

## Smart Whole Chip Read Option

When creating a job in Data I/O's TaskLink, the Special Features tab lists the option *Smart Whole Chip Read* for some e-MMC devices.

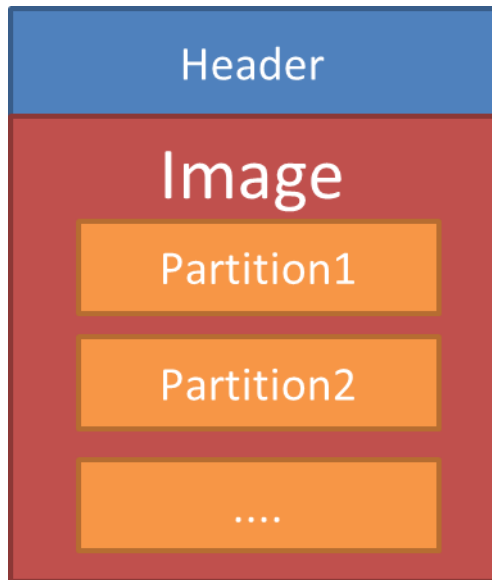


Figure 1: The Read Back File Format diagram.

The header is similar with “super header.” That means the header includes Extended CSD (ECSD) register values and partitions information. All writeable ECSD mask bits will be set to *unmask*.

The image includes multiple partitions (boot0/boot1 areas; general purpose areas; and no blank user area). User area partitions are according to the blank check result.

**NOTE: The *Read Back* image could be used as a “PC file.”**

**NOTE: One block is 512 bytes.**

### ***Limitations***

1. FC FW should be not less than 5.49.00C.
2. SuperBoost (SB) should be enabled.
3. The device should not be blank.
4. The capacity of device must be over 2GB.
5. The *Read Back* image must not contain **W** or **W/E\_P** type ECSDs that can't be read.

## How to Create a Smart Whole Chip Read Job

### 1. Enable Partial download.

Click System > Option > General.

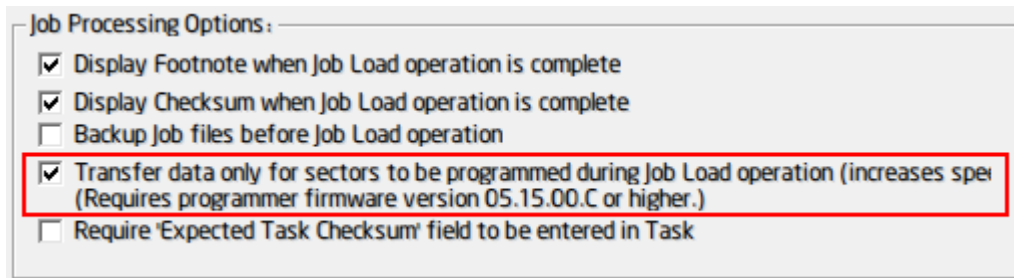


Figure 2: Job Processing Options in System > Option > General.

### 2. Ensure that *Program* is checked for all sectors.

In TaskLink, in the Edit Task dialog, click the Sectors Tab.

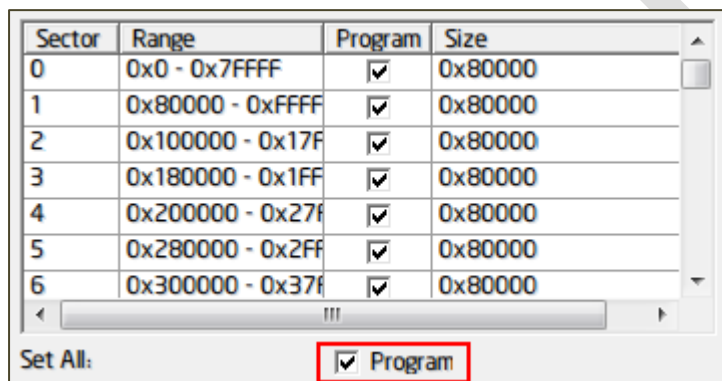


Figure 3: Clicking *Set All* > *Program* (once or twice) at the bottom of the dialog will select all the boxes.

### 3. Select 'First Job Run'

Select the First Job Run option on the Edit Tasks > Data Tab > Load From Master Device drop-down.

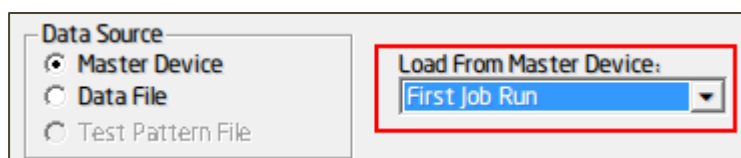


Figure 4: "First job Run" on the Data Tab.

#### 4. Select 'Smart Whole Chip Read.'

On the Special Features tab, click the Choose Special Features drop-down and click Smart Whole Chip Read.

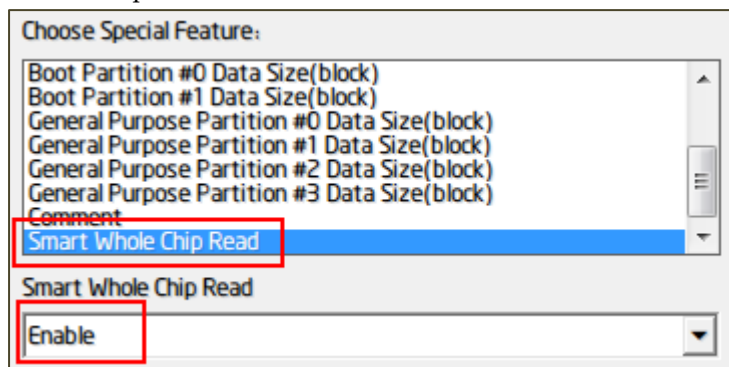


Figure 5: Selection on the Special Features Tab.

#### 5. Store read back image into internal SD card (Not CF)

This is a recommended setting for e-MMC with none blank data less than CF card spare capacity. But it is an essential setting for e-MMC with none blank data over 4G. Otherwise, programmer will throw an exception.

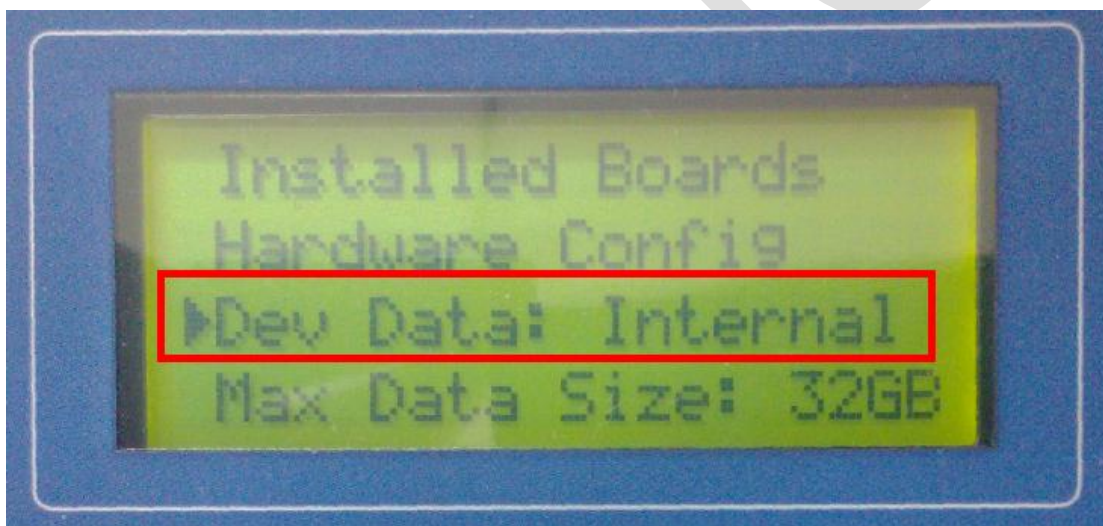


Figure 6: On FlashPAK System>configuration>Dev Data:.

### Special Notes

1. Smart Whole Chip Read option will copy the entire device content (including Boot area, General purpose area, and the User area).
2. Even if the device has been partial capacity supported; it will scan the empty area to check whether the TLWin sector table can cover the data area and adjust the super partition automatically. (It will throw an error if no enough empty area is found).
3. Only the User area supports smart partitions (up to 8 partitions). Each non-zero Boot area or General purpose area has one partition.

## ***Revision History***

- |      |               |                            |
|------|---------------|----------------------------|
| V1.0 | Nov 30, 2012  | Create the draft.          |
| V1.1 | DEC. 04, 2012 | Add a limitation.          |
| V1.2 | DEC. 18, 2012 | Fix some comment.          |
| V1.3 | DEC. 25, 2012 | Add FP setting.            |
| V1.4 | JAN. 31, 2013 | Add FW version limitation. |