



191118666 EZR32LG and EZR32WG Revision C PRCN and Datasheet Update

PRCN Issue Date: 11/18/2019

Effective Date: 2/24/2020

PCN Type: Product Revision

Description of Change

Silicon Labs is pleased to announce the release of revision C devices for EZR32LG and EZR32WG devices. This revision is accompanied by a datasheet update to version 2.0.

After the effective date Silicon Labs reserves the right to ship revision C devices in place of revision B. After the effective date revision B devices will be End of Life. Please see the Product Identification section for information on the new drop in replacement part number.

This revision solves 2 errata items, RMU_E103 and RMU_E102.

RMU_E102:

Output of the on-chip regulator (DECOUPLE pin) may be approximately 0V, and the device will not respond to a pin reset.

RMU_E103:

Reset may fail to trigger when the device supplies (AVDD_0, AVDD_2, VDD_DREG) fall to a voltage in the 1.25V - 1.45V range.

Datasheet version 2.0 changes are as follows:

- Removed Table 4.4 "Environmental" as the latest ESD data can be found online in the qualification reports
- Removed MSL and solder information data as the latest MSL and soldering data can be found online in the qualification report
- In Table 4.9 "GPIO", changed maximum input leakage current from +/-100nA to +/- 40nA
- In Table 4.9 "GPIO", added maximum pulse wide of pulses to be removed by the glitch suppression filter of 50 ns
- In Table 4.9 "LFXO", added minimum supported nominal crystal frequency of value 31.3 kHz
- In Table 4.9 "LFXO", added maximum supported nominal crystal frequency of value 34.3 kHz
- In Table 4.9 "LFXO", changed typical start-up time from 400 ms to 1100 ms
- In Table 4.17 "OPAMP", removed minimum load resistance of 200Ω
- In Table 4.17 "OPAMP", added typical load resistance for OPA2 with a value of 500Ω
- In Table 4.17 "OPAMP", added typical load resistance for OPA1ALT with a value of 1000Ω
- In Table 4.17 "OPAMP", added a note to give details on the load resistance specification
- Corrected Figure 5.2 "Opamp pinout" to correctly show the pin out for the op amp
- Updated PCB Land Pattern Dimensions table to fix typographical error.
- In Table 4.23 "EZR32Pro DC Characteristics", added R69 specifications
- In Table 4.15 "ADC", added footnote to Average active current specification to state that it includes current from VREF
- In Table 4.15 "ADC", added specification for current consumption of internal voltage reference with a typical value of 65 uA
- In Table 4.15 "ADC", corrected the minimum ADC input ON resistance from 1MΩ to 300Ω
- In Table 4.15 "ADC", added maximum ADC input ON resistance of 800Ω
- In Table 4.15 "ADC", added minimum input bias current specification with value of -40 nA
- In Table 4.15 "ADC", added maximum input bias current specification with value of +40 nA
- In Table 4.15 "ADC", added minimum input offset current specification with value of -40 nA
- In Table 4.15 "ADC", added maximum input offset current specification with value of +40 nA
- In Table 4.15 "ADC", added minimum specification for VREF voltage with test condition of 1.25V with value of 1.2 V
- In Table 4.15 "ADC", added typical specification for VREF voltage with test condition of 1.25V with value of 1.25 V
- In Table 4.15 "ADC", added maximum specification for VREF voltage with test condition of 1.3V with value of 1.2 V
- In Table 4.15 "ADC", added minimum specification for VREF voltage with test condition of 2.5V with value of 2.4 V
- In Table 4.15 "ADC", added typical specification for VREF voltage with test condition of 2.5V with value of 2.5 V
- In Table 4.15 "ADC", added maximum specification for VREF voltage with test condition of 2.5V with value of 2.6 V
- In Table 4.15 "ADC", added minimum specification for VREF voltage drift with test condition of 1.25V with value of -12.4 mV/V
- In Table 4.15 "ADC", added typical specification for VREF voltage drift with test condition of 1.25V with value of 2.9 mV/V
- In Table 4.15 "ADC", added maximum specification for VREF voltage drift with test condition of 1.25V with value of 18.2 mV/V
- In Table 4.15 "ADC", added minimum specification for VREF voltage drift with test condition of 2.5V with Vdd > 2.5V with value of -24.6 mV/V
- In Table 4.15 "ADC", added typical specification for VREF voltage drift with test condition of 2.5V with Vdd > 2.5V with value of 5.7 mV/V

- In Table 4.15 "ADC", added maximum specification for VREF voltage drift with test condition of 2.5V with Vdd > 2.5V with value of 35.2 mV/V
- In Table 4.15 "ADC", added minimum specification for VREF temperature drift with test condition of 1.25V with value of -132 uV/°C
- In Table 4.15 "ADC", added typical specification for VREF temperature drift with test condition of 1.25V with value of 272 uV/°C
- In Table 4.15 "ADC", added maximum specification for VREF temperature drift with test condition of 1.25V with value of 677 uV/°C
- In Table 4.15 "ADC", added minimum specification for VREF temperature drift with test condition of 2.5V with value of -231 uV/°C
- In Table 4.15 "ADC", added typical specification for VREF temperature drift with test condition of 2.5V with value of 545 uV/°C
- In Table 4.15 "ADC", added maximum specification for VREF temperature drift with test condition of 2.5V with value of 1271 uV/°C
- In Table 4.15 "ADC", added typical specification for VREF current consumption with test condition of 1.25V with value of 67 uA
- In Table 4.15 "ADC", added maximum specification for VREF current consumption with test condition of 1.25V with value of 97 uA
- In Table 4.15 "ADC", added typical specification for VREF current consumption with test condition of 2.5V with value of 55 uA
- In Table 4.15 "ADC", added maximum specification for VREF current consumption with test condition of 2.5V with value of 72 uA
- In Table 4.15 "ADC", added typical specification for ADC and DAC VREF matching with test condition of 1.25V with value of 99.85%
- In Table 4.15 "ADC", added typical specification for ADC and DAC VREF matching with test condition of 2.5V with value of 100.01%
- In Table 4.17 "OPAMP", removed the minimum Load Resistance specification of 200

Reason for Change

Release of revision C devices to address errata items

Impact on Form, Fit, Function, Quality, Reliability

Revision C corrects the 2 errata items listed in the Change Description section; revision C devices will now behave as expected on power on reset and brown out events. There is no change to form, fit, quality or reliability.

Product Identification

Existing Part #	Replacement Part #	DropInCompInd.
EZR32WG230F64R55G-B0	EZR32WG230F64R55G-C0	Yes
EZR32WG230F64R55G-B0R	EZR32WG230F64R55G-C0R	Yes
EZR32WG230F64R60G-B0	EZR32WG230F64R60G-C0	Yes
EZR32WG230F64R60G-B0R	EZR32WG230F64R60G-C0R	Yes
EZR32WG230F64R61G-B0	EZR32WG230F64R61G-C0	Yes
EZR32WG230F64R61G-B0R	EZR32WG230F64R61G-C0R	Yes
EZR32WG230F64R63G-B0	EZR32WG230F64R63G-C0	Yes
EZR32WG230F64R63G-B0R	EZR32WG230F64R63G-C0R	Yes
EZR32WG230F64R67G-B0	EZR32WG230F64R67G-C0	Yes
EZR32WG230F64R67G-B0R	EZR32WG230F64R67G-C0R	Yes
EZR32WG230F64R68G-B0	EZR32WG230F64R68G-C0	Yes
EZR32WG230F64R68G-B0R	EZR32WG230F64R68G-C0R	Yes
EZR32WG230F64R69G-B0	EZR32WG230F64R69G-C0	Yes
EZR32WG230F64R69G-B0R	EZR32WG230F64R69G-C0R	Yes
EZR32WG230F128R55G-B0	EZR32WG230F128R55G-C0	Yes
EZR32WG230F128R55G-B0R	EZR32WG230F128R55G-C0R	Yes
EZR32WG230F128R60G-B0	EZR32WG230F128R60G-C0	Yes
EZR32WG230F128R60G-B0R	EZR32WG230F128R60G-C0R	Yes
EZR32WG230F128R61G-B0	EZR32WG230F128R61G-C0	Yes
EZR32WG230F128R61G-B0R	EZR32WG230F128R61G-C0R	Yes
EZR32WG230F128R63G-B0	EZR32WG230F128R63G-C0	Yes
EZR32WG230F128R63G-B0R	EZR32WG230F128R63G-C0R	Yes
EZR32WG230F128R67G-B0	EZR32WG230F128R67G-C0	Yes
EZR32WG230F128R67G-B0R	EZR32WG230F128R67G-C0R	Yes
EZR32WG230F128R68G-B0	EZR32WG230F128R68G-C0	Yes
EZR32WG230F128R68G-B0R	EZR32WG230F128R68G-C0R	Yes
EZR32WG230F128R69G-B0	EZR32WG230F128R69G-C0	Yes
EZR32WG230F128R69G-B0R	EZR32WG230F128R69G-C0R	Yes

EZR32WG230F256R55G-B0	EZR32WG230F256R55G-C0	Yes
EZR32WG230F256R55G-B0R	EZR32WG230F256R55G-C0R	Yes
EZR32WG230F256R60G-B0	EZR32WG230F256R60G-C0	Yes
EZR32WG230F256R60G-B0R	EZR32WG230F256R60G-C0R	Yes
EZR32WG230F256R61G-B0	EZR32WG230F256R61G-C0	Yes
EZR32WG230F256R61G-B0R	EZR32WG230F256R61G-C0R	Yes
EZR32WG230F256R63G-B0	EZR32WG230F256R63G-C0	Yes
EZR32WG230F256R63G-B0R	EZR32WG230F256R63G-C0R	Yes
EZR32WG230F256R67G-B0	EZR32WG230F256R67G-C0	Yes
EZR32WG230F256R67G-B0R	EZR32WG230F256R67G-C0R	Yes
EZR32WG230F256R68G-B0	EZR32WG230F256R68G-C0	Yes
EZR32WG230F256R68G-B0R	EZR32WG230F256R68G-C0R	Yes
EZR32WG230F256R69G-B0	EZR32WG230F256R69G-C0	Yes
EZR32WG230F256R69G-B0R	EZR32WG230F256R69G-C0R	Yes
EZR32WG330F64R55G-B0	EZR32WG330F64R55G-C0	Yes
EZR32WG330F64R55G-B0R	EZR32WG330F64R55G-C0R	Yes
EZR32WG330F64R60G-B0	EZR32WG330F64R60G-C0	Yes
EZR32WG330F64R60G-B0R	EZR32WG330F64R60G-C0R	Yes
EZR32WG330F64R61G-B0	EZR32WG330F64R61G-C0	Yes
EZR32WG330F64R61G-B0R	EZR32WG330F64R61G-C0R	Yes
EZR32WG330F64R63G-B0	EZR32WG330F64R63G-C0	Yes
EZR32WG330F64R63G-B0R	EZR32WG330F64R63G-C0R	Yes
EZR32WG330F64R67G-B0	EZR32WG330F64R67G-C0	Yes
EZR32WG330F64R67G-B0R	EZR32WG330F64R67G-C0R	Yes
EZR32WG330F64R68G-B0	EZR32WG330F64R68G-C0	Yes
EZR32WG330F64R68G-B0R	EZR32WG330F64R68G-C0R	Yes
EZR32WG330F64R69G-B0	EZR32WG330F64R69G-C0	Yes
EZR32WG330F64R69G-B0R	EZR32WG330F64R69G-C0R	Yes
EZR32WG330F128R55G-B0	EZR32WG330F128R55G-C0	Yes
EZR32WG330F128R55G-B0R	EZR32WG330F128R55G-C0R	Yes
EZR32WG330F128R60G-B0	EZR32WG330F128R60G-C0	Yes
EZR32WG330F128R60G-B0R	EZR32WG330F128R60G-C0R	Yes
EZR32WG330F128R61G-B0	EZR32WG330F128R61G-C0	Yes
EZR32WG330F128R61G-B0R	EZR32WG330F128R61G-C0R	Yes
EZR32WG330F128R63G-B0	EZR32WG330F128R63G-C0	Yes
EZR32WG330F128R63G-B0R	EZR32WG330F128R63G-C0R	Yes
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EZR32WG330F128R68G-B0R	EZR32WG330F128R68G-C0R	Yes
EZR32WG330F128R69G-B0	EZR32WG330F128R69G-C0	Yes
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EZR32WG330F256R60G-B0R	EZR32WG330F256R60G-C0R	Yes
EZR32WG330F256R61G-B0	EZR32WG330F256R61G-C0	Yes
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EZR32WG330F256R63G-B0	EZR32WG330F256R63G-C0	Yes
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EZR32WG330F256R67G-B0	EZR32WG330F256R67G-C0	Yes
EZR32WG330F256R67G-B0R	EZR32WG330F256R67G-C0R	Yes
EZR32WG330F256R68G-B0	EZR32WG330F256R68G-C0	Yes
EZR32WG330F256R68G-B0R	EZR32WG330F256R68G-C0R	Yes
EZR32WG330F256R69G-B0	EZR32WG330F256R69G-C0	Yes
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EZR32LG230F64R67G-B0R	EZR32LG230F64R67G-C0R	Yes
EZR32LG230F64R68G-B0	EZR32LG230F64R68G-C0	Yes

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EZR32LG230F128R68G-B0R	EZR32LG230F128R68G-C0R	Yes
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EZR32LG230F256R60G-B0R	EZR32LG230F256R60G-C0R	Yes
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EZR32LG230F256R61G-B0R	EZR32LG230F256R61G-C0R	Yes
EZR32LG230F256R63G-B0	EZR32LG230F256R63G-C0	Yes
EZR32LG230F256R63G-B0R	EZR32LG230F256R63G-C0R	Yes
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EZR32LG230F256R67G-B0R	EZR32LG230F256R67G-C0R	Yes
EZR32LG230F256R68G-B0	EZR32LG230F256R68G-C0	Yes
EZR32LG230F256R68G-B0R	EZR32LG230F256R68G-C0R	Yes
EZR32LG230F256R69G-B0	EZR32LG230F256R69G-C0	Yes
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EZR32LG330F64R60G-B0	EZR32LG330F64R60G-C0	Yes
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EZR32LG330F64R69G-B0	EZR32LG330F64R69G-C0	Yes
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EZR32LG330F128R55G-B0R	EZR32LG330F128R55G-C0R	Yes
EZR32LG330F128R60G-B0	EZR32LG330F128R60G-C0	Yes
EZR32LG330F128R60G-B0R	EZR32LG330F128R60G-C0R	Yes
EZR32LG330F128R61G-B0	EZR32LG330F128R61G-C0	Yes
EZR32LG330F128R61G-B0R	EZR32LG330F128R61G-C0R	Yes
EZR32LG330F128R63G-B0	EZR32LG330F128R63G-C0	Yes
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EZR32LG330F128R67G-B0	EZR32LG330F128R67G-C0	Yes
EZR32LG330F128R67G-B0R	EZR32LG330F128R67G-C0R	Yes
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EZR32LG330F128R69G-B0R	EZR32LG330F128R69G-C0R	Yes
EZR32LG330F256R55G-B0	EZR32LG330F256R55G-C0	Yes
EZR32LG330F256R55G-B0R	EZR32LG330F256R55G-C0R	Yes
EZR32LG330F256R60G-B0	EZR32LG330F256R60G-C0	Yes
EZR32LG330F256R60G-B0R	EZR32LG330F256R60G-C0R	Yes
EZR32LG330F256R61G-B0	EZR32LG330F256R61G-C0	Yes
EZR32LG330F256R61G-B0R	EZR32LG330F256R61G-C0R	Yes
EZR32LG330F256R63G-B0	EZR32LG330F256R63G-C0	Yes
EZR32LG330F256R63G-B0R	EZR32LG330F256R63G-C0R	Yes

EZR32LG330F256R67G-B0	EZR32LG330F256R67G-C0	Yes
EZR32LG330F256R67G-B0R	EZR32LG330F256R67G-C0R	Yes
EZR32LG330F256R68G-B0	EZR32LG330F256R68G-C0	Yes
EZR32LG330F256R68G-B0R	EZR32LG330F256R68G-C0R	Yes
EZR32LG330F256R69G-B0	EZR32LG330F256R69G-C0	Yes
EZR32LG330F256R69G-B0R	EZR32LG330F256R69G-C0R	Yes

Last Date of Unchanged Product: 2/24/2020

Qualification Samples

Available upon request.

Customer Response

Lack of acknowledgment of the PCN within 30 days constitutes acceptance of the change, Ref. JEDEC-J-STD-046.

To request further data or inquire about this notification, please contact your Silicon Labs sales representative. A list of Silicon Labs sales representatives is available at <http://www.silabs.com>.

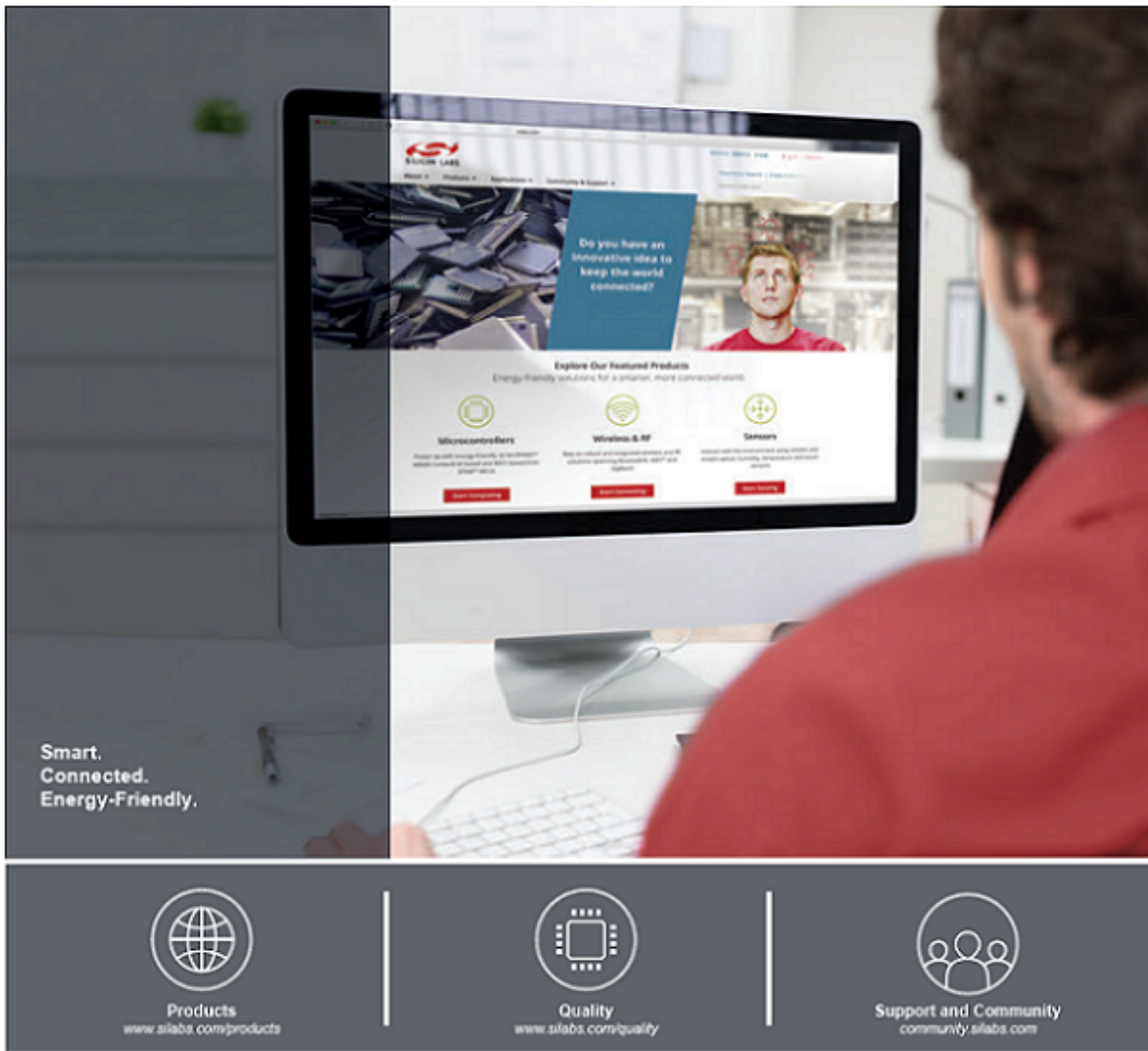
Customers may approve early PCN acceptance by emailing approval, along with PCN # to PCNEarlyAcceptance@silabs.com

User Registration

Register today to create your account on Silabs.com. Your personalized profile allows you to receive technical document updates, new product announcements, "how-to" and design documents, product change notices (PCN) and other valuable content available only to registered users. <http://www.silabs.com/profile>

Qualification Data

Available upon request.



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