Date: March 30, 2012

To: Whom It May Concern

Re: XR21V141x Product Change from Rev B to Rev D

Dear Sir/Madam:

Exar is in the process of moving the XR21V1410, XR21V1412 and XR21V1414 (XR21V141x) devices from revision B to revision D. The table on page 5 of this PCN summarizes the improvements from revision B to revision D and the customers who may potentially be affected. Exar believes that most customers should not be affected by these improvements.

The XR21V141x revisions B and D are both currently in production. Unless there was a requirement for one or more improvements in revision D, Exar has been addressing all orders by shipping revision B material. Production shipment for the new revision will begin as existing inventory is depleted. Exar is projecting transition to occur in Q4CY12 for all XR21V141x devices.

The new material will carry the revision code of "D" on the last line of the top mark.

In order for customer evaluation and qualification of the new material to be completed by the above time frame, please submit your sample request and specify your requirement for Revision D material.

The table on page 5 of this PCN summarizes the improvements in the XR21V141x USB UART devices from Rev B to Rev D. Rev D should be a drop in replacement to rev B provided that the customer is not using the CDC-ACM driver.

If you have any questions or concerns please contact Lisa Bedard at lisa.bedard@exar.com.

Sincerely,
Exar

PRODUCT CHANGE NOTICE

PART NUMBER(S):	**PCN No.:** 12-0305-01
Refer to Attachment A	**DATE:** March 30, 2012

PART DESCRIPTION:

Please refer to www.exar.com

LEVEL OF CHANGE:

[**X**] Level I, Customer Approval. [ ] Level II, Customer Information.

PRODUCT ATTRIBUTE AFFECTED:

[ ] Material Change
[**X**] Design Change
[ ] Process Change
[**X**] Data Sheet Change
[ ] Package Change
[ ] Packing / Shipping

[ ] Other, Explain:

DESCRIPTION OF THE PROPOSED CHANGE:

Product revision is changed from B to D. Please see the attached summary for more details.

REASON FOR CHANGE:

Product improvement.

DATE OF SAMPLES AVAILABLE:	**DATE OF QUALIFICATION COMPLETED:**
Please verify timelines for specific devices with customer support.	December 2011

PRODUCT CHANGE NOTICE

ESTIMATED CHANGE DATE OR DATE CODE:	**SUPPORTING DATA:**
December 2012	Reliability Qualification Data

[X] STANDARD DISTRIBUTION **[ ] CUSTOM DISTRIBUTION**

PERSON TO CONTACT WITH QUESTIONS:

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Please acknowledge receipt of this PCN.

Acknowledged:

_____
Signature

_____
Printed Name

_____
Company

_____
Title

_____
Date

Approved ☐ **Not Approved** ☐ (Approved/Not Approved section not applicable and should be removed for all Level II PCNs)

Comments: _____

ATTACHMENT A

PART NUMBERS
XR21V1410IL16-F
XR21V1410IL16TR-F
XR21V1412IL32-F
XR21V1412IL32TR-F
XR21V1414IM48-F
XR21V1414IM48TR-F

Summary of improvements from Rev B to Rev D for the XR21V141x

Summary of Improvements	Detailed Description	How Customers will be Affected
Lower Suspend Mode Current	The maximum suspend mode current has decreased by 500uA from Rev B to Rev D. Rev B: Isusp = 2mA typical, 2.15mA maximum Rev D: Isusp = 1.5mA typical, 1.65mA maximum	**Existing customers using Rev B are not affected.** This improvement provides additional margin for power consumption during USB compliance testing for the rest of the board in suspend mode.
LOWPOWER pin behavior in high power mode	LOWPOWER pin behavior in Rev B: For both low power (bMaxPower <= 100mA) and high power (bMaxPower > 100mA) devices, the LOWPOWER pin is de-asserted upon power-up. LOWPOWER pin behavior in Rev D: For low power devices, the behavior is the same as Rev B. For high power devices, the LOWPOWER pin will be de-asserted after the XR21V141x has been configured by the USB host/hub. Note: bMaxPower is a field that is reported by the XR21V141x to the USB host, and is one of the programmable fields in the external EEPROM.	**Existing customers using Rev B are not affected.**
Higher Drive Strength on USB data pins	The USB_D+/USB_D- pins have a slightly higher drive strength in Rev D which resulted in a 10% increase in the maximum short circuit current spec in the datasheet. Rev B: Iosc = 35mA maximum Rev D: Iosc = 38.5mA maximum	**Existing customers using Rev B are not affected.** The Rev B devices pass the electrical (eye diagram) test of the USB compliance tests. This improvement in Rev D provides additional margin for passing. Note: There is no USB spec for maximum short circuit current.
Fixed polarity of modem I/Os in CDC-ACM mode	When using the CDC-ACM driver, the polarity of the modem inputs and outputs were inverted in Rev B. Rev D corrects the polarity of the modem inputs and outputs.	**Existing customers using Rev B with the Exar custom driver are not affected.** Existing customers using Rev B and the CDC-ACM driver will notice that the polarity has been inverted in Rev D.
HW flow control is the default flow control in CDC-ACM mode	In Rev B, the default flow control mode is "no flow control". Since there's no way for the CDC-ACM driver to enable/disable flow control, the default has been changed to "Auto RTS/CTS HW flow control" in Rev D.	**Existing customers who are not using the RTS# and CTS# pins as legacy modem I/Os or customers who are using the RTS# and CTS# pins with the Exar custom driver <u>will not</u> be affected.** **Existing customers using Rev B and the CDC-ACM driver with the incorrect polarity of the RTS# and CTS# pins as legacy modem I/Os <u>will</u> be affected when moving to rev D.**
USB max packet size in CDC-ACM mode	Changed the USB max packet size from 64 bytes in Rev B to 63 bytes in Rev D to overcome a bug discovered in the Windows CDC-ACM driver.	**Existing customers using Rev B are not affected.**