

PCN# 2023062901

Substitution of ADC and GPIO transistors
on:

The MityCCD Cameras

Date: June 29, 2023

To: Purchasing Agents

Dear Customer,

This is an initial announcement of a change to a product that is currently offered by Critical Link. The details of this change are on the following pages.

For questions regarding this notice, contact info@criticallink.com.

Sincerely,

Critical Link, LLC

Phone: (315) 425-4045

Fax: (315) 425-4048



PCN Number: 2023062901

PCN Date: June 29, 2023

Title: Substitution of ADC and GPIO transistors on the Interface IO card used on MityCCD cameras

Contact: info@criticallink.com

Phone: (315) 425-4045

Ship Date: July-Sept 2023

Overview

Changes to the MityCCD cameras are identified in the following sections.

1 ADC Substitution

1.1 Description of Change

Replaced on-board ADC, MPN: ADS8422IPFBT with ADS8412IPFBT.

1.2 Reason for Change

This change was made due to component availability. This is NOT a permanent change. However, Critical Link reserves the right to use either component depending on availability in the market moving forward.

1.3 Anticipated Impact on Form, Fit, Function (positive / negative)

The substitute ADC is a 2Msps converter, whereas the original is a 4Msps converter. The slower settling time of the substitute converter will somewhat limit the pixel readout timing of the sensor. Readout rates above 500 k pixel/sec will show higher noise and slightly lower gain with the substitute converter. All MityCCD cameras currently supported by Critical Link, LLC limit the readout to 300 k pixel/sec, so this change will have no impact on function. If the intended application requires faster readout, the impact of this change should be tested in that application and Critical Link should be contacted.

There is limited impact to form, in order to support the use of the ADS8412IPFBT, certain resistor populations were changed, however, the PCB gerber was not modified in anyway.

There is no impact to fit.

1.4 Anticipated Impact on Quality or Reliability (positive / negative)

None.

2 Substitute GPIO interface transistor

2.1 Description of Change

Replaced GPIO pre biased dual NPN Transistors, MPN: DMC264000R with MPN: RN1607.



2.2 Reason for Change

This substitution was made due to component availability. This is NOT a permanent change.

2.3 Anticipated Impact on Form, Fit, Function (positive / negative)

This substitution should not change the fit and function of the cameras. The GPIO interface will meet the signaling specifications of the previous revisions of these MityCCD cameras.

There is limited impact to form of the Interface IO card, in order to support the use of the substitute transistor the pull up resistor values for the substitute transistor require a 2K Ω resistor compared to the original pull up resistor value of 10K Ω .

2.4 Anticipated Impact on Quality or Reliability (positive / negative)

None.

3 Products Affected

Details regarding the full revision history can be found in the MityCCD Revision History section on the Critical Link support site.

Table 1: Products Affected

Model Number
80-000559-2 Assembly, Enclosed Body, MityCCD-H101411107-DS
80-000807-1 Assembly, MityCCD, Back-Illuminated 1024 x 250, Enclosed, Window, MityCCD-H70311008-DS, including package 80-000627-1
80-000816-2 Assembly, MityCCD, Back-Illuminated, 2048 x 250, Enclosed, Window, MityCCD-H10141 1108-DS
80-000890-2 Assembly, Enclosed Body, MityCCD-SU256LSB-DAB, including package 80-000715-1
80-000908-2 Assembly, Open Frame, MityCCD-H70310906-BS, including package 80-000386-1
80-000914-2 Assembly, Enclosed Body, MityCCD-H70311007-DS-LE, including packages 80-000398-1, 80-000930-2, and 80-001671-1
MityCCD-E3011 packages 80-001080-5, 80-001286-5, and 80-001314-2
80-001392-2 Assembly, MityCCD-S11850, Split Flange
80-001673-1 Package, Board Set, MityCCD-CCD42-10
80-000674-4 Assembly, Enclosed Body, MityCCD-H70311007-GS-LE, including package 80-000383-2

4 Document Revision History

Date	Version	Change Description
06/29/2023	1.0	Initial Version