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SHEERLINK™
PROFESSIONAL WIRELESS AUDIO
PRODUCT INFORMATION SHEET

Sheerlink is a new standard in wireless audio performance which enables you to create your own wireless audio product with superior performance and a short time to market.

FEATURES & BENEFITS

SUPERIOR AUDIO QUALITY - Built around the RTX Sheersound audio codec, Sheerlink enables superior audio quality while supporting either mono or stereo in high-definition audio. And even better - it is here to become your product.

PRODUCT REALIZATION SIMPLIFIED - Sheerlink was specifically developed for easy and fast implementation into existing products or as a new, stand-alone product. This is possible because we made Sheerlink highly modular and configurable. By choosing Sheerlink you can with a small up-front investment, go to market fast. Furthermore, you can, by taking advantage of RTX's know-how, through dedicated services and support, create a Sheerlink-based product without necessarily having the full skillset within the technologies used.

FULL-FEATURED PRODUCT SOLUTION - The initial software provided can be used stand-alone without any host processor allowing for basic functions such as power on/off, pairing, connection setup and LED indication for device status. In addition, a simple hardware API will be available to allow you to add a host processor for more informative status indications and other user operations.

FAST DEVELOPMENT - With Sheerlink, RTX has already done the work designing and testing a recommended solution, including the software to ensure low latency and high radio link robustness.

FLEXIBLE HARDWARE SOLUTION - Different recommended designs for the analog and digital circuitry and antennas can be provided thus making sure that the product cost matches your goals for the final product.

LOW UPFRONT INVESTMENT - Due to most of the work already being done, the upfront investment is very low compared to custom wireless solutions.

CONFIGURABILITY - Sheerlink is highly configurable to meet your product requirements, whether focus is on robust connections, low latency, high audio quality or intuitive usability.

EXPERIENCE - With more than two decades of development experience and around a thousand projects within wireless communication such as DECT, Wi-Fi, LTE and Bluetooth, RTX is a strong and dependable partner for bringing your product to life. Read more about our services by visiting our website.

PRODUCT SOLUTION

BASEBAND/RADIO TRANSCEIVER MODULE SUPPORTING 1.9 GHZ (RTX1090) OR 2.4 GHZ (RTX1290) RADIO

- RTX Sheersound codec allowing optimum wireless audio quality
- Battery and power management
- API for user interaction
- Recommended carrier board design for the modules
 - Circuitry for power, USB, GPIOs, antenna signals etc.
 - Modules being pin compatible

RECOMMENDED ANTENNA DESIGNS

- Antenna diversity ensuring optimum radio performance
- Naturally different designs depending on radio

RECOMMENDED ANALOG AND DIGITAL IN- & OUTPUT CIRCUITRY FOR SINGLE OR DUAL CHANNEL AUDIO

- Standard or high-end (24 bit, 48 kHz) audio quality depending on your product goals
- Designs can be used independently of radio

You are naturally free to do your own designs just utilizing the module and residing software itself.

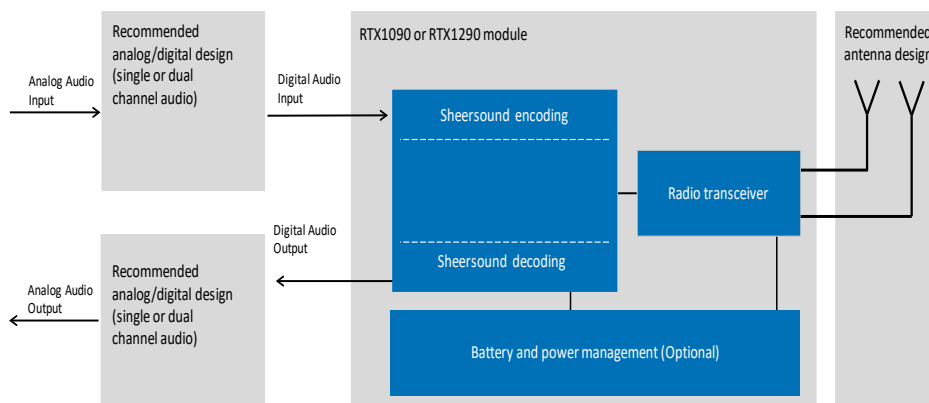


Figure 1: Solution elements

APPLICATIONS & CONFIGURATIONS

Although focus has been on instrument and microphone use cases, the Sheerlink Product Solution is deployable everywhere an audio cable is used today.

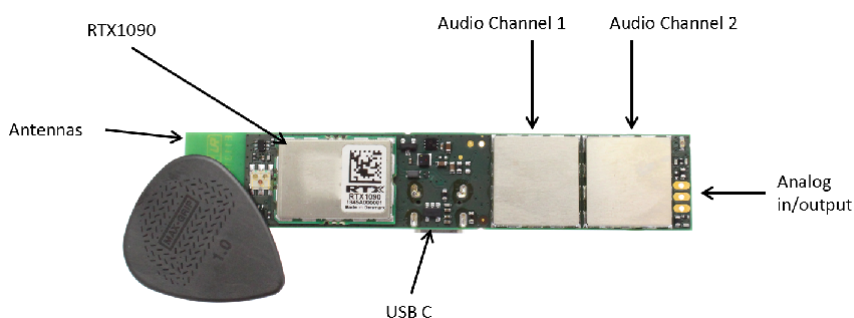


Figure 2: A two channel Sheerlink product used for wireless instruments built using a recommended design.

#	AUDIO SOURCE	TRANSMITTER	RECEIVER	TRANSMITTER SIGNAL
1	Microphone	Single	Single	Mono Voice
2	Microphone	Single	Multiple	Mono Voice
3	Microphone	Dual	Single	Mono Voice
4	Instrument	Single	Single	Mono / Stereo Audio
5	Instruments	Dual	Single	Mono Audio
6	Instrument	Single	Multiple	Mono / Stereo Audio
7	Speakers	Single	Multiple	Mono / Stereo Audio
8	DJ Equipment / Headphones	Single	Single / Dual	Mono / Stereo Audio
9	Rack Amplifiers	Single	Single	Mono / Stereo Audio

SUPPORT PACKAGES

HARDWARE DESIGN AND VERIFICATION

- Including EMC, ESD and compliance

MECHANICS

- With our trusted partners, we can ensure a smooth path into production including tooling with your product design ideas

ANTENNA CUSTOM DESIGN & MATCHING

- Depending on the mechanics chosen, the recommended antenna designs may need customization

PRODUCT TYPE APPROVAL

- With the modules being type approved with recommended designs, the way through product approvals has already been made easier. However, we can assist you in the process

PRODUCTION TEST SETUP

- We can provide full or partial production test setup

ODM

- If you prefer to focus only on the distribution and sale, we can handle the rest

SHEERLINK UPDATES

- Subscription to improvements or feature additions allows you to benefit from the Sheerlink roadmap

TECHNICAL SPECIFICATIONS

SUPPORTED COMPLIANCE	SPECIFICATIONS
EU, US JAPAN STANDARDS	See the data sheets for the RTX1090 and RTX1290 respectively

FEATURES	SPECIFICATIONS
RADIO	1.9 GHz DECT or 2.4 GHz
OPERATION RANGE	20-50 meters depending on design
OPERATION TIME	Highly depending on chosen design. Ranging from 5 hrs to 20 +hrs using 3.6 V 1000 mAh battery
STD ACCEPTED DIGITAL INPUT (BY THE MODULE)	24 bit, 48 kHz
LATENCY (ANALOG TO ANALOG)	2-10 ms depending on chosen radio and configuration
CODEC	Sheersound 48 kHz / 4 bit
SNR	>89 dB acheivable*
DYNAMIC RANGE	>120 acheivable*
THD	Better than -123 dB acheivable*
FREQUENCY RESPONSE	10 Hz - 22 kHz*
FILTERING	Optional filter can be programmed to simulate cable characteristics

ORDERING DETAILS	DESCRIPTION
SHEERLINK PRODUCT SOLUTION	Contact RTX for more information and offer at sales@rtx.dk

*Dependent upon analog/digital design chosen

