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**INSTALLING PA0909 F3200/ NDU/ RDU AS4428.1  
CONTROLLER REPLACEMENT BOARD****General**

The PA0909 F3200 AS4428.1 Controller Replacement Board may be used as a replacement board for the 1931-111-1 F3200 Controller used in an F3200 AS4428.1 standard panel, F3200 networked panel, network display unit (NDU) or AS4428.1 RDU. It cannot be used in AS1603.4 type panels as the LEDs do not line up with the keyboard. PA0804 is the replacement board for AS1603.4 systems.

**F3200/ NDU software**

Any version of F3200/NDU AS4428 software (V3.XX onwards) may be installed in the PA0909. F3200/NDU software V3.XX onwards provide AS4428.1 operation. F3200 V2.XX software provides AS1603.4 operation so F3200 V2.XX software cannot be installed in the PA0909. If the software version being installed is a later version than what was previously used (i.e. a software upgrade is being done), then the relevant software upgrade instructions should be referred to. LT0333 provides the instructions for upgrading to V5.XX and LT0264 for upgrading to V3.XX software.

**RDU software**

RDU software V5.XX provides AS4428.1 operation and RDU Mk1 V2.XX does not, so only RDU V5.XX software (or later) can be fitted to a PA0909 controller.

**Controller socket U3 chip**

The PA0909 replacement controller board is supplied with an 8K EEPROM in the U3 socket. This is suitable for both F3200/NDU V3.XX and F3200/NDU V4.XX software. For F3200 V4.XX software, the EEPROM can be left in U3 but will not be used. For F3200/NDU V5.XX software and RDU V5.XX software, the 8K EEPROM must be removed from U3 and replaced with the IC0483 512K flash chip that is supplied with PA0909 and link LK5 must be set to position 2-3 (refer to LT0330 that is supplied with the PA0909). Note, U8 must contain a SF0427 PAL IC.

**Installation Instructions**

NOTE: Use anti-static (ESD) precautions when handling the controller board and ICs.

1. Ensure that the current database is saved on disk. If the database is not saved on disk and it is desired to retain it, then it may be possible to swap the EEPROM (socket U3), from the old board to the new board if the software version is F3200 V3.XX. F3200 V4.XX or later and RDU V5.XX (or later) don't use the EEPROM and instead, store the database in the flash IC in U2. Hence if the software is F3200 V4.XX (or later) or RDU V5.XX, and is being transferred from an existing board, then the database is automatically transferred too because it is in the same IC as the software. If a database checksum fault occurs when the new board is powered up then the database will need reinitialising/ reprogramming or reloading.
2. Transfer the software IC from U2 on the old board to U2 on the new board. Ensure it is orientated correctly and all pins are inserted properly.
3. The PA0909 replacement controller board is supplied with an 8K EEPROM in the U3 socket. This is suitable for both F3200/NDU V3.XX and F3200/NDU V4.XX software. For F3200 V4.XX software, the EEPROM can be left in U3 but will not be used.

For F3200/NDU V5.XX software and RDU V5.XX software, the 8K EEPROM must be removed from U3 and replaced with the IC0483 512K flash chip that is supplied with PA0909 and link LK5 must be set to position 2-3 (refer to LT0330 that is supplied with the PA0909).

4. Set the links on the Controller board according to the accompanying literature LT0330.
5. Install the Controller board, power the panel up and download the database (if necessary). If a software upgrade is occurring, then follow the upgrade instructions (LT0333 or LT0264 for F3200/NDU).  
Perform appropriate tests such as system test, display and buzzer tests and zone tests to ensure the panel is operating correctly.