

VIEW Tags

Safety / Setup Installation Guide

Gen 3 series

DRAFT

Please read these instructions carefully before using this product and save this manual for future use.

Preface

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This document pertains to the following products:

Model No	Description
VT03-G3	View 3 Tag with Bracket
VT03-G3BKT	Bracket for View 3 Tag
VT04-G3	View 4 Tag with Bracket
VT04-G3BKT	Bracket for View 4 Tag

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1. Specifications

1.1. Standards and Regulatory Approvals

1.1.1. Certifications

EN Standard	EN 300 220-1 ETSI EN 301 489-1 ETSI EN 301 489-3 EN 55032:2015/AC:2016 EN 55024:2010 EN 61000-4-2:2009 EN 61000-4-3:2006: +A1:2008 + A2:2010
FCC	FCC Part 15 subpart C FCC Part 15.231 FCC Part 15.209 FCC Part 15 subpart B
IC	RSS-210 ICES-003
Safety	IEC/EN 62368-1

1.1.2. FCC Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

1.1.3. Industry Canada Statement

This device complies with Industry Canada license- exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropic radiated power (e.i.r.p.) is not more than that permitted for successful communication.

1.1.4. Battery Safety Warnings

 CAUTION	
	These products contain lithium metal batteries. Do not charge, short circuit, incinerate or mutilate the tag, otherwise the battery may vent or rupture and release hazardous materials.
	Do not store above 122F (50C)

1.2. Interfaces

1.2.1. Screen

The View tags incorporate electrophoretic displays to present information to the user.

1.2.1.1. View 3

Active Area (mm):	66.9 (H)× 29.06 (V)
Resolution (pixel):	296 (H)×128 (V)
Pixel Pitch (mm):	0.227×0.226

1.2.1.2. View 4

Active Area (mm):	84.8 (H)×63.6 (V)
Resolution (pixel):	400 (H)×300 (V)
Pixel Pitch (mm):	0.212×0.212

1.2.2. Button

The button serves as a means for the user to communicate with the system. Three different types of button press can be reported:

- Single press
- Long press (>2 seconds)
- Double press

In addition, the button can be used to facilitate local interaction with the tag:

- Pressing the button three time in rapid succession (<1 sec) will result in a page being drawn which displays the tag's UID (unique identifier) in both barcode and human readable format. Pressing three times while on this page will return to the previously displayed image.
- Pressing and holding the button for more than 7 seconds will result in a diagnostic page being generated which shows the various tag configuration settings.
- Pressing and holding the button for >20 seconds will cause the embedded processor to reset.

1.2.3. LED

The View Tags contain a single, green LED located immediately above the button. This LED can be programmed by the system to operate in several different modes:

- Blink when the button is pressed
- Blink when the active radio is transmitting (default behavior)
- Blink when the passive RFID command channel is active
- Blink 10 times
- Blink until the button is pressed

1.2.4. I/O Port

Both the View 3 and View 4 feature an identical I/O port on the end of the tag. The orientation of Pin 1 on the connector is shown in Figure 1 below:

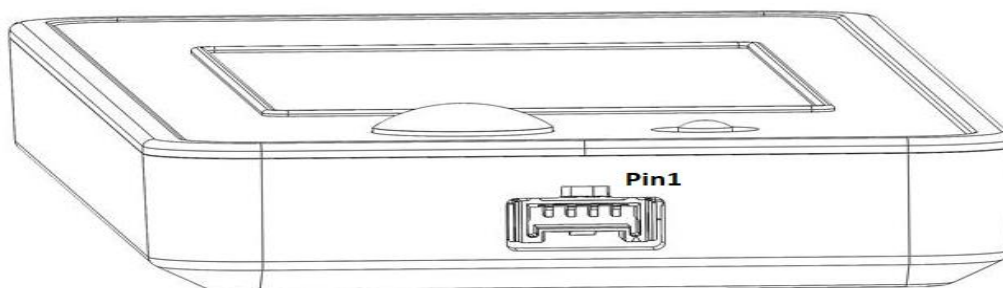


Figure 1 – GPIO Connector

The port supports one digital input, one digital output and a single line communication channel. The usage of each pin is described in the following table.

Pin	Description	Type	Comments
1	GPIO OUT	OUT	24V 0.1A max (internally current limited)
2	GPIO IN	IN	24Vmax (use only with normally open switch to save power)
3	GND	GND	Ground
4	DATA	IN/OUT	3.3V logic signal only. NOT 24V TOLERANT

1.2.5. 433 MHz Radio

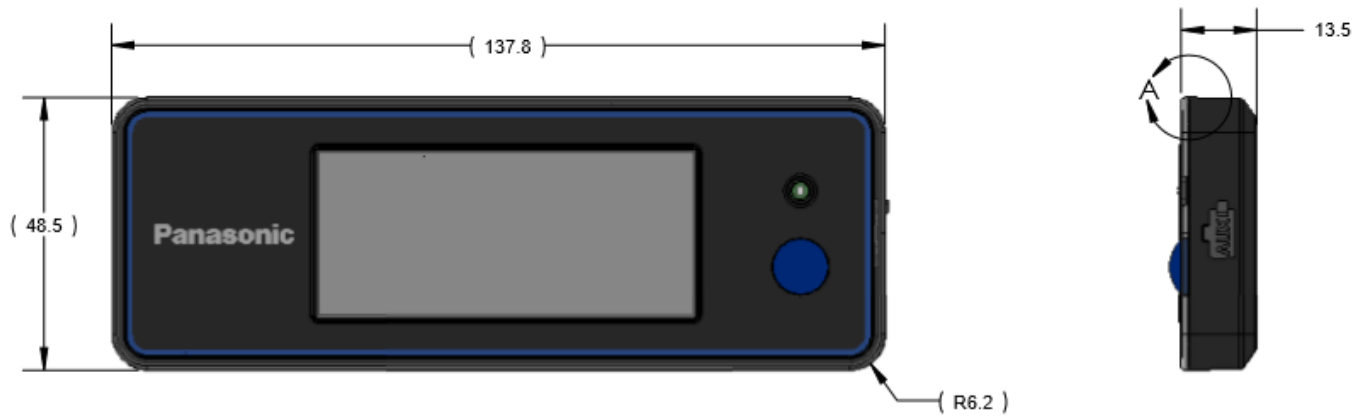
Primary communication between the Tag and the rest of the system takes place over a 433 MHz communication channel. This uses a Panasonic proprietary protocol to configure

1.2.6. Passive RFID (910/868 MHz)

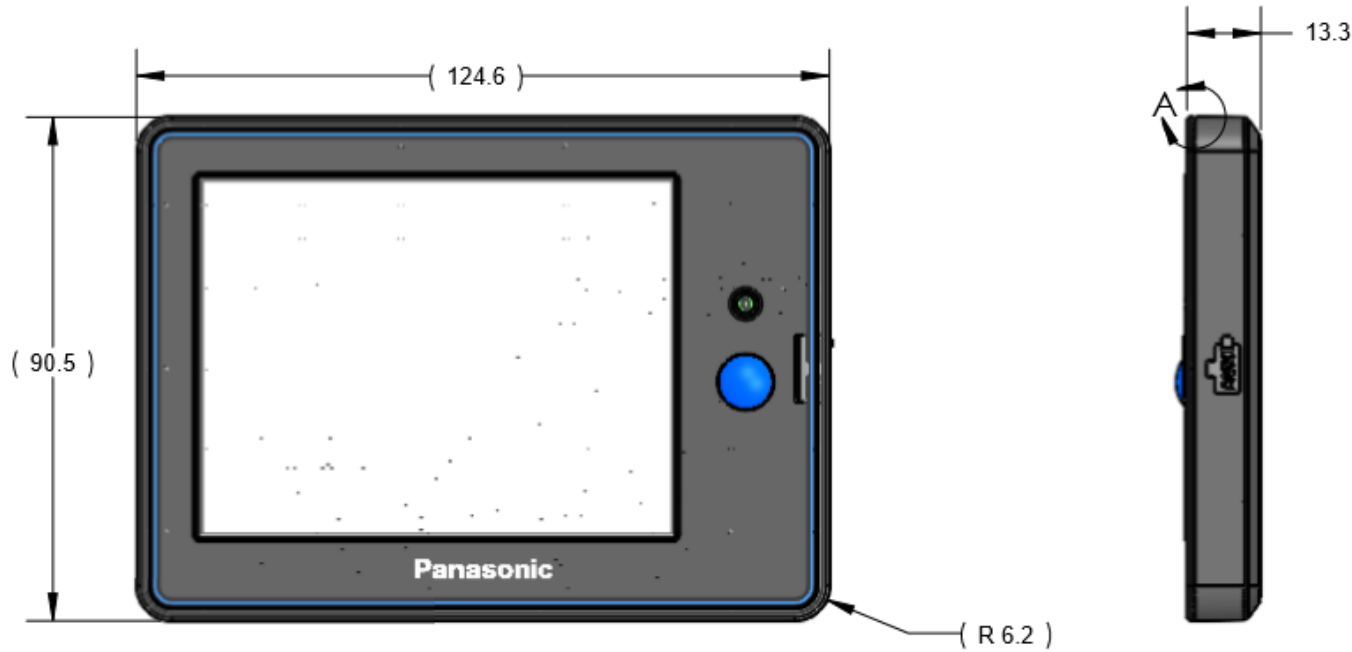
The View Tags include an EPC Gen 2 RFID interface, implemented using the Impinj MonzaX 2K integrated circuit. In addition to being able to read the Tag as a standard RFID tag, it also allows an additional communication path.

1.3.Physical Specifications

1.3.1. View 3



1.3.2. View 4



1.4.Environmental Specifications

Storage Temperature	-20C to +50C
Operating Temperature	0C ¹ to +40C
Ingress Protection	IP50
Humidity	20% - 80%

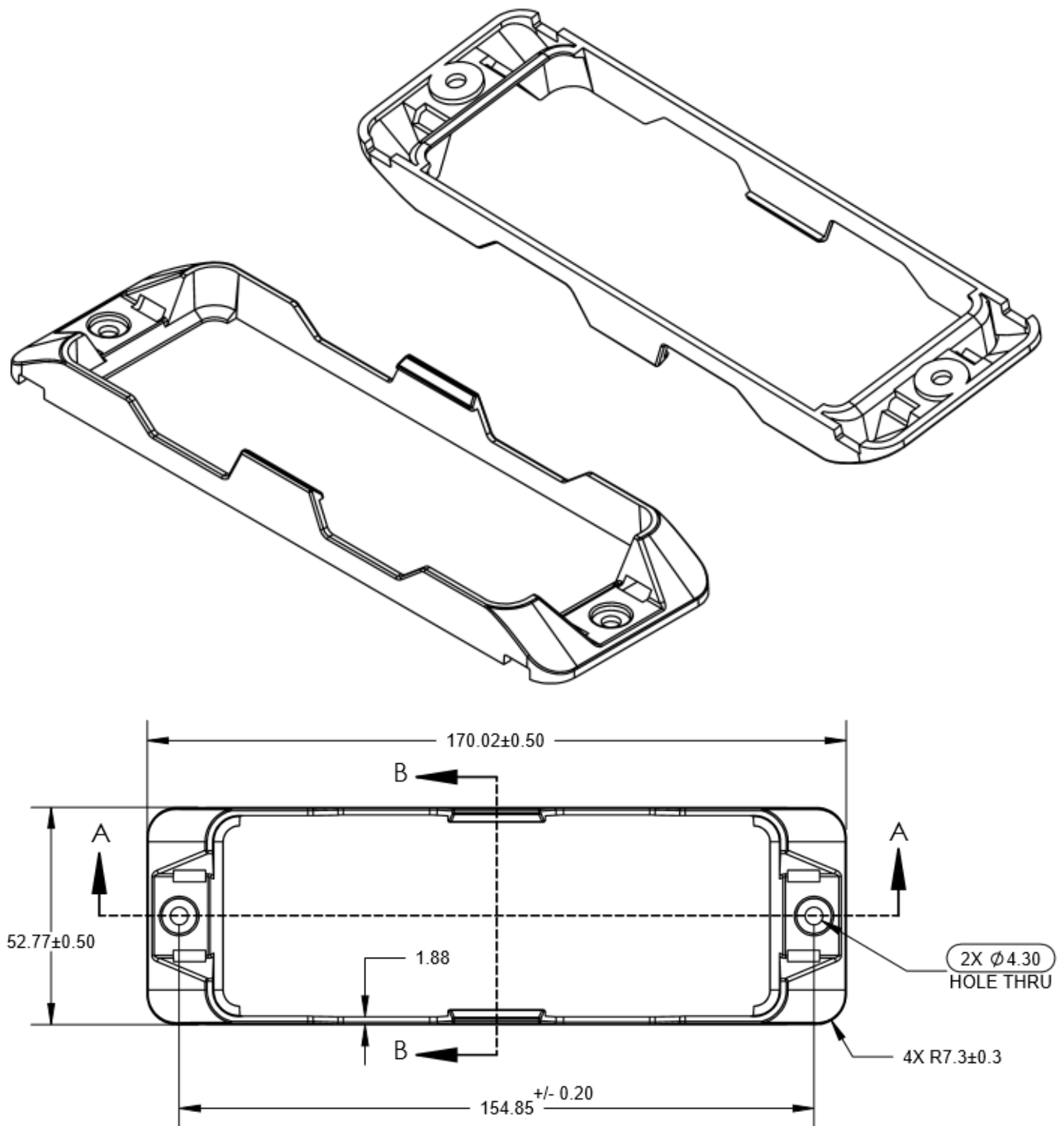
1 – below 20C the radio will operate but the screen will not update

2. Installation

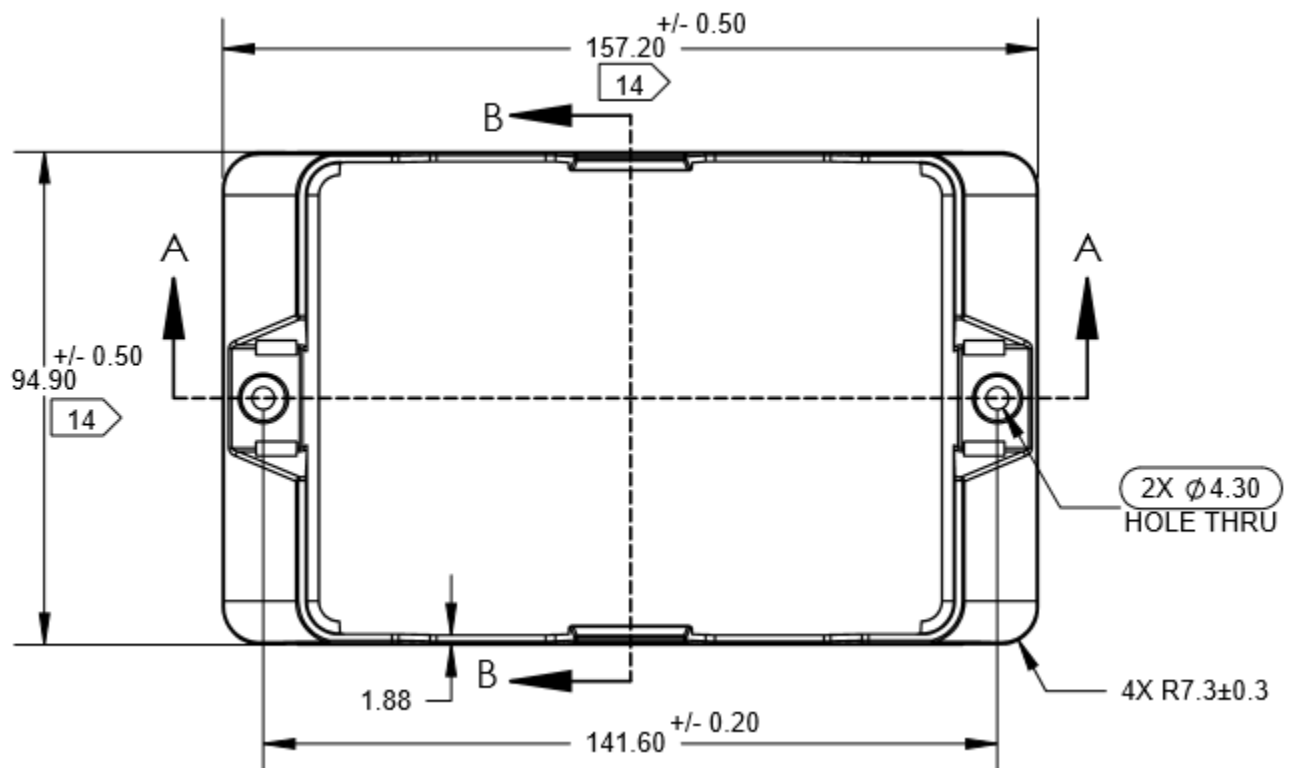
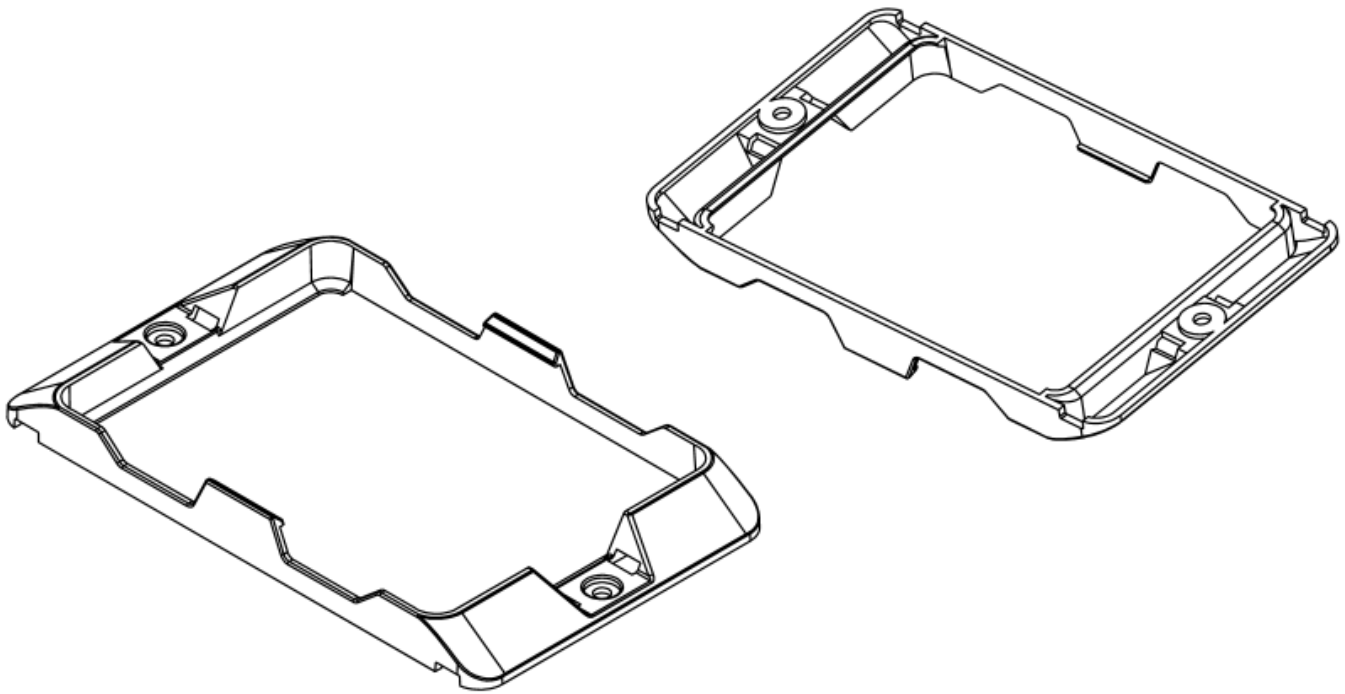
2.1.Brackets

The View Tags are designed to be mounted using the included bracket.

2.1.1. View 3 Bracket



2.1.2. View 4 Bracket



2.2.Attachment

The brackets are designed to be attached using one of two methods:

2.2.1. Tie wraps

Slots at either end of the bracket will accommodate standard tie wraps to mount the bracket. This can be useful when attaching to piping or other uneven surfaces.

2.2.2. Screws

For securing with screws, the following options are specified:

8-32 UNC Socket Head Cap Screw with 0.27" diameter head

-or-

M4 x 0.7 Socket Head Cap Screw with 0.8mm dia. Head

Torque: 10-12 In-Lbs.

2.2.3. Location

Since the View Tags' function is to provide human readable instructions on the screen, they will typically be mounted no higher than 2 meters.

3. Licenses

3.1.CMSIS

```
/* -----
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*
* $Date:    19. October 2015
* $Revision: V.1.4.5 a
*
* Project:   CMSIS DSP Library
*
* Description: This file has extern declaration for common tables like Bitreverse,
* reciprocal etc which are used across different functions
*
* Target Processor: Cortex-M4/Cortex-M3
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From musl include/elf.h

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From musl src/string/strverscmp.c

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\$KAME: in6.h,v 1.89 2001/05/27 13:28:35 itojun Exp \$

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\$FreeBSD: head/sys/sys/_bitset.h 299184 2016-05-06 16:41:23Z royger \$

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@(#)filio.h 8.1 (Berkeley) 3/28/94
\$FreeBSD: head/sys/sys/filio.h 314436 2017-02-28 23:42:47Z imp \$

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Configuration for math routines.

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bits/byteswap.h

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