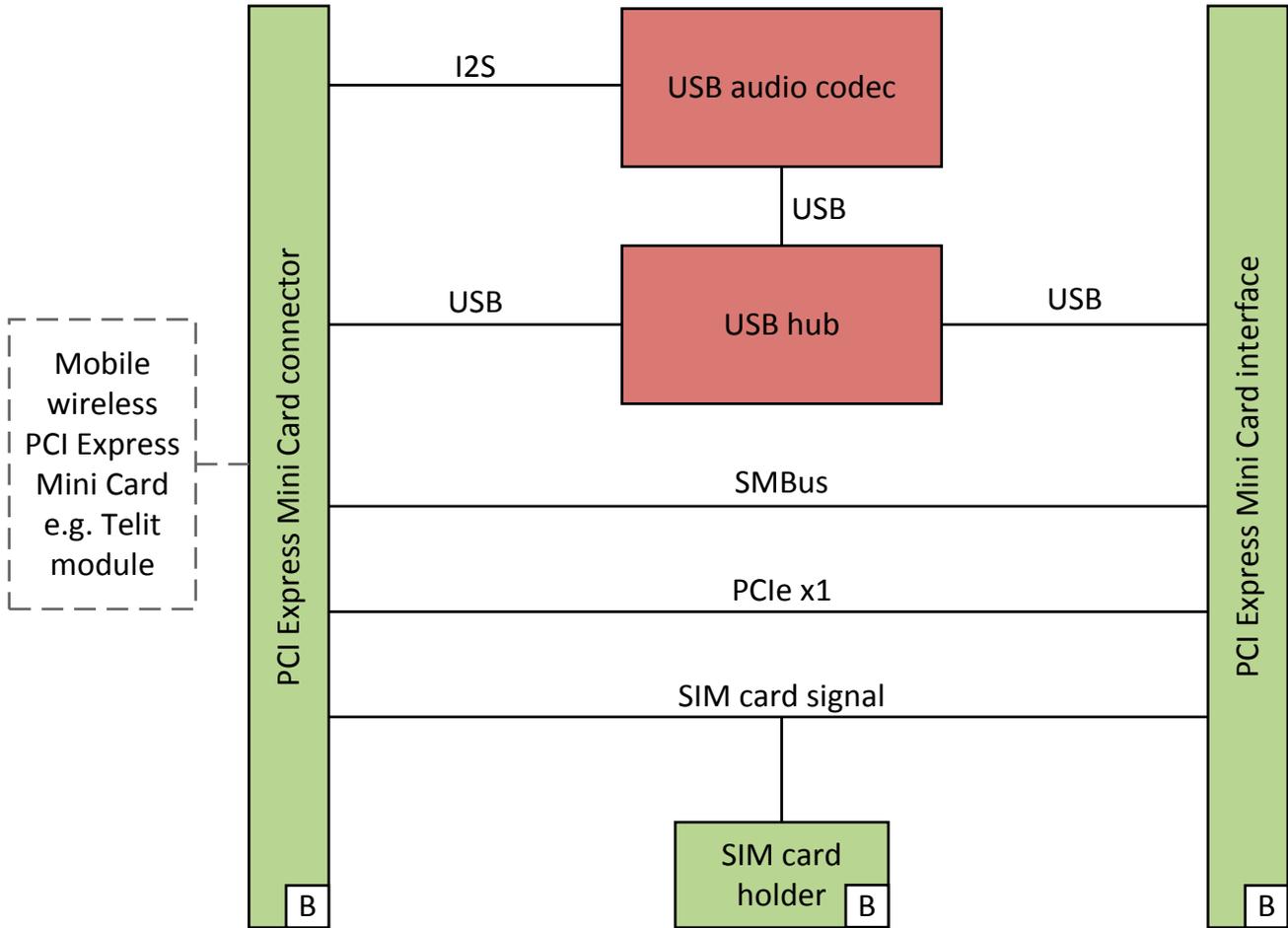
The PX4 is a PCI Express® Mini Card providing an audio and sound interface for mobile wireless functions. It can be equipped with an additional PCI Express® Mini Card with UMTS, LTE, GPRS and Edge for mobile phone functionality.

The PX4 provides a SIM card slot and is prepared for conformal coating.

Its wireless functionality makes the PX4 especially suitable for the rail and road market. It can be used for mobile phone applications, for example, if the driver wants to call the control room or if the control room wants to make an announcement to the passengers.

# Diagram

**B** Onboard connector  
Options



## Technical Data

<b>Host Interface</b>	<ul style="list-style-type: none"><li>■ PCI Express® Mini Card connector<ul style="list-style-type: none"><li>□ USB 2.0</li><li>□ PCIe® x1</li></ul></li></ul>
<b>PCI Express® Mini Card Slot</b>	<ul style="list-style-type: none"><li>■ For mobile phone functionality using an UMTS/LTE/Edge/GPRS PCI Express® Mini Card</li><li>■ <a href="#">For Telit HE910 PCI Express® Mini Card see Ordering Information.</a></li><li>■ I2S audio interface</li><li>■ SIM card slot</li></ul>
<b>Electrical Specifications</b>	<ul style="list-style-type: none"><li>■ Supply voltage/power consumption:<ul style="list-style-type: none"><li>□ +1.5V, supply rail not used - routed to connectors only 3.3V, typ. 180 mA / max. 300 mA</li></ul></li></ul>
<b>Mechanical Specifications</b>	<ul style="list-style-type: none"><li>■ Dimensions: 30 mm x 58 mm x 5 mm (PCI Express® Full-Mini Card)</li><li>■ Weight: 10 g</li></ul>
<b>Environmental Specifications</b>	<ul style="list-style-type: none"><li>■ Temperature range (operation):<ul style="list-style-type: none"><li>□ -40..+85°C (screened)</li><li>□ Airflow: min. 1 m/s</li></ul></li><li>■ Temperature range (storage): -40..+85°C</li><li>■ Relative humidity (operation): max. 95% non-condensing</li><li>■ Relative humidity (storage): max. 95% non-condensing</li><li>■ Altitude: -300 m to +3000 m</li><li>■ Shock: 15 g, 11 ms</li><li>■ Bump: 10 g, 16 ms</li><li>■ Vibration (sinusoidal): 1 g, 10..150 Hz</li><li>■ Conformal coating on request</li></ul>
<b>MTBF</b>	<ul style="list-style-type: none"><li>■ tbd h @ 40°C according to IEC/TR 62380 (RDF 2000)</li></ul>
<b>Safety</b>	<ul style="list-style-type: none"><li>■ PCB manufactured with a flammability rating of 94V-0 by UL recognized manufacturers</li></ul>
<b>EMC Conformity</b>	<ul style="list-style-type: none"><li>■ EN 50121-3-2 (table 4) (EMC in rolling stock)</li><li>■ EN 55011 (radio disturbance)</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>

## Ordering Information

<b>Standard PX4 Models</b>	<b>15PX04-00</b>	Audio interface for mobile wireless cards, with SIM card holder, -40..+85°C screened
<b>Related Hardware</b>	<b>02F212-05</b>	2 PCI Express® Mini Card slots with USB interface, 4 SIM card sockets, 4 SMA connectors, -40..+85°C with qualified components (carrier only)
	<b>02G212-00</b>	2 PCI Express® Mini Card slots (USB and PCIe®), -40..+85°C screened
	<b>06RC01-00</b>	Intel® Atom™ Z510, 1.1GHz, 512MB RAM, 2GB MicroSD card, prepared for SSD, 2 Fast Ethernet, 1 USB, prepared for 2 SA-Adapter kits, prepared for wireless access, 24V DC input (S2), -40..+70(+85)°C screened, EN50155 compliant, IP67
	<b>06RC01-01</b>	3.5" display with touch, Intel® Atom™ Z510, 1.1GHz, 512MB RAM, 2GB MicroSD Card, prepared for SSD, 2 Fast Ethernet, 1 USB, prepared for 2 SA-Adapter kits, prepared for wireless access, 24V DC input (S2), -40..+70(+85)°C screened, EN50155 compliant, IP67, 120-day Windows® XP Embedded eval version installed
	<b>08AE51-00</b>	Graphics & I/O interface board for display and box computers; 2x DisplayPort®, 2x Gb Ethernet, 1x USB, 2x PCI Express® Mini card slot, 2x SIM card slot, 2x SA-Adapter slot, PSU 24 VDC, -40 to +85°C screened
	<b>08SC21-00</b>	Intel® Atom™ Z520PT 1.3GHz, 1GB DRAM, 2x Fast Ethernet, 2x USB, 1x LVDS, 1x MicroSD card slot, 24V PSU (non isolated), prepared for -40 to +85°C screened via conductive cooling
	<b>08SC27-00</b>	Display electronics SBC with Intel® Atom™ E680T, 1.6 GHz, 2GB RAM, 1 Fast Ethernet on M12, 1 USB 2.0 on M12, 1 USB 2.0 Type A, 1 PCIe® MiniCard socket, 1 micro SIM card socket, 1 GPS interface, 2 SA-Adapter slots, EN 50155 compliant PSU, -40..+85°C operation temperature via conduction cooling (screened), conformal coating
	<b>08XC02-00</b>	Carrier board for ESMexpress® modules (Intel®), 4 GB USB Flash Disk, LVDS and DVI on board, 2 Fast Ethernet on M12, 1 SA-Adapter slot, 2 USB 2.0, PCI Express® Mini Card slot, 24V PSU (9..36VDC), -40..+85°C with qualified components
	<b>08XC06-01</b>	Carrier board for ESMMini: 1x TTY, 1x RS232, 1x DVI-I, 1x Audio I/O, 4x USB2.0, 2x Fast Ethernet, USB Flash slot, PCI Express® Mini Card socket, SIM card holder, microSD™ card socket, 8x GPIOs, -40°C..+85°C screened
	<b>09BC50100</b>	Industrial box computer with dual graphics connection, 24 VDC PSU, AMD Dual Core T48N, 1.4 GHz, 2 GB RAM, SD card slot, mSATA slot, 2x DisplayPort®, 2x Gb Ethernet RJ45, 2x USB, 2x SA-Adapter slot (UARTs, fieldbuses), 1x PCI Express® Mini card slot, 1x SIM card slot, -40..+70°C screened
	<b>09BC50M00</b>	Box computer with dual graphics connection, 24 VDC PSU, AMD T48N, 1.4 GHz, 2 GB RAM, SD card slot, mSATA slot, 2x DisplayPort®, 2x Gb Ethernet, 1x USB, 2x SA-Adapter slot (UARTs, fieldbuses), 2x PCI Express® Mini card slot, 2x SIM card slot, -40..+70(+85)°C screened, conformal coating, IP40, EN 50155, ISO 7637-2 (E-mark)
	<b>09BL50W00</b>	Box computer with 4 PCI Express® Mini card slots and 8 microSIM card sockets and 1 GPS/GLONASS interface, 24 and 36 VDC PSU, AMD Dual Core T48N, 1.4 GHz, 2 GB RAM, SD card slot, mSATA slot, 2x DisplayPort®, 2x Gb Ethernet, 2x USB, 1x RS232, 1x RS422/485, 1 IBIS slave interface, 1 odometer input, 2 SA-Adapter slots (UARTs, fieldbuses), -40..+70(+85)°C screened, conformal coating, IP40, EN 50155, ISO 7637-2 (E-mark)
	<b>Miscellaneous Accessories</b>	<b>6100-0244</b>
<b>Documentation</b>	<b>20PX04-00</b>	PX4 User Manual

## Contact Information

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