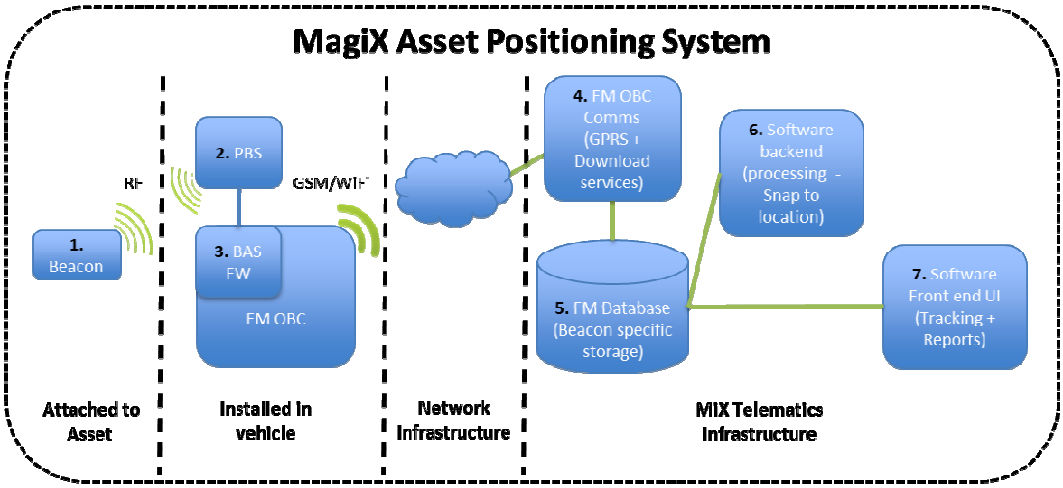
Exhibit 12: Operating Description - Pico Base Station

1.1 Product Overview

The Pico Base Station (PBS) is part of the Magix Asset Positioning System (MAPS) solution for the US market as described in the diagram below. The PBS (2) has been designed to be fitted to the master device (3) i.e. FM OBC by fitting in-line with the Code Plug socket and will enable an FM OBC to act as a Base Station for the MAPS network by providing communication with the GPS enabled Beame (1) mobile devices (or Beacon as stated in diagram below).



The PBS provides 3 main functions:

- RF transceiver operating at 915MHz responsible for communicating with Beame devices and Magix Business logic
- Communicate Beame messages via Code Plug interface to FM OBC for all server communications
- In-line Code Plug communications to allow all standard keys to operate with the FM OBC

The PBS will be powered from the FM OBC via the POS Drive supply or directly from the vehicle supply (12V or 24V) and will communicate with the FM OBC via the 2-wire Code Plug interface. The PBS will act as a transparent link to allow standard functionality via the Code Plug i.e. driver ID via Blue key, device driver downloads via the Green key etc.

The PBS has been designed to be easily retrofitted to existing OBC installations by sitting in between the short cable between the Code Plug socket and the FM OBC. The Code Plug harness will remain the same but there will be a new cable from the PBS to the OBC.

1.2 RF Transceiver Description

The RF Transceiver selected for the PBS design is the SiLabs Si4463. The main design features that were critical in the choice of this device were good receiver sensitivity, low receive current, voltage operating range and o/p power.
The Si4463 is a highly integrated wireless transceiver incorporating many features that reduce the number of external components to a minimum.

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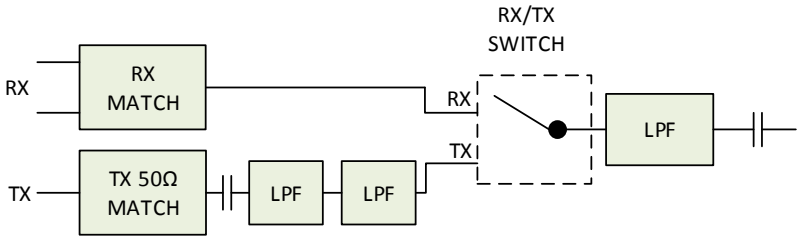
The receiver architecture comprises of a front end wide band LNA with automatic AGC. The LNA is followed by an I-Q mixer which converts the signal down to an IF (Intermediate Frequency) of 468 kHz. The signal is then passed through a high performance Delta Sigma ADC for digital filtering and decoding. The demodulated signal is then output to the CPU via the SPI bus.
A single high precision local oscillator (LO) is used for both transmit and receive modes. The LO is generated by an integrated VCO and Fractional-N PLL synthesiser and provides a step size of 28.6Hz over the frequency range 850 to 1050MHz.

The transmitter includes an integrated power amplifier which is capable of transmitting levels of -20dBm to +20dBm in 127 steps. The design has a very high efficiency consuming only 85mA at +20dBm.

1.3 Rx and Tx Filters

The receive section of the filter comprises a matching circuit and a single low pass filter section between the antenna and Rx/Tx switch. The transmit filter is more complex and comprises a matching circuit with multiple low pass filter sections. The block diagram for the filter is shown below.



1.4 Frequency Hopping Technique

In order to meet the requirements of 15.247(a)(1) the 915MHz channel has been divided into 64 channels numbered 0 to 63. Each channel is 400kHz wide with the first channel starting at 902.2MHz, the middle at 915MHz and the top at 927.8MHz.

The 64 channels are selected using a pseudo random generator algorithm that outputs the following sequence of channels:

> {0, 48, 30, 28, 35, 61, 21, 11, 31, 18, 53, 41, 62, 47, 44, 40, 45, 14, 24, 17, 52, 13, 39, 50, 8, 37, 55, 12, 34, 2, 59, 25, 42, 15, 9, 6, 54, 46, 27, 10, 33, 5, 38, 26, 58, 51, 63, 60, 23, 57, 56, 22, 1, 32, 3, 49, 20, 16, 29, 4, 36, 19, 43, 7}

Once the sequence has finished it is then repeated and so on.

1.5 Air Protocol

The PBS is designed to act as a mobile base station for the MAPS Beame asset tracking devices. The PBS will receive position data from the Beame devices on Channel 0. Within the position message is an ACK channel number which the PBS will switch to when it transmits the ACK back to the Beame device. This sequence is shown in the diagram below. The Beame device will request ACK's from the PBS on channels selected by the same pseudo random algorithm as defined in section 1.4 above. So for every position message transmitted by the Beame device the ACK will be received on a pseudo random channel.

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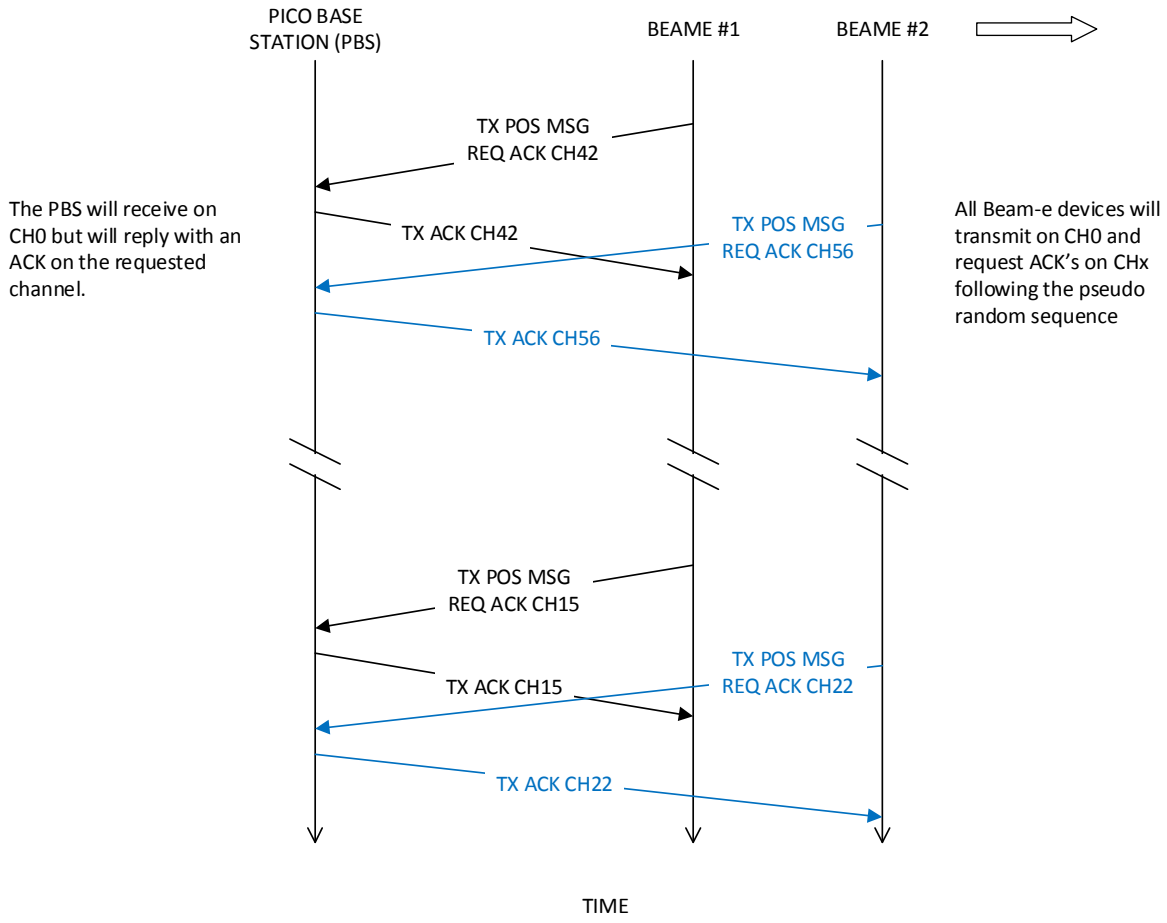
The MAPS system is inherently random due to the power-up times of the Beame device, so in areas where there are multiple Beame devices, they will be requesting ACK channels at different points within the pseudo random algorithm.



Both the ACK and Position transmissions are 11ms long and transmitted at a data rate of 19200 pbs using 2 level FSK.