Solidtronic

Introducing The PoC to 2-way Radio Interoperability System

Push-to-Talk (PTT) technology of 2-way radio systems has been around since the mid-1930s. The first push-to-talk over commercial cellular system was developed in 1987. A key characteristic of PTT is instant communication with the push of a button on a handset. The quick and efficient nature of PTT calls has made the technology a core communication tool for organisations that have a highly mobile work force.

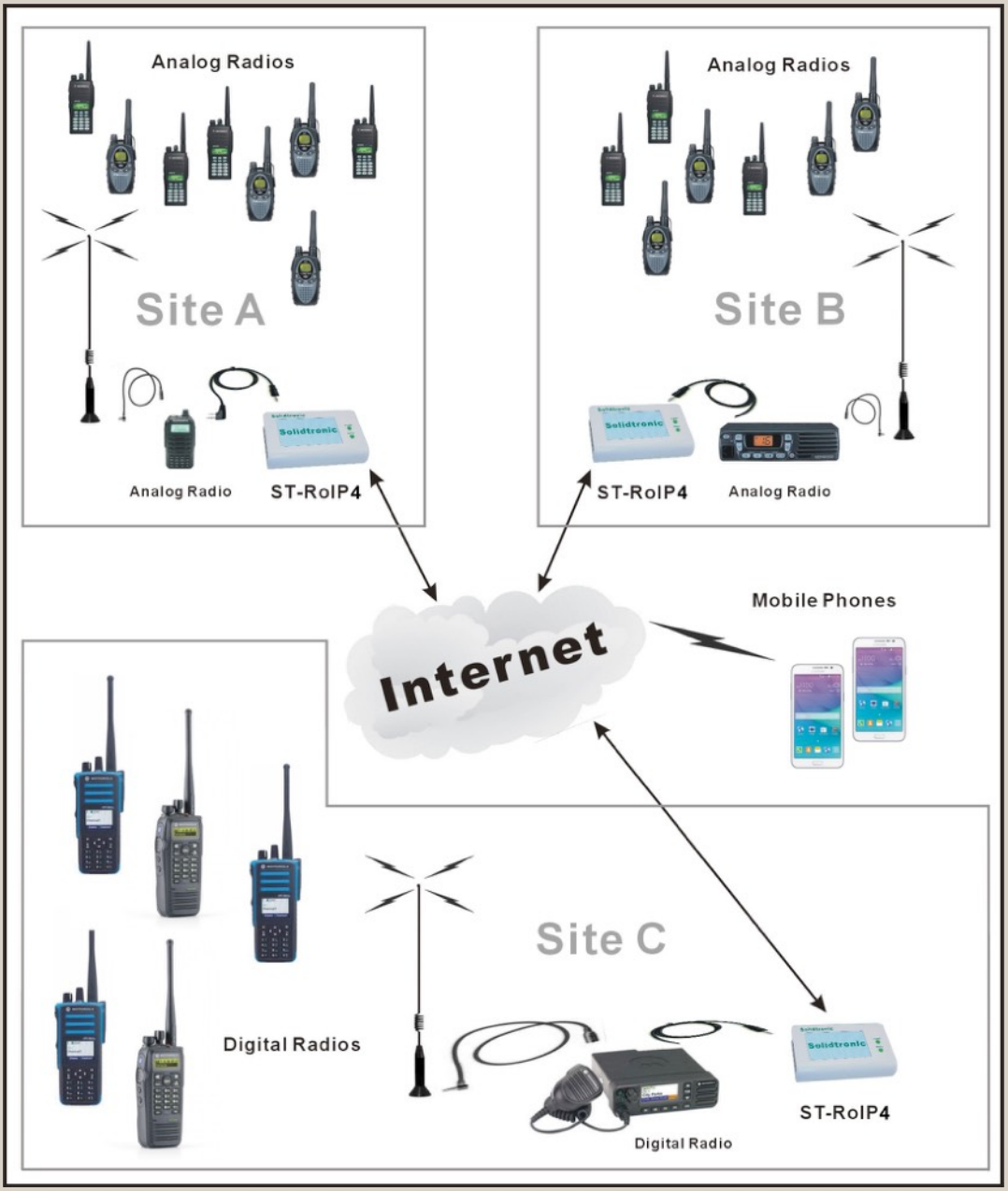
PTT over cellular(PoC or PTToC) network is now being re-defined. Thanks to the evolution of cellular networks, emergence of smartphones, new PTT-enabling technology, etc. PoC platforms set a new benchmark for performance, features, network support, handset choices, and cost savings to end customers in multiple industries.

The traditional 2-way radio system is still widely used by different industries due to its advantages. In fact of the global operation feature of the PoC platform, it is the best partner of the traditional 2-way radio systems. Solidtronic introduces the standalone gateways to interconnect the PoC platforms with any 2-way radio systems including conventional trunked analog FM, ETSI DMR, ETSI TETRA, APCO P25 FDMA, NXDN... brings you the fast and stable push-to-talk communication over any devices, anytime and everywhere over the world!

Key Features

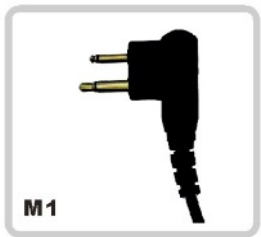
- Cost effective.
- Easy of installation by connecting the gateway to a 2-way radio transceiver.
- Automatic recovery after power failure.
- Support stable bandwidth 10/100-Base-T Ethernet network connection.
- Support different brand and model of 2-way radios to handle the 2-way radio channel.

Example System Diagram



With Solidtronic standalone RoIP gateway, different type of radio channels can be easy connected. From the above Example System Diagram, one DMR channel, two analog radio channels are interconnected by using 3 standalone RoIP gateways. After the installation, all of the 2-way radio users in the 3 sites and the smartphone with PoC app users can feel free to make PTT communication.

Cables



How does it work?

When the gateway system is installed and setup by following the steps in the User's Guide, the gateway system is standby PTT calls from both PoC group and 2-way radio channel.

1. PTT Call from PoC to 2-way Radio

When an user make a PTT call from a smartphone to a group, the gateway system works as below:

- The PoC app on the gateway receives the PTT call from the PoC group.
- The PoC-COS/COR(ST-RoIP4 only) and iDats DSP of the gateway detect the PTT call.
- The gateway generates the PTT signal to control the connected 2-way radio to make TX.
- The gateway forwards the voice message from the PoC group to the connected 2-way radio.
- The connected 2-way radio transmits the voice message to the 2-way radio channel.
- After the user release the PTT call from the smartphone, the gateway also releases the PTT control to the connected 2-way radio.

2. PTT Call from 2-way Radio to PoC

When an user make a PTT call from a 2-way radio to a channel, the gateway system works as below:

- The gateway connected 2-way radio receives the PTT call from the 2-way radio channel.
- The Radio-COS/COR(ST-RoIP4 only) and iDats DSP of the gateway detect the PTT call.
- The gateway generates the PTT signal to control the PoC app to make TX.
- The gateway forwards the voice message from the connected 2-way radio to the PoC app.
- The PoC app transmits the voice message to the PoC group.
- After the user release the PTT call from the 2-way radio, the gateway also releases the PTT control to the PoC app.