## Contents



## Revisions & Change Log

| Rev | Description | Date | Approved |
|---|---|---|---|
| X1 | 27909 base Initial Draft | 03/07/13 | J. SCOTT |
| A | 27909 Prototype Release | 03/26/13 | J. SCOTT |
| AX1_UD | 27982 (BT Version) Under Development | 07/16/13 | J. SCOTT |
| AX1 | 27982 (BT Version) PPL & A070 RELEASE | 07/22/13 | J. SCOTT |
| AX2 | 27982 (BT Version) Block Diagram Update | 08/07/13 | J. SCOTT |
| B | 27982 (BT Version) Release candidate | 08/23/13 | J. SCOTT |
| BX1 | 27982 (UNDER DEVELOPMENT) I2C swap fix | 09/25/13 | J. SCOTT |
| C | 27982 Release to prod. Block diagram update | 09/27/13 | J. SCOTT |

# FRDM-FXS-MULTI


freescale

Automotive, Industrial & Multi-Market Solutions Group

6501 William Cannon Drive West Austin, TX 78735-8598


ICAP Classification: FCP: FIUO: PUBI: X

| | | | |
|---|---|---|---|
| Designer: RAFAEL DEL REY | Drawing Title: FRDM-FXS-MULTI_B | | |
| Drawn by: RAFAEL DEL REY | Page Title: TITLE PAGE | | |
| Approved: JAMES SCOTT | Size C | Document Number SCH-27982 \| PDF: SPF-27982 | Rev C |
| | Date: Tuesday, October 01, 2013 | Sheet 1 of 4 | |

ecified:
ohms, 5%, 1/8 Watt
u uF, 20%, 50V

All polarized capacitors are aluminum electrolytic

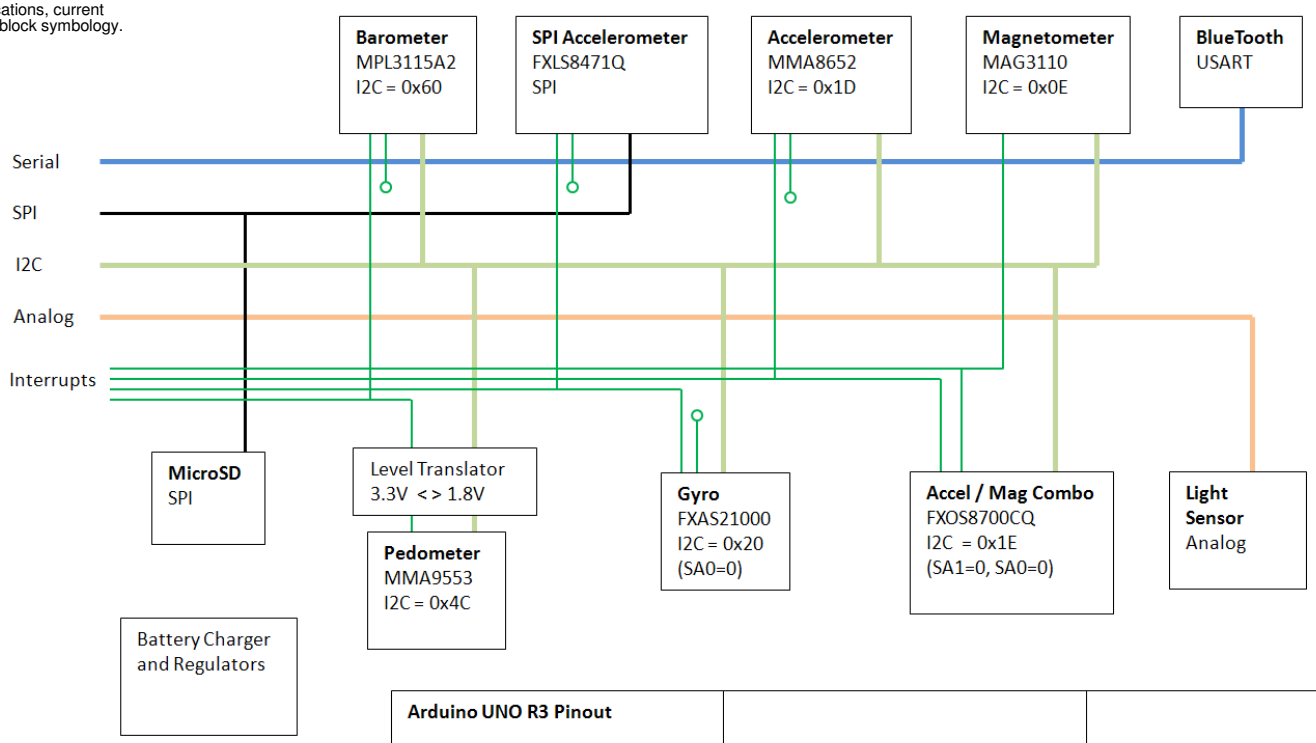
2. Interrupted lines coded with the same letter or letter combinations are electrically connected.

3. Device type number is for reference only. The number varies with the manufacturer.

4. Special signal usage:
   _B Denotes - Active-Low Signal
   <> or [] Denotes - Vectored Signals

5. Interpret diagram in accordance with American National Standards Institute specifications, current revision, with the exception of logic block symbology.

# FRDM-FXS-MULTI Block Diagram




| Arduino UNO R3 Pinout | | |
|---|---|---|
| D0 = BlueTooth RX | D8 = Interrupt Pedometer or Pressure 1 | A0 = BT_Wakeup |
| D1 = BlueTooth TX | D9 = test point | A1 = BT_Monitor |
| D2 = Interrupt Combo 1 or Mag | D10 = SPI_SS_SPI_ACCEL | A2 = SPI_SS_SD |
| D3 = test point | D11 = SPI_MOSI | A3 = Light Sensor Analog Signal |
| D4 = Interrupt Combo 2 or Accel 1 | D12 = SPI_MISO | A4 = Main I2C Data |
| D5 = Interrupt Gyro or SPI Accel 1 | D13 = SPI_CLK | A5 = Main I2C Clock |
| D6 = test point | D14 = Optional I2C Data | |
| D7 = test point | D15 = Optional I2C Clock | |

freescale

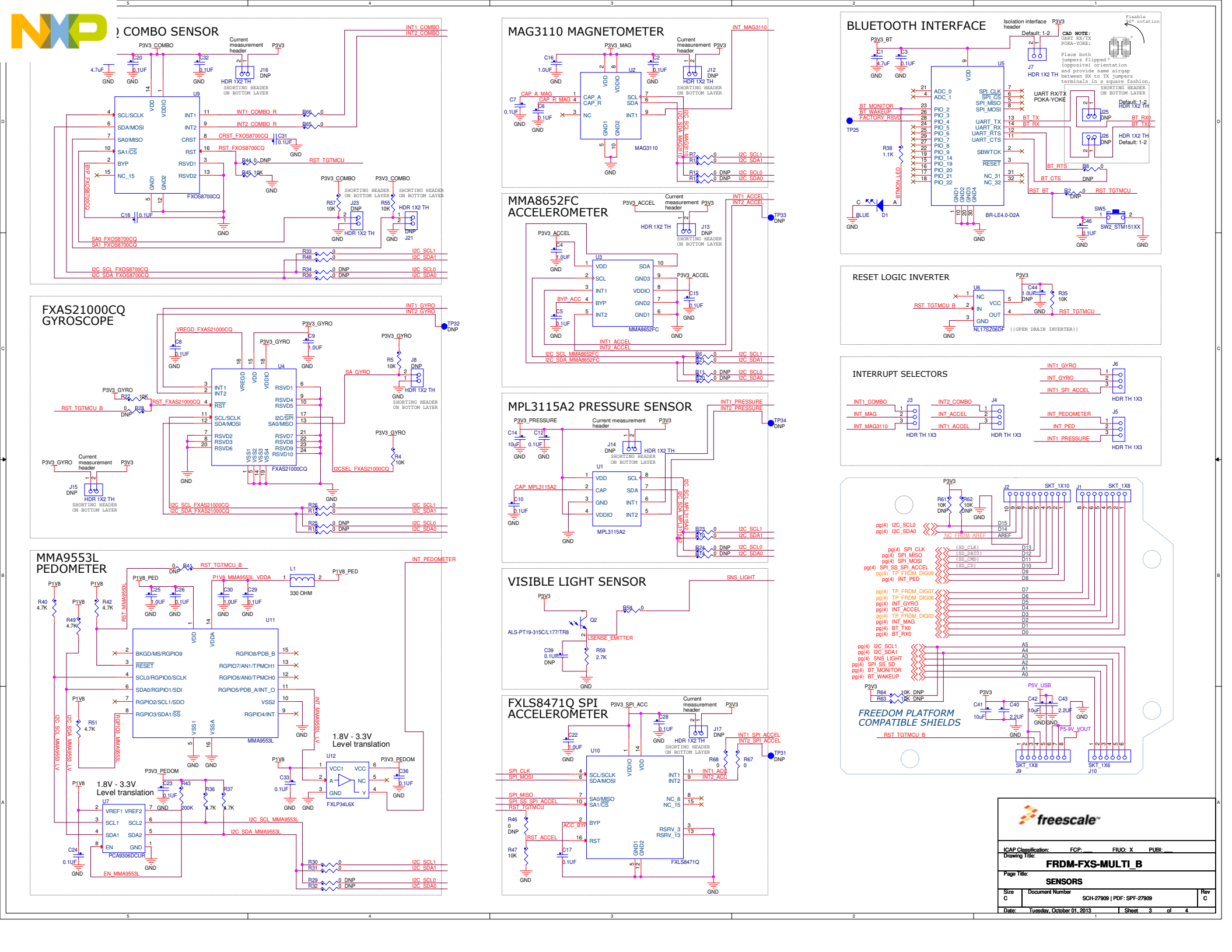
ICAP Classification: FCP: ___ FIUO: X PUBI: ___

Drawing Title: **FRDM-FXS-MULTI_B**

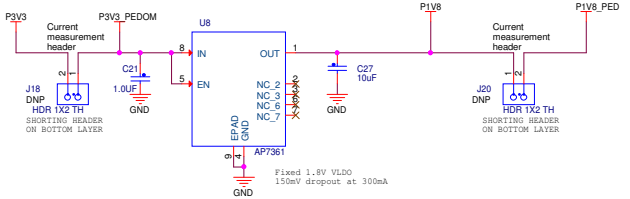
Page Title: **BLOCK DIAGRAM**

| Size | Document Number | Rev |
|---|---|---|
| C | SCH-27909 \| PDF: SPF-27909 | C |

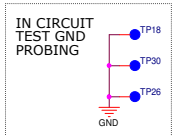
Date: Tuesday, October 01, 2013 Sheet 2 of 4


COMBO SENSOR
MAG3110 MAGNETOMETER
BLUETOOTH INTERFACE
FXAS21000CQ GYROSCOPE
MMA8652FC ACCELEROMETER
RESET LOGIC INVERTER
MMA9553L PEDOMETER
MPL3115A2 PRESSURE SENSOR
INTERRUPT SELECTORS
VISIBLE LIGHT SENSOR
FXLS8471Q SPI ACCELEROMETER
FREEDOM PLATFORM COMPATIBLE SHIELDS
1.8V - 3.3V Level translation
freescale
FRDM-FXS-MULTI_B
SENSORS
SCH-27909 | PDF: SPF-27909
Tuesday, October 01, 2013

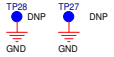
## VOLTAGE REGULATION



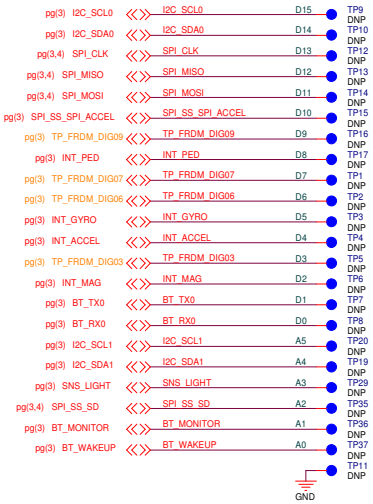

## IN CIRCUIT TEST GND PROBING



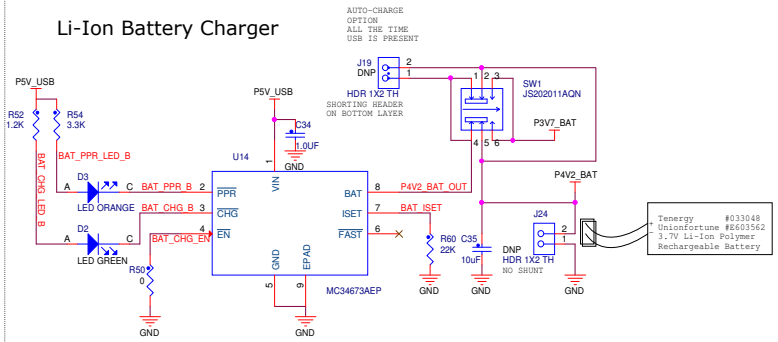

## DEBUG GROUND HOOK



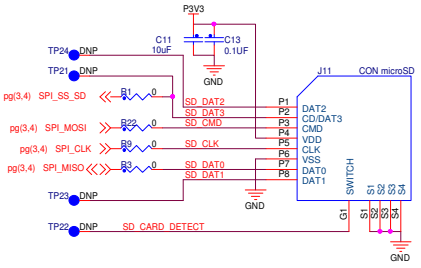

## Prototyping Area Heading Signals



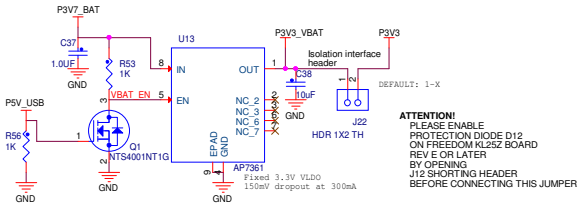

## Li-Ion Battery Charger




## microSD Card Connector, SPI Mode




## Battery Regulation




freescale

| | | | |
|---|---|---|---|
| ICAP Classification: | FCP: ___ | FIUO: X | PUBI: ___ |

Drawing Title: **FRDM-FXS-MULTI_B**

Page Title: **POWER SUPPLY**

| Size | Document Number | Rev |
|---|---|---|
| C | SCH-27909 \| PDF: SPF-27909 | C |

Date: Tuesday, October 01, 2013 | Sheet 4 of 4