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 Wireless LANs

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| **Proposed TGbd draft specification****NGV midambles** |
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Abstract

This document contains a proposal for the TGbd draft amendment. It captures the feature requirements outlined in the TGbd specification framework document (11-19/0497) in detailed draft text.

# Next Generation V2X (NGV) PHY specification

## Intorduction

## NGV PPDU format

## Transmitter block diagram

## Overview of the PPDU encoding process

## NGV modulatin and coding schemes

## Timing related parameters

## Mathematical description of signals

## NGV Preamble

## Data field

### Midambles

An NGV STA may include midambles in an NGV PPDU transmission to facilitate channel estimation update during the PPDU. The recipient might use the midambles to compensate the channel estimation.

Midambles are present in the Data field of the NGV PPDU every *M* OFDM symbols, where *M* is either 4 or TBDs as indicated by the Midamble Periodicity field in TBD.

Each midamble is the same format as the NGV-LTF field(s) in the preamble of the same PPDU as defined in 33.8.xx (NGV-LTF), as shown in Figure 33-x1 (NGV PPDU with midamble).

If present, the number of midamble periods, *NMA*, in a PPDU is calculated using Equation (33-x1).

$N\_{MA= \left⌊\frac{N\_{SYM-1}}{M}\right⌋} $ (33-x1)

where *NSYM* is as defined in 33.xx.

As shown in Figure 33-x1 (NGV PPDU with midamble), the first midamble is inserted immediately after the *M*-th OFDM symbol in the Data field, and a midamble is not inserted after the last data OFDM symbol if mod(*NSYM, M*) = 0.



Figure 33-x1—NGV PPDU with midamble

## Transmit specification

## Receiver specification

## NGV transmit procedure

## NGV receive proceduee

## Regulatory requirements