

# USB BC1.2 介紹

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Reported: 台北工程部

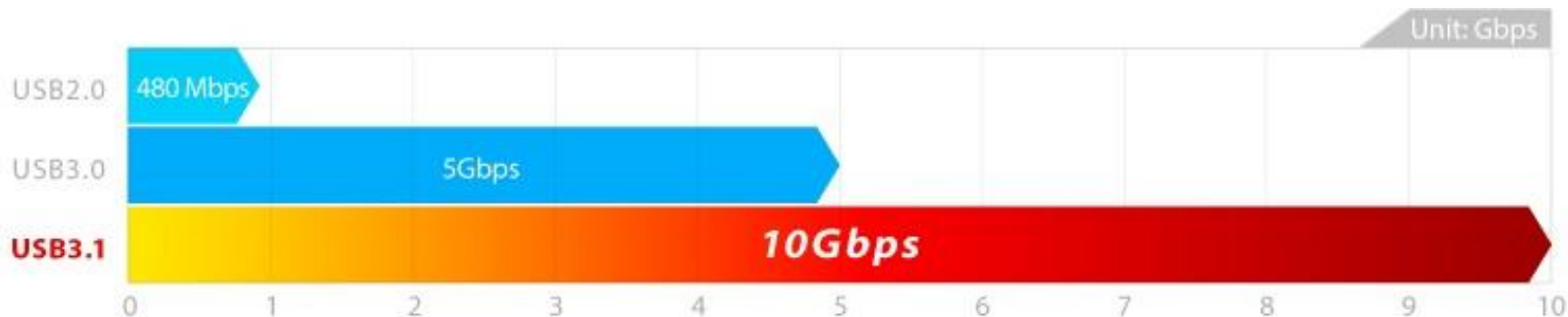
Date: Aug 10<sup>th</sup> 2015

Update : Oct 6<sup>th</sup> 2015



- USB History
- USB BC1.2
- 總結

	Generation	Mark	Bandwidth	Power	Launch
USB 1.0	Low speed		1.5 Mbps	5V /500mA	1996 .Jan
USB 1.1	Full speed		12 Mbps	5V /500mA	1998 .Sep
USB 2.0	High speed		480 Mbps	5V /500mA	2000 .Apr
USB 3.0	Super speed Gen1		5 Gbps	5V /900mA	2008 .Nov
USB 3.1	Super speed + Gen2		10 Gbps	5V /900mA	2013 .Aug



- USB 2.0 採用8b/10b 編碼原則，  
也就是在傳10個bit時會有2 個bit的編碼耗損，  
實際傳輸速度為 $480\text{Mb/s} \times 8 / 10 = 384\text{Mb/s} = 48\text{MB/s}$
- USB 3.0 採用8b/10b 編碼原則，  
也就是在傳10個bit時會有2 個bit的編碼耗損，  
實際傳輸速度為 $5\text{Gb/s} \times 8 / 10 = 4\text{Gb/s} = 500\text{MB/s}$
- USB 3.1 採用128b/132b 編碼原則，  
也就是在傳132個bit時會有4 個bit的編碼耗損，  
實際傳輸速度為 $10\text{Gb/s} \times 128 / 132 = 9.69\text{Gb/s} = 1212\text{MB/s}$

- 2009年，由全球行動通訊系統協會（Global System for Mobile Communications Association，GSMA），開放手機聯盟（Open Handset Alliance，OHA），USB-IF 約20家廠商共同制訂，以Micro USB 做為數據及充電的統一接口，這是USB BC 的開端。



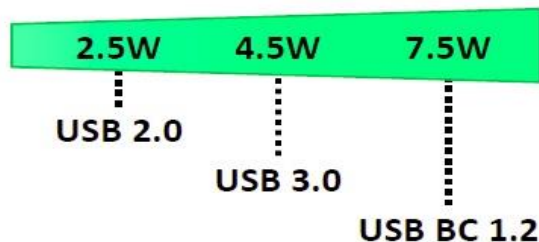


## Taking a Great Idea ...

Broad international adoption of USB Battery Charging standard for mobile devices



- China, Europe drove standardization as a means to increase charger reuse and reduce electronic waste



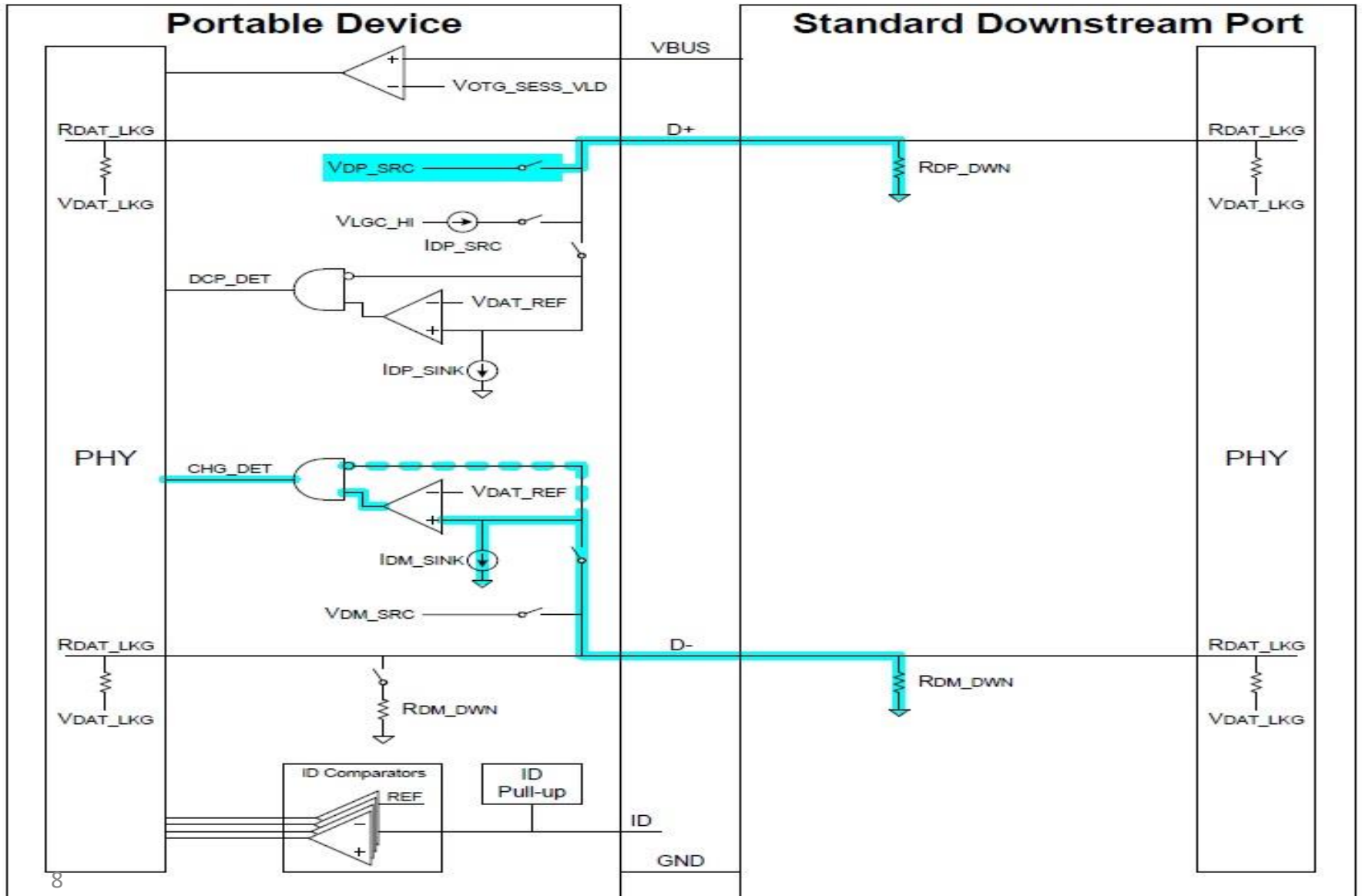
**Agreement reached on Micro-USB connector and the standard for the common mobile charger**

*CENELEC and the USB Implementers Forum reach agreement on memorandum of understanding*

**BRUSSELS – March 1, 2011**– A Memorandum of Understanding (MoU) was signed today between the USB-IF and CENELEC, the European Committee for Electrotechnical Standardization.



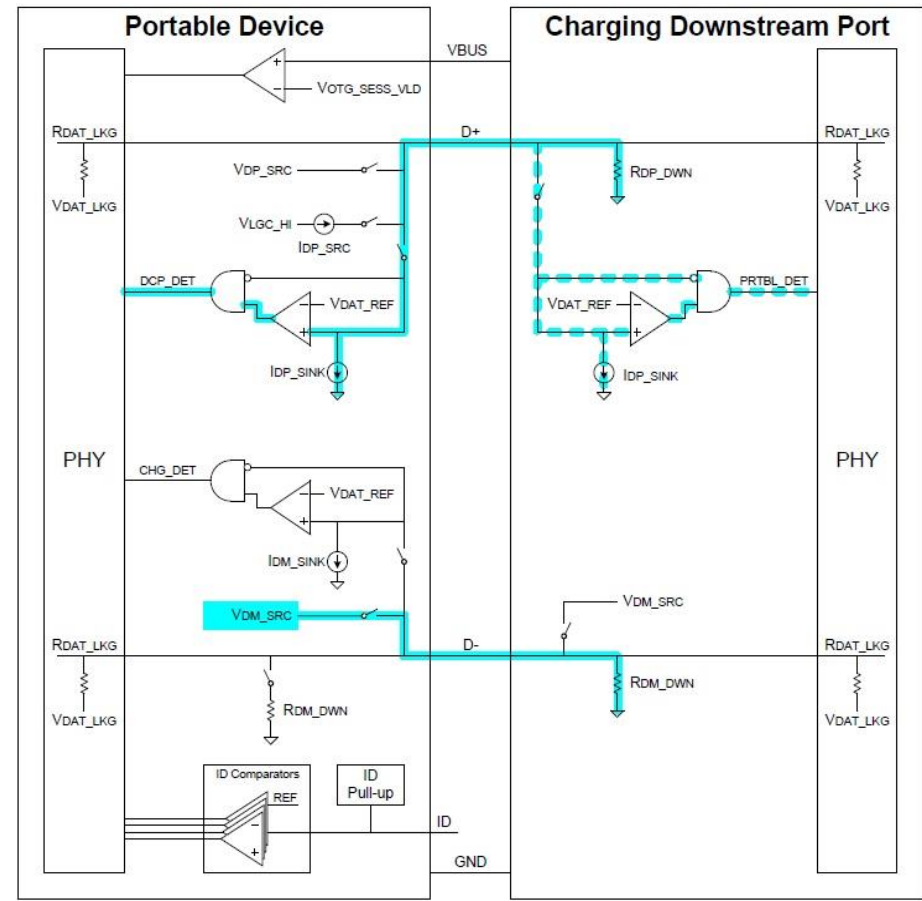
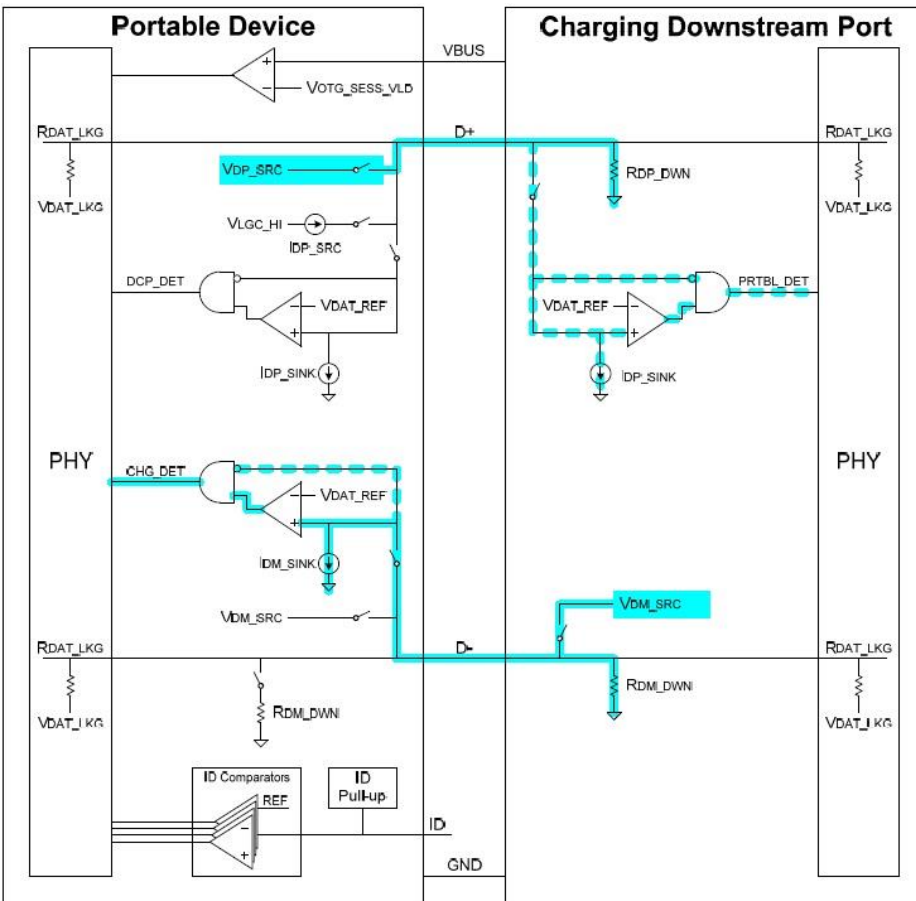
	Charge voltage	Charge current	USB Data
<b>SDP</b> Standard Downstream Port 標準下行端口	4.75V~5.25V	500mA(USB2.0) 900mA(USB3.0)	Yes
<b>CDP</b> Charging Downstream Port 充電下行端口	4.75V~5.25V	1.5A	Yes
<b>DCP</b> Dedicated Charging Port 專用充電端口	2.0V~5.25V	1.5A	No





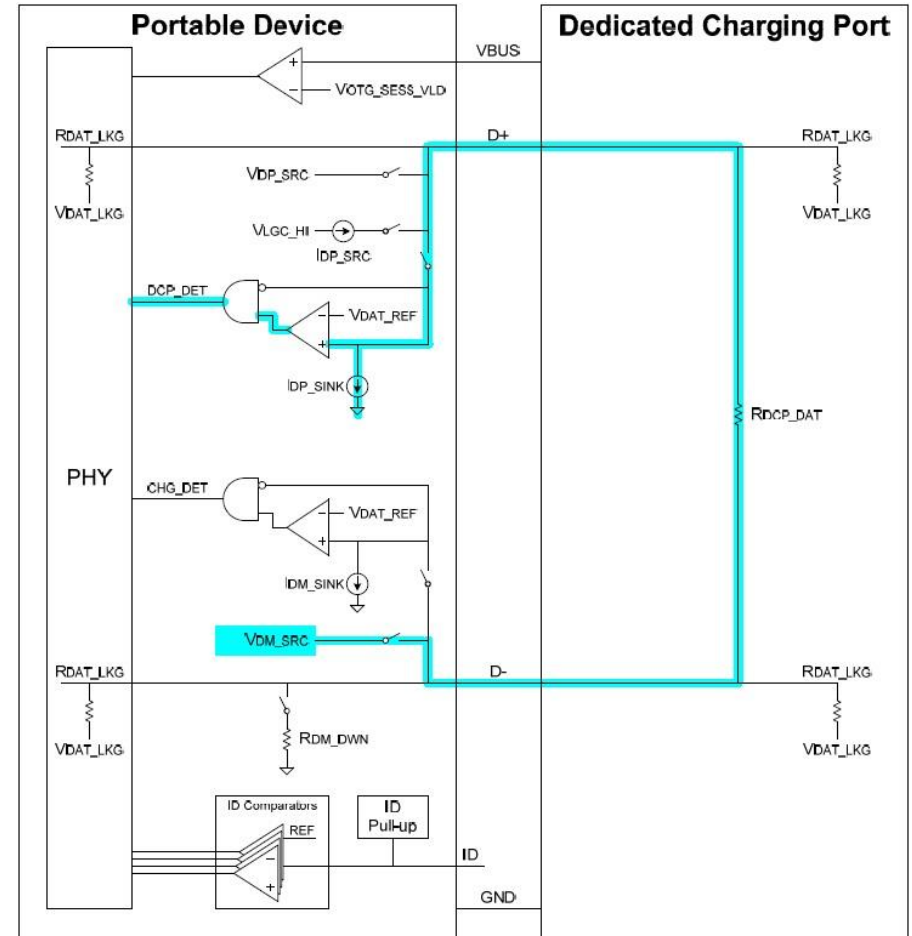
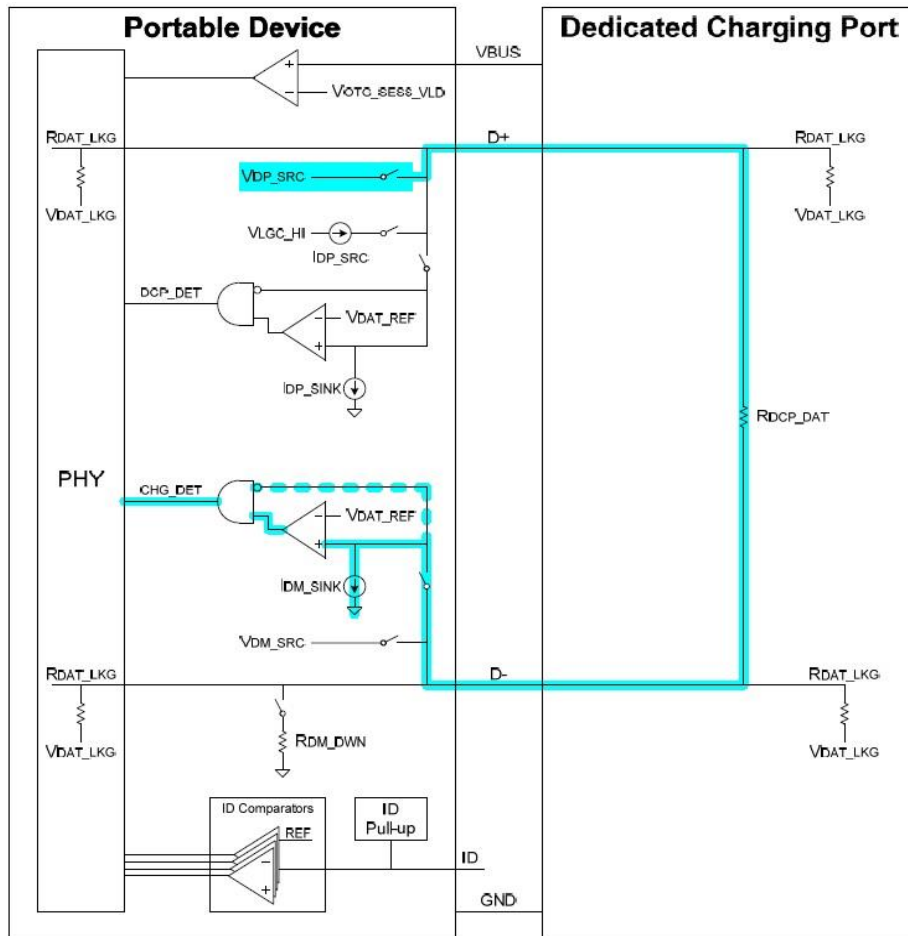
## Primary Detection

## Secondary Detection



## Primary Detection

## Secondary Detection





欲知詳情請洽...

**AENEAS**

## FAE team

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Thank You

*AENEAS*

