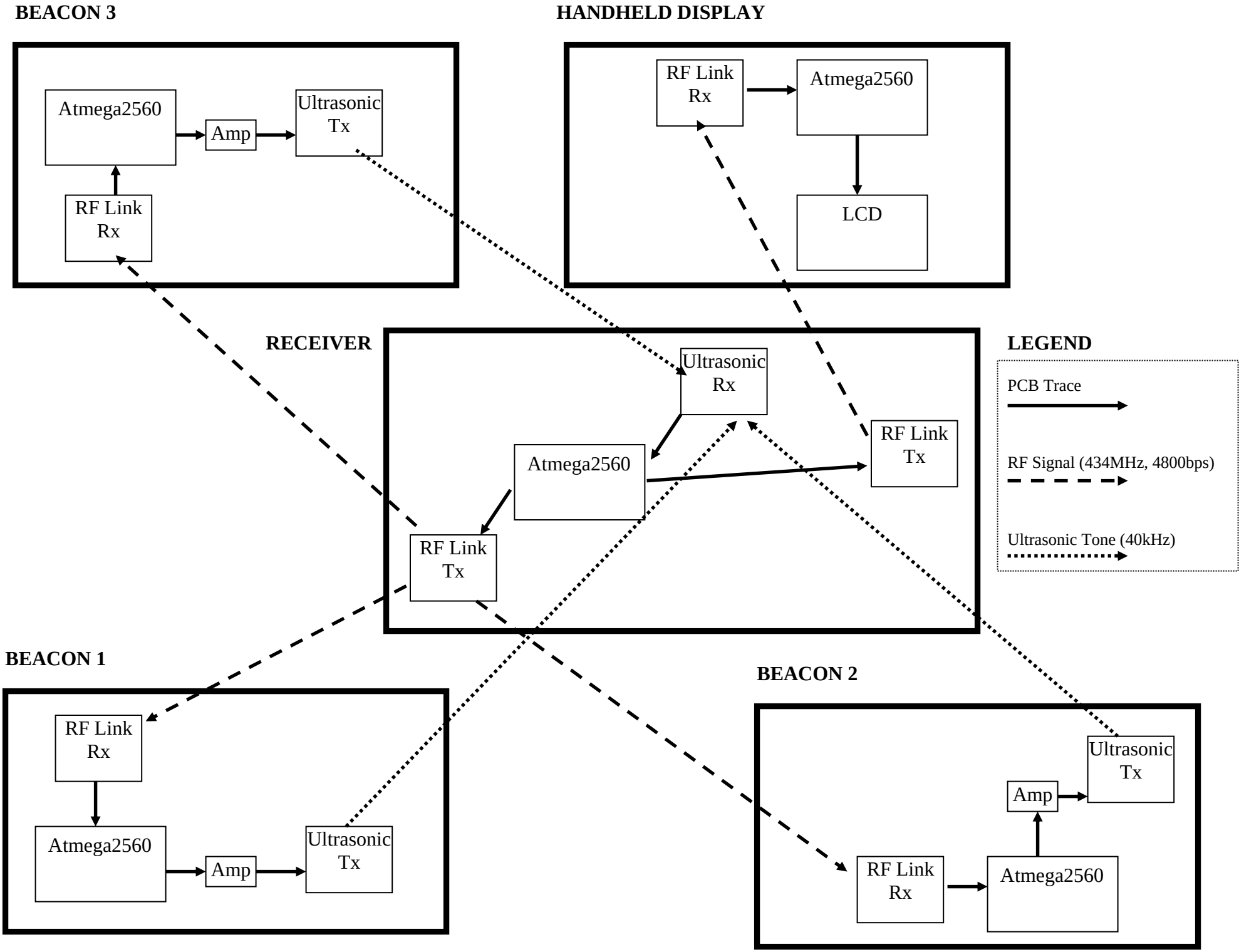
BEACON 3
Atmega2560
Amp
Ultrasonic Tx
RF Link Rx
HANDHELD DISPLAY
RF Link Rx
Atmega2560
LCD
RECEIVER
Ultrasonic Rx
Atmega2560
RF Link Tx
RF Link Tx
LEGEND
PCB Trace
RF Signal (434MHz, 4800bps)
Ultrasonic Tone (40kHz)
BEACON 1
RF Link Rx
Atmega2560
Amp
Ultrasonic Tx
BEACON 2
Ultrasonic Tx
Amp
RF Link Rx
Atmega2560

Connections between components

Beacons 1 through 3 utilize identical architecture:

- Atmega2560 connects to RF receiver through USART0
- Atmega2560 connects to Amplifier through PortB.1
- Amplifier output is connected to ultrasonic transmitter

On the receiver unit:

- Atmega2560 connects to RF transmitter to beacons through USART0
- Atmega2560 connects to Ultrasonic receiver through PortB.4 (timer required here)
- Atmega2560 connects to RF transmitter to handheld unit through USART3

On handheld display unit:

- Atmega2560 connects to RF receiver through USART0
- Atmega2560 connects to LCD through PortA