RX-480RA-(ZH)

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I have searched for information about the specific data format from the RX-480R (or RX480RA) module's DATA pin.

Based on the available technical specifications for this module, I was unable to find a detailed datasheet that describes the exact digital data protocol . However, the module's hardware specifications clearly indicate its communication method and define the key characteristics of the output signal.

Summary of the DATA Pin Characteristics

The table below summarizes the confirmed technical details regarding the signal output by the RX480RA module:

Parameter	Specification	Source / Note
Modulation Type	**ASK (Amplitude Shift Keying)** and **OOK (On-Off Keying)**	This is specified as the module's supported modulation methods for the incoming RF signal .
Output Signal Type	**Digital (TTL level)**	The module demodulates the received radio signal. The DATA pin provides the reconstructed digital signal.
Output Voltage Level	Approx. **3.3V to 5V** (depending on VCC)	The output level is directly related to the module's supply voltage (2.2V to 5V). It is a TTL-compatible signal.

Understanding the DATA output

Because the exact protocol isn't detailed in the product specifications, the following information is based on the module's hardware capabilities and standard practices for this type of component.

1. **Data is Demodulated:** The RX480RA receives an RF (radio frequency) signal modulated with ASK or OOK. Its internal circuitry demodulates this signal and outputs the resulting digital pattern directly on the DATA pin. The signal you see on the DATA pin is a raw, non-decoded stream of high and low voltage levels.

2. **"Transparent" Output:** This type of module is often referred to as a "transparent" receiver. It does not decode protocols like EV1527, PT2262, or other proprietary codes. Your microcontroller or decoder IC is responsible for interpreting the timing of the highs and lows to understand the transmitted data.

3. **Typical Data Representation:**
 - **OOK:** When the transmitter is sending a "1" (carrier ON), the DATA pin on the receiver will be **HIGH** (e.g., 3.3V or 5V). When the transmitter sends a "0" (carrier OFF), the DATA pin will be **LOW** (0V).
 - **ASK:** This functions similarly, where the amplitude (strength) of the carrier signal dictates the logic level.
 - **Idle State:** When no signal is being received, the DATA pin will likely be in a random or high-impedance state.
Therefore, it is crucial to include a decoding algorithm in your code (e.g., on an Arduino) to validate a signal's preamble and data framing before acting on it.

How to Decode the Signal

Without an official protocol, the best way to understand the data format is to empirically analyze the output.

1. **Use an Oscilloscope or Logic Analyzer:** This is the most reliable method. Connect the probe to the DATA pin and GND.
2. **Transmit a Known Signal:** Use a 433MHz transmitter module connected to a device (like an Arduino) programmed to send a simple, repeating pattern (e.g., a 1-second HIGH, 1-second LOW).
3. **Analyze the Waveform:** On the oscilloscope, you will see the digital waveform that the RX480RA has demodulated. You can then measure the timing of the pulses.
4. **Example Decoding with a Microcontroller:**
 A common technique is to measure the duration between state changes.
 ```cpp
 // Pseudo-code example
 int lastState = digitalRead(DATA_PIN);
 while (digitalRead(DATA_PIN) == lastState) {
 // measure the duration of the state
 }
 // You now know the pin was HIGH for a specific time.
 // By comparing short vs long durations, you can discern logic 0 and 1.
 ```

Conclusion

The specific data sheet for the RX480RA module is unavailable . Therefore, the exact data format, encoding scheme, or preamble structure cannot be provided.

However, based on the module's **ASK/OOK** modulation capability, the DATA pin will output a **digital TTL-level signal** corresponding directly to the transmitter's keyed carrier. To determine any specific protocol, you must use an oscilloscope to analyze the output or refer to the datasheet of the **companion transmitter module** you are using with it.
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RX480RA 433MHz D6MM 0402 T1 V4

RX480RA 433MHz D6MM 0402 T1 V4 ??

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433.92MHz

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ASK?OOK

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2.2V~5V

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5mA

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-105dBm

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-40?~+85?

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RX480RA?????UHF　ASK????????ASK?OOK??????????????????-110dBm??????????????????????60dB???????????
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??ASK/OOK????????????-110dBm
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RX480RA????

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433M ??
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?????????????3.0mm?
???? 26 ?????? 36mm?