



Druck Limited  
Fir Tree Lane  
Groby  
Leicester LE6 0FH  
United Kingdom  
Tel: +44 116 231 7100

## SOFTWARE RELEASE (SR)

**DPI611 and DPI612**

**SR0112**

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		Revision	V

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### Amendment Record

Rev. Lev.	Date	Author	Amendments
1	18 Aug 14	S. Ward	New Specification
2	29 Aug 14	S. Ward	Upgrade
3	22 Sept 14	S. Ward	Upgrade
4	25 Mar 15	S. Ward	Upgrade
-	17 Apr 15	SAP	Added to SAP as SR0112_04. Previously released as issue 4
A	31 July 15	S. Ward	Fixes for Intecal procedure range and tolerance.
B	11 Sept 15	S. Ward	Addition of rechargeable battery interface plus calibration.
C	07 Oct 15	S. Ward	Fix for 10V source calibration failure on first try from power on
D	22 May 17	A.Morten	Fix for new Tianma LCD display for DK451
E	31 May 17	A.Morten	Fix for new Tianma LCD display for DPI611/612
F	11 Aug 17	N. Wardle	Fix for Customer request to allow independent 24V output Fix for DPI612 Sealed Gauge view with an absolute sensor
G	1 Dec 17	A.Morten	Update of DK439 + DK455
H	1 May 18	A.Morten	Update of DK439 + DK455
J	24 Sep 18	A.Morten	Update of DK439 + DK455
K	26 Oct 18	A.Morten	Update of DK439 + DK455
L	5 Nov 18	A.Morten	Update of DK439 + DK455
M	14 Jan 19	A.Morten	Update of DK439 + DK455
N	5 Feb 19	A.Morten	Update of DK439 for DPS5000 timing issue
P	19 Mar 19	A.Morten	Update of DK439 + DK455
R	20 Jun 19	A.Morten	Update of application (DK439 + DK455) and OS (DK437, DK438, DK453, DK454)
T	10 Jun 20	P.Sengupta	Update of DK437, DK438, DK439, DK455 DK453, DK454
U	8 Jan 21	P.Sengupta	Update of DK439, DK455
V	14 Jul 21	C. Gosden	Update DK439 + DK455

### Approvals

<b>Checked</b> <b>P. Sengupta</b>	<b>Engineering</b> <b>S. Sudheesh</b> (Reviewer)	<b>Principal Engineer</b> <b>S. Parkinson</b> (Technical Reviewer)
<b>Production</b> <b>N/A</b>		<b>Product Security Leader</b> <b>S. Parkinson</b> (Reviewer)

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## 1 INTRODUCTION

This document details the Product Software Release (SR) for the products DPI611 and DPI612.

The approval of this SR document authorises the Product Software Release to Manufacturing (RTM) of all named DK software items (+Version) referenced by this SR document

## 2 REFERENCES

The following documents and are referenced by this SR document:

Ref	Number	Revision	Description
[1]	DK0439	T	DPI611 Main Application
[2]	DK0455	N	DPI612 Main Application
[3]	159M4514	-	Release Test Report

**Table 1 - Reference Documents**

## 3 ABBREVIATIONS

AMC	Advanced Modular Calibrator
DD	Device Description
DK	Software Item
FPGA	Field Programmable Gate Array
Genii IS	Genii Intrinsically Safe
HART	Highway Addressable Remote Transducer
IS	Intrinsically Safe
JTAG	Joint Test Action Group (automated test mechanism)
OS	Operating System
OSS	Open Source Software
RTM	Release to Manufacturing
SAP	System Applications Products (an Enterprise Resource Planning System)
SDC	Smart Device Configurator
SR	Software Record (document)
USB	Universal Serial Bus
Wi-Fi	Wireless

## 4 SOFTWARE RELEASE

### 4.1 Supporting Documents and Software Items (DK)

The following table lists all the supporting documents and DK(s) which relate to this software release. The 'changed' column is to indicate which items have changed since the last release.

This release comprises the following versions for the DPI612:

SAP		DK Software Version	Item Changed In this Release	Document Type	Description
Document Name	Revision Level				
DK0455	N	V03.02.02	Yes	Software	DPI612 Application DK for the product software
DK0454	C	V02.04.00	No	Software	DPI612 OS Software
DK0453	C	V02.04.00	No	Software	DPI612 Bootloader Software
DK0451	A	V01.06.02	No	Software	DPI611 and DPI612 Operating System **See <b>Warning-Note (1)</b>

**Table 2 - Supporting Documents & Software Items (DK)**

This release comprises the following versions for the DPI611:

SAP		DK Software Version	Item Changed In this Release	Document Type	Description
Document Name	Revision Level				
DK0439	T	V03.02.02	Yes	Software	DPI611 Application DK for the product software
DK0438	D	V02.04.00	No	Software	DPI611 OS Software
DK0437	D	V02.04.00	No	Software	DPI611 Bootloader Software
DK0451	A	V01.06.02	No	Software	DPI611 and DPI612 Operating System **See <b>Warning-Note (1)</b>

**Table 3 - Supporting Documents & Software Items (DK)**

**Warning-Note (1):** DK0451 (Combined OS + Bootloader) does not contain the latest versions of DK437/438 and must not be relied on to install the latest Bootloader or OS. See section 4.4.1 for more details on DK0451.

## 4.2 Release Package

This name of the corresponding formal Product Software Release Package are:

DPI611\_RELEASE\_SR0112\_REV\_V.zip  
and  
DPI612\_RELEASE\_SR0112\_REV\_V.zip

This package contains a copy of this document and folder structures which contains all the DK Product Software folders and files required for this specific revision of SR.

### 4.2.1 Release Package - Data Verification

This files and folders in this release package have been verified against the DK Version numbers and the formal data release repository using the Verify.bat script(s) which are embedded in the word version of this SR document.

-- EXECUTIVE STATEMENT (Data Verification) --	
Reviewing Engineer	Piyali Sengupta
Date of Verify	29/07/2021
Results of the Data Verify	Pass
Exception(s)	-NA-

Table 3 - Release Package Verification



Verify612.zip



verify611.zip

## 4.3 Customer Release Note

- Japanese Keyboard Numerical Keypad Update
- Druck Rebranding Connection Diagrams
- Removal of on-screen user manuals

## 4.4 How to Install the Software (DPI611 and DPI612)

### USB memory device root

└─> AMC  
OS

Important note: Ensure the USB memory device AMC folder is deleted or empty before unzipping DPI611 files to the USB memory device.

Extract the folder on a memory stick and then follow the below steps for upgrade.

### 4.4.1 DK0451

DK0451 is a combined binary image of DK0437 and DK0438. It is provided as a single image which can be flashed into NAND memory by the CEM the DPI611 and DPI612 main board is manufactured.

### 4.4.2 DPI611 OS and Bootloader - DK0437, DK0438

These DKs can be installed by the user using the normal upgrade process as follows:

1. Copy the OS (DK437, DK438) directory contained in the installation to the root directory of a USB stick. Insert the stick into the unit.
2. Power on the unit and wait until the DASHBOARD is displayed.

3. Select SETTINGS, then ADVANCED, then enter the pin number 5487. Press the tick at the bottom right of the screen.
4. From the UPGRADE menu select OPERATING SYSTEM as appropriate and when asked to Confirm Upgrade select Yes.
5. Power down the unit.
6. Power up the unit; the new software will install and, when finished, the unit will boot up to the DASHBOARD.
7. Select SETTINGS, then STATUS, then SOFTWARE BUILD. Observe that the APPLICATION version has been upgraded.

#### 4.4.3 DPI612 OS and Bootloader – DK0453, DK0454

These DKs can be installed by the user using the normal upgrade process as follows:

1. Copy the OS (DK453, DK454) directory contained in the installation to the root directory of a USB stick. Insert the stick into the unit.
2. Power on the unit and wait until the DASHBOARD is displayed.
3. Select SETTINGS, then ADVANCED, then enter the pin number 5487. Press the tick at the bottom right of the screen.
4. From the UPGRADE menu select OPERATING SYSTEM as appropriate and when asked to Confirm Upgrade select Yes.
5. Power down the unit.
6. Power up the unit; the new software will install and, when finished, the unit will boot up to the DASHBOARD.
7. Select SETTINGS, then STATUS, then SOFTWARE BUILD. Observe that the APPLICATION version has been upgraded.

#### 4.4.4 DPI611 / DPI612 Application Upgrade : Amc Folder

8. Copy the Amc directory contained in the installation to the root directory of a USB stick. Insert the stick into the unit.
9. Power on the unit and wait until the DASHBOARD is displayed.
10. Select SETTINGS, then ADVANCED, then enter the pin number 5487. Press the tick at the bottom right of the screen.
11. From the UPGRADE menu select APPLICATION as appropriate and when asked to Confirm Upgrade select Yes.
12. Power down the unit.
13. Power up the unit; the new software will install and, when finished, the unit will boot up to the DASHBOARD.
14. Select SETTINGS, then STATUS, then SOFTWARE BUILD. Observe that the APPLICATION version has been upgraded.

#### 4.4.5 Flash programming of the bare board

The OS for DPI611 and DPI612 can also be programmed via the Flash programming tool MfgTool, rather than via the upgrade process above.

1. Run MfgTool and set Profile = DPI611 Windows CE Update
2. Copy XLDR.nbo, EBOOT.nbo, NK.nbo to:  
<Mfgtools application folder>\Profiles\DPI611 WinCE Update\OS firmware\files
3. Remove display from board
4. Set 2x DPI switches to ON
5. Plug in mains adapter
6. Hold down gold button on rear and press the power button to switch on
7. Connect client USB port. Will see Freescale i.MX25 USB BulkIO Device appear under USB in Device Manager. Note: on some boards, sequence seems to be different to get the PC to recognise the board is connected, eg. plug USB in first then switch on?
8. In MFGTool – will see i.MX25 as recognised device
9. Click on START

## 5 SOFTWARE CHECKS

### 5.1 Install Package Virus Scan

The results of Virus scan of each DK software item product (the install executables) are held in the relevant DK document. The table below summarises the results of that scan.

DK Number	DK Revision	DK Virus Results Checked	Date	Checked By	PASS / FAIL / ERROR
DK0455	N	Yes	21/07/2021	P.Sengupta	Pass
DK0439	T	Yes	21/07/2021	P.Sengupta	Pass
DK0437	D	Yes	12/02/2020	P.Sengupta	Pass
DK0438	D	Yes	12/02/2020	P.Sengupta	Pass
DK0453	C	Yes	12/02/2020	P.Sengupta	Pass
DK0454	C	Yes	12/02/2020	P.Sengupta	Pass
DK0451	A	Yes	12/02/2020	P.Sengupta	Pass

Table 4 - File Virus Scan Checker

### 5.2 Cyber Security & Vulnerabilities

The results of Cyber Security and OSS scan checks are held in the relevant DK document. The table below summarises the results of that analysis.

DK Number	DK Revision	Checked	Date	Checked By	PASS / FAIL / ERROR
DK0455, DK0453, DK0454, DK0451	N, C, C, A	Yes	21.07.2021	P.Sengupta	Pass
DK0439, DK0437, DK0438, DK0451	T, C, C, A	Yes	21.07.2021	P.Sengupta	Pass

Table 5 - Cyber Security Checker

### 5.3 Open Source Software (OSS) Notices

There is no OSS notice for this product