



Product Change Notification / SYST-01SGRP429

Date:

06-Apr-2022

Product Category:

USB Hubs

PCN Type:

Document Change

Notification Subject:

Data Sheet - USB7006 6-Port USB 3.2 Gen 1 Controller Hub Datasheet Document Revision

Affected CPNs:

[SYST-01SGRP429_Affected_CPN_04062022.pdf](#)

[SYST-01SGRP429_Affected_CPN_04062022.csv](#)

Notification Text:

SYST-01SGRP429

Microchip has released a new Product Documents for the USB7006 6-Port USB 3.2 Gen 1 Controller Hub of devices. If you are using one of these devices please read the document located at [USB7006 6-Port USB 3.2 Gen 1 Controller Hub](#).

Notification Status: Final

Description of Change:

- Cover : Updated product title
: Added USB Billboard Device bullet

- : Added USB-IF bullet
: Added Multi-Host Endpoint Reflector bullets
: Updated Windows compatibility list to include Windows 11
: Updated USB 3.2 Gen 1 pins voltage tolerance to 1.32

- Section2.1 “General Description” : Added Multi-Host Endpoint Reflector and USB Power Delivery Billboard Device paragraphs

- Figure 3-1: Corrected pins 4 and 80 as 'NC'
- Figure 3-1: Corrected flow chart in CFG_STRAP section. Replaced "Configuration 1?" text with "Configuration 3?"
- Section 3.2 "Pin Descriptions" : Added note regarding pull-up/down resistor values.
: Updated SPI_CLK pin description.
- Section 8.1 "Downstream Battery Charging" : Replaced reference to "USB Battery Charging with Microchip USB70xx Hubs" with "AN2810 Configuration of USB7002/USB7006/USB7016/ USB705x"
- Section 8.4 "FlexConnect": Removed mention of Direct Pin Control for FlexConnect, which is not supported on USB7006
- Section 9.1 "Absolute Maximum Ratings*": Corrected absolute maximum range of V_{CORE} domain. V_{CORE} absolute maximum range specification erroneously had same limits V_{CORE} operational limits.
- Section 9.1 "Absolute Maximum Ratings*": Changed "Digital Core Supply Voltage (V_{CORE})" to "1.2 V and Digital Core Supply Voltage (V_{CORE})" since V_{CORE} power domain also supplies voltage to analog circuitry.
- Section 9.1 "Absolute Maximum Ratings*": Relaxed absolute maximum limit of XTAL from 3.63V to 4.6V
- Section 9.4 "Power Consumption" Updated Power Consumption figures and expanded on example calculations to improve clarity.
- Section 9.4 "Power Consumption": Added note about real world power consumption variability.
- Section 9.6.1 "Power Supply and RESET_N Sequence Timing": Added additional clarification on V_{BUS_DET} with respect to power sequencing requirements.
- Table 9-11: Load Capacitance updated to 10pF NOM and Shunt Capacitance updated to 5pF NOM.
- Table 9-3: Updated I and IS buffer types VIH min values.
- Table 9-4: Updated t_{reset} min time to 1ms.
- Table 9-6: Extended minimum RESET_N pulse from 5μs to 1ms. This is to provide additional buffer for maximum process and operational variables (i.e.: end application voltage and temperature variations).
- Table 9-7 Extended minimum t_{SMBUS_RDY} pulse from 40ms to 100ms. This is to provide additional buffer for maximum process and operational variables (i.e.: end application voltage and temperature variations).
- Table 9-8 Extended minimum t_{ATTACH_RDY} from 5μs to 150ms. This is to provide additional buffer for maximum process and operational variables (i.e.: end application voltage and temperature variations) as well as to account for additional delays in t_{ATTACH_RDY} due to additional OTP memory utilization (i.e.: Additional OTP content pre-programmed into USB7006 adds time to device initialization after USB Attach command is issued)

Impacts to Data Sheet: None

Reason for Change: To Improve Productivity

Change Implementation Status: Complete

Date Document Changes Effective: 06 Apr 2022

NOTE: Please be advised that this is a change to the document only the product has not been changed.

Markings to Distinguish Revised from Unrevised Devices: N/A

Attachments:

[USB7006 6-Port USB 3.2 Gen 1 Controller Hub](#)

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Affected Catalog Part Numbers (CPN)

USB7006-I/KDX

USB7006-I/KDXVAO

USB7006/KDX

USB7006T-I/KDX

USB7006T-I/KDXVAO

USB7006T/KDX