



**ON Semiconductor®**

# Power Bank Solution

---

**LC709511A05GEVB Quick Guide**

**Mar 9, 2017**



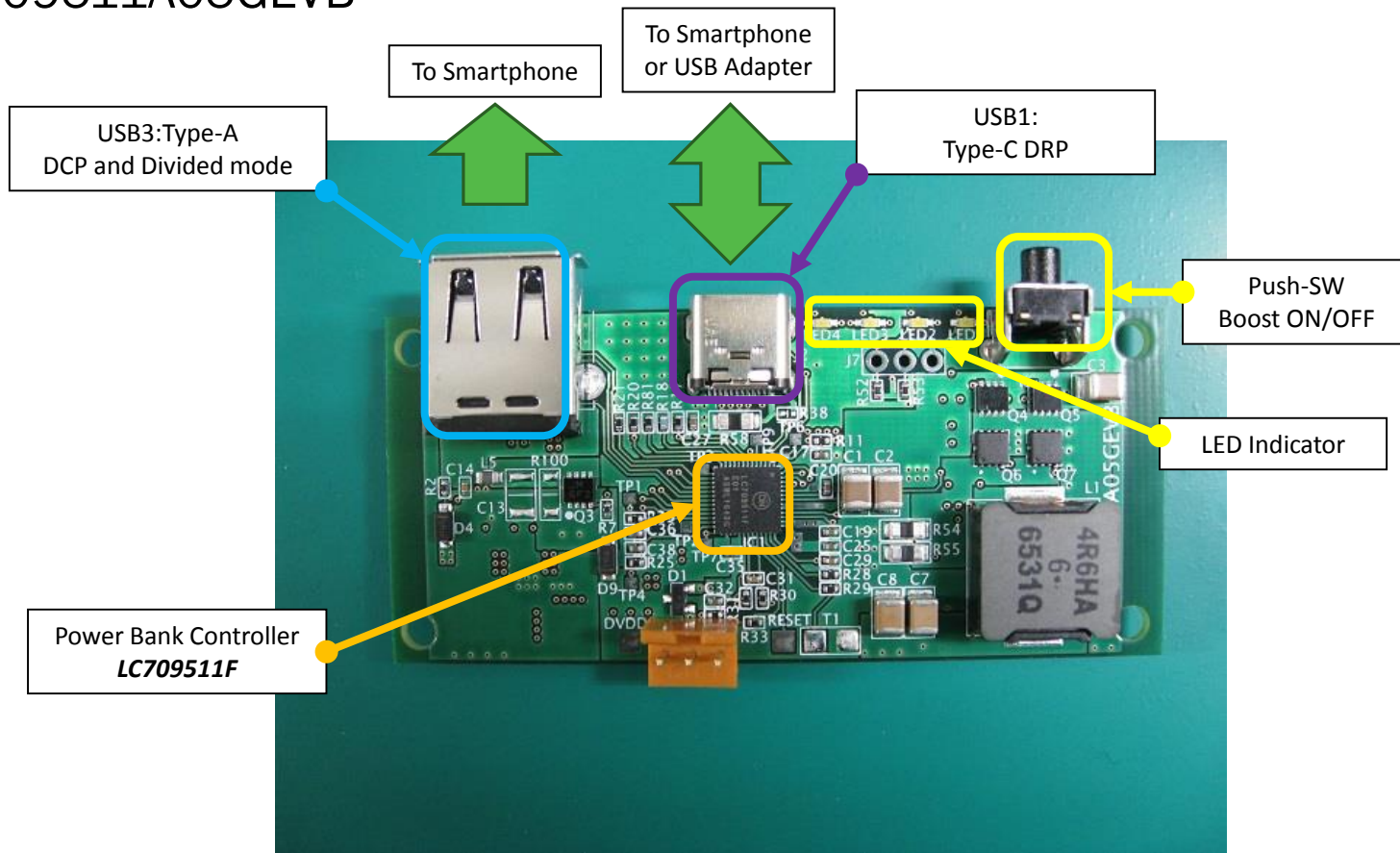
Confidential

**ON Semiconductor®**



# LC709511F : FW05(Type-C, Type-A) EVB Overview

## LC709511A05GEVB



# LC709511EVA05GEVB Functions

Reference software used for this EVB : LC709511F-FW05 (Ver.100)

Function		USB1 (Type-C DRP)	USB3 (Type-A)
1	USB1 QC3.0 Output	Smartphone_1	N/A
2	USB1&USB3 2-port (QC3.0 & 5V) Output	Smartphone_1	Smartphone_2
3	USB3 5V Output	N/A	Smartphone_2
4	USB1 5V Input	Adapter	N/A



# LC709511EVA05GEVB connection example

## Function 1 : USB1 QC3.0 Output

Smartphone  
Xiaomi MI 5  
Android 6.0.0  
USB Type-C x1(DRP)  
QC3.0 support



USB1 Type-C  
DRP(DFP)



- ◆ When a smartphone is plugged into USB1, the power bank will automatically detect the smartphone and checks the suitable supply voltage from the range of 5V~12V.
- ◆ LED1 will flash while supplying power.
- ◆ Power supply will automatically stop once the smartphone is fully charged.
- ※ In case the smartphone is DRP type, smartphone may be treated as DFP and begin charging the power bank (This may happen by the DRP toggle timing). This also depends on the DRP policy of the smartphone.



# LC709511EVA05GEVB connection example

## Function 2 : USB1 & USB3 Output

Smartphone\_1  
Xiaomi MI 5  
Android 6.0.0  
USB Type-C x1(DRP)  
QC3.0 supported



USB1 Type-C  
DRP(DFP)

Smartphone\_2  
Huawei Honor  
Android 5.1.1  
USB micro-B



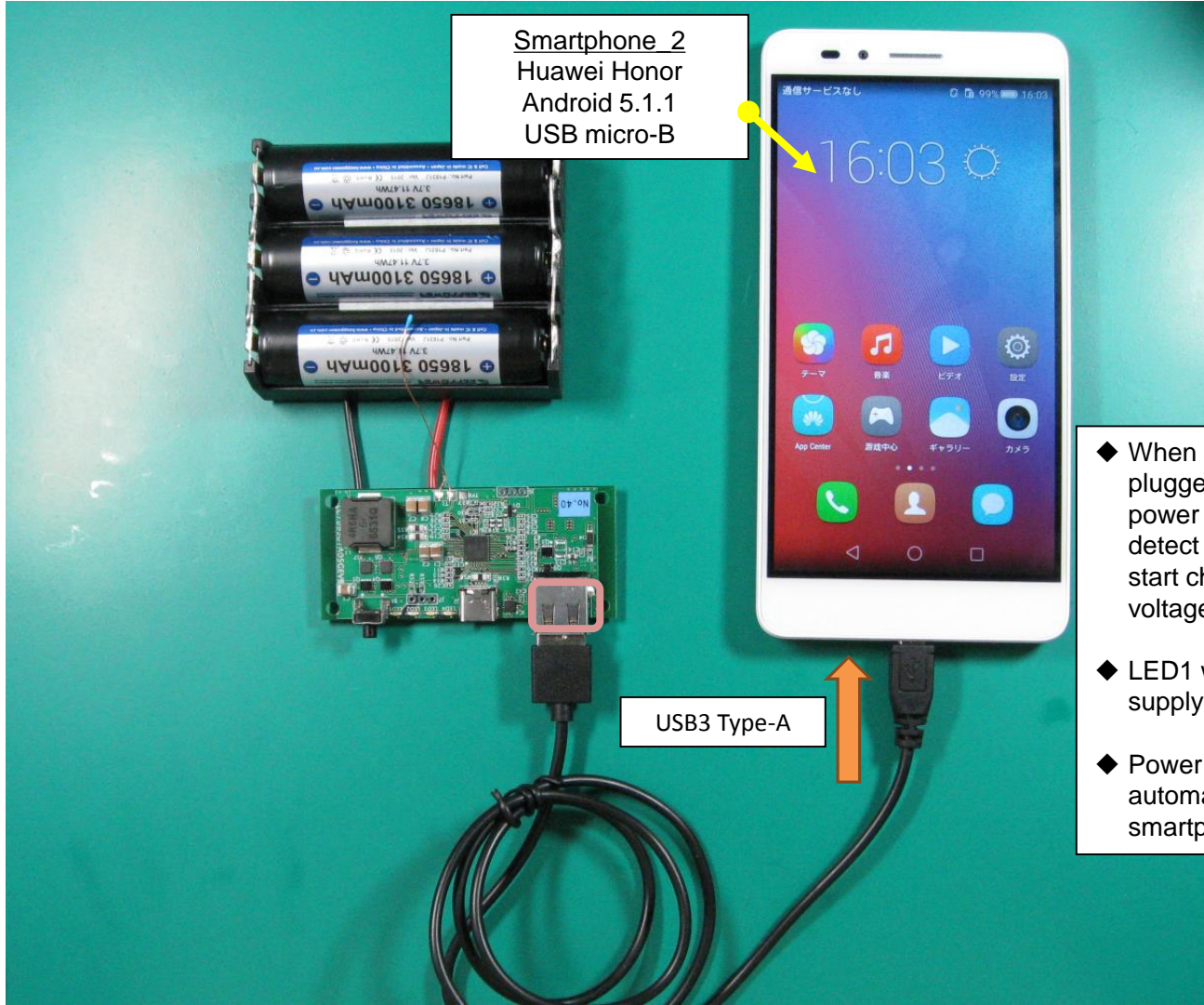
USB3 Type-A

- ◆ Two smartphones can be charged at the same time when Smartphone\_1 is connected to USB1 and Smartphone\_2 is connected to USB3.
- ◆ In this case, USB1 is supplying voltage in the range of 5V~12V and USB3 is supplying 5 fixed voltage.
- ◆ LED1 will flash while supplying power to these smartphones.



# LC709511EVA05GEVB connection example

## Function 3 : USB3 5V Output



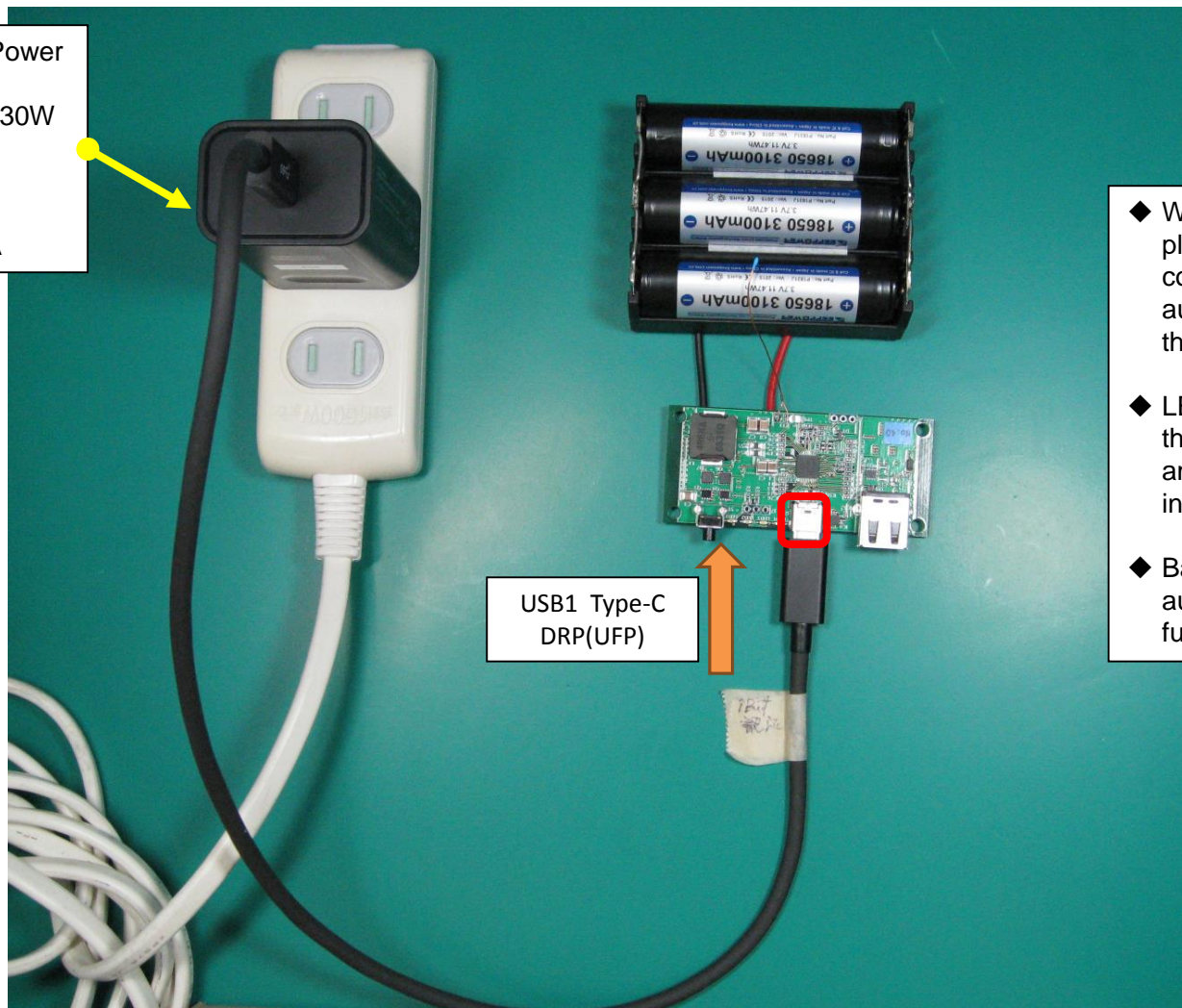
- ◆ When a smartphone is plugged into an USB3, the power bank will automatically detect the connection and start charging 5V fixed voltage.
- ◆ LED1 will flash while supplying power.
- ◆ Power supply will automatically stop once the smartphone is fully charged.



# LC709511EVA05GEV connection example

## Function 4 : AC-Adapter(Type C)Input

USB Type-C Power Adapter  
Output: Max. 30W  
5.0V/3A  
9V/2A  
15V/2A  
20V/1.5A



USB1 Type-C  
DRP(UFP)

- ◆ When the USB adapter is plugged into USB1 connector, it will automatically start charging the battery inside.
- ◆ LEDs will flash based on the battery remaining amount while charging the internal battery.
- ◆ Battery charging will automatically stop once it is fully charged.

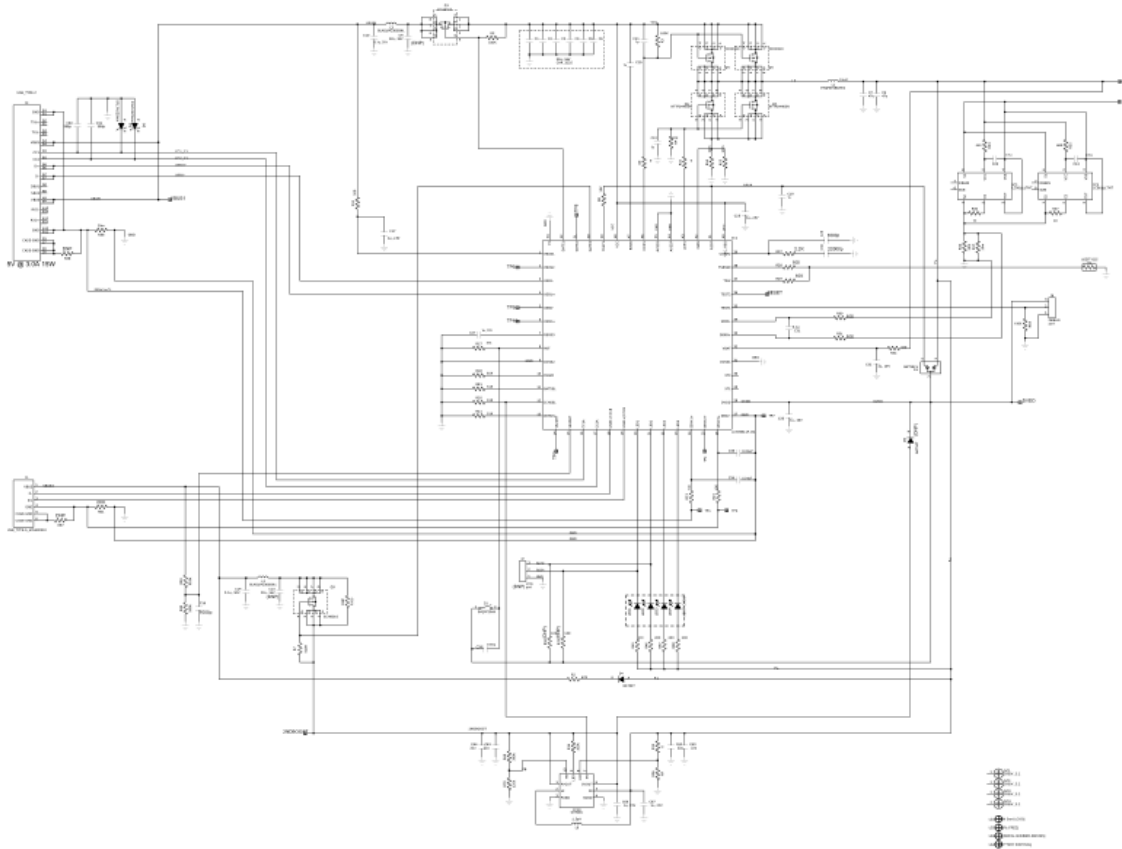


# LC709511EVA05GEVB Circuit Diagram

ON Semiconductor®



## Schematic for the LC709511A05GEVB Evaluation Board





ON Semiconductor and the ON logo are registered trademarks of Semiconductor Components Industries, LLC (SCILLC) or its subsidiaries in the United States and/or other countries. SCILLC owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of SCILLC's product/patent coverage may be accessed at [www.onsemi.com/site/pdf/Patent-Marking.pdf](http://www.onsemi.com/site/pdf/Patent-Marking.pdf). SCILLC reserves the right to make changes without further notice to any products herein. SCILLC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does SCILLC assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. "Typical" parameters which may be provided in SCILLC data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. SCILLC does not convey any license under its patent rights nor the rights of others. SCILLC products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the SCILLC product could create a situation where personal injury or death may occur. Should Buyer purchase or use SCILLC products for any such unintended or unauthorized application, Buyer shall indemnify and hold SCILLC and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that SCILLC was negligent regarding the design or manufacture of the part. SCILLC is an Equal Opportunity/Affirmative Action Employer. This literature is subject to all applicable copyright laws and is not for resale in any manner.



## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for* [Power Management IC Development Tools](#) *category:*

*Click to view products by* [ON Semiconductor](#) *manufacturer:*

Other Similar products are found below :

[EVAL-ADM1168LQEBZ](#) [EVB-EP5348UI](#) [MIC23451-AAAYFL EV](#) [MIC5281YMME EV](#) [DA9063-EVAL](#) [ADP122-3.3-EVALZ](#) [ADP130-0.8-EVALZ](#) [ADP130-1.2-EVALZ](#) [ADP130-1.5-EVALZ](#) [ADP130-1.8-EVALZ](#) [ADP1712-3.3-EVALZ](#) [ADP1714-3.3-EVALZ](#) [ADP1715-3.3-EVALZ](#) [ADP1716-2.5-EVALZ](#) [ADP1740-1.5-EVALZ](#) [ADP1752-1.5-EVALZ](#) [ADP1828LC-EVALZ](#) [ADP1870-0.3-EVALZ](#) [ADP1871-0.6-EVALZ](#) [ADP1873-0.6-EVALZ](#) [ADP1874-0.3-EVALZ](#) [ADP1882-1.0-EVALZ](#) [ADP199CB-EVALZ](#) [ADP2102-1.25-EVALZ](#) [ADP2102-1.875EVALZ](#) [ADP2102-1.8-EVALZ](#) [ADP2102-2-EVALZ](#) [ADP2102-3-EVALZ](#) [ADP2102-4-EVALZ](#) [ADP2106-1.8-EVALZ](#) [ADP2147CB-110EVALZ](#) [AS3606-DB](#) [BQ24010EVM](#) [BQ24075TEVM](#) [BQ24155EVM](#) [BQ24157EVM-697](#) [BQ24160EVM-742](#) [BQ24296MEVM-655](#) [BQ25010EVM](#) [BQ3055EVM](#) [NCV891330PD50GEVB](#) [ISLUSBI2CKIT1Z](#) [LM2744EVAL](#) [LM2854EVAL](#) [LM3658SD-AEV/NOPB](#) [LM3658SDEV/NOPB](#) [LM3691TL-1.8EV/NOPB](#) [LM4510SDEV/NOPB](#) [LM5033SD-EVAL](#) [LP38512TS-1.8EV](#)