

# ETERNA (TM) CASTELLATED MOTE WITH MMCX CONNECTOR

## Content:

1. Title Page
2. Eterna Mote-on-Chip
3. Castellations
4. Battery Holder and Accelerometer Options

## Notes:

1. Assembly Options:
  - 1.a) X1 & X5: installed crystals (32kHz and 20 MHz resp.)
  - 1.b) R12 TCK termination not installed
  - 1.c) Battery holder not installed
  - 1.d) Accelerometer not installed

## 2. Associated Documents



**PCB FAB**  
600-0176 REV3



**BOM**  
700-0208 REV3



**ASY DWG**  
705-0176 REV3

## Revision History:

Rev	Description	ECO	Author
01	Initial release Based on 700-0176 rev4 using LTC5800IWR-IPRA	1180	CN
02	Update U1 p/n (documentation only, not a functional change)	1214	CN
03	Change 32kHz & 20MHz XTAL	1394	RMP



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## CUSTOMER NOTICE

LINEAR TECHNOLOGY HAS MADE A BEST EFFORT TO DESIGN A CIRCUIT THAT MEETS CUSTOMER-SUPPLIED SPECIFICATIONS; HOWEVER, IT REMAINS THE CUSTOMER'S RESPONSIBILITY TO VERIFY PROPER AND RELIABLE OPERATION IN THE ACTUAL APPLICATION. COMPONENT SUBSTITUTION AND PRINTED CIRCUIT BOARD LAYOUT MAY SIGNIFICANTLY AFFECT CIRCUIT PERFORMANCE OR RELIABILITY. CONTACT LINEAR TECHNOLOGY APPLICATIONS ENGINEERING FOR ASSISTANCE.

THIS CIRCUIT IS PROPRIETARY TO LINEAR TECHNOLOGY AND IS SUPPLIED FOR USE WITH LINEAR TECHNOLOGY PARTS.

CONTRACT NO.

APPROVALS

DRAWN:

CHECKED:

APPROVED:

ENGINEER:

DESIGNER:



**Linear Technology Corporation**

1630 McCarthy Blvd.  
Milpitas, CA 95035

Phone: (408)432-1900  
Fax: (408)434-0507

TITLE:

**LTP5902IPC-IPRA**  
**PCA SCH, ETERNA IP CASTELLATED MNGR,CANADIAN**

SIZE

**A**

DWG NO.

**710-0208**

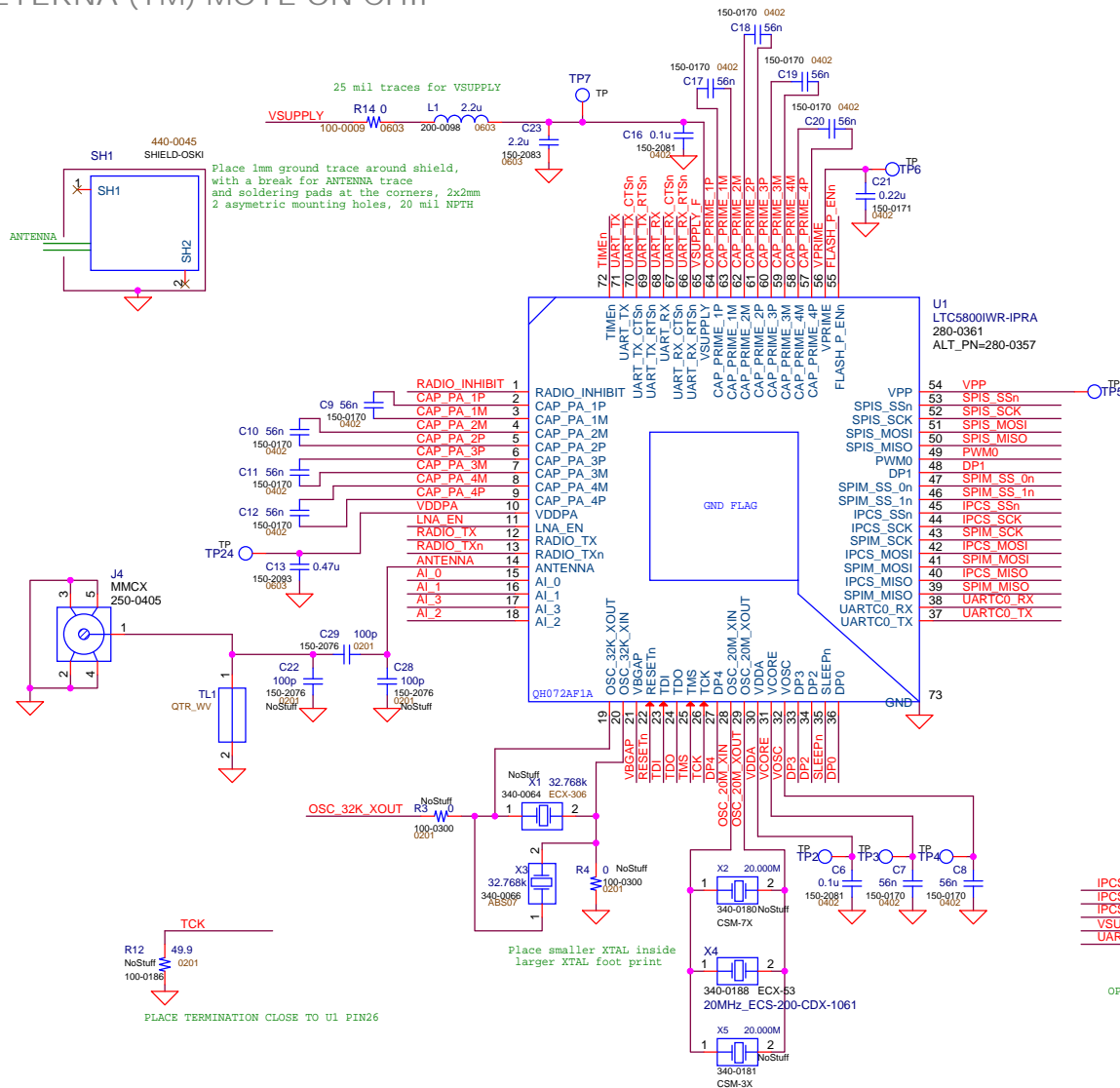
REV

**03**

DATE: **Wednesday, July 29, 2015**

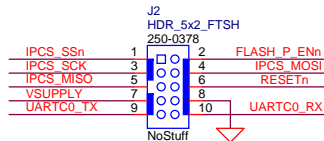
SHEET **1** OF **4**

# ETERNA (TM) MOTE-ON-CHIP



RADIO_INHIBIT	<< RADIO_INHIBIT
VDDPA	>> VDDPA
LNA_EN	>> LNA_EN
RADIO_TX	>> RADIO_TX
RADIO_TXn	>> RADIO_TXn
AI_0	<< AI_0
AI_1	<< AI_1
AI_2	<< AI_2
AI_3	<< AI_3
UARTC0_TX	>> UARTC0_TX
UARTC0_RX	<< UARTC0_RX
SPIM_MISO	<< SPIM_MISO
SPIM_MOSI	>> SPIM_MOSI
SPIM_SCK	>> SPIM_SCK
SPIM_SS_1n	>> SPIM_SS_1n
SPIM_SS_0n	>> SPIM_SS_0n
IPICS_MISO	>> IPICS_MISO
IPICS_MOSI	<< IPICS_MOSI
IPICS_SCK	<< IPICS_SCK
IPICS_SSn	<< IPICS_SSn
DP1	<< DP1
PWM0	<< PWM0
SPIS_MISO	>> SPIS_MISO
SPIS_MOSI	<< SPIS_MOSI
SPIS_SCK	<< SPIS_SCK
SPIS_SSn	<< SPIS_SSn

RESETn	<< RESETn
TDI	<< TDI
TDO	>> TDO
TMS	<< TMS
TCK	<< TCK
DP4	<< DP4
VDDA	>> VDDA
VCORE	>> VCORE
VOSC	>> VOSC
DP3	<< DP3
DP2	<< DP2
SLEEPn	<< SLEEPn
DP0	<< DP0
FLASH_P_ENn	<< FLASH_P_ENn
VPRIME	>> VPRIME
VSUPPLY	>> VSUPPLY
UART_RX_RTSn	<< UART_RX_RTSn
UART_RX_CTSn	<< UART_RX_CTSn
UART_RX	>> UART_RX
UART_TX_RTSn	<< UART_TX_RTSn
UART_TX_CTSn	<< UART_TX_CTSn
UART_TX	>> UART_TX
TIMEEn	<< TIMEEn
OSC_32K_XOUT	<< OSC_32K_XOUT



OPTION: STAND-ALONE SPI W/ CLI LOCK/UNLOCK



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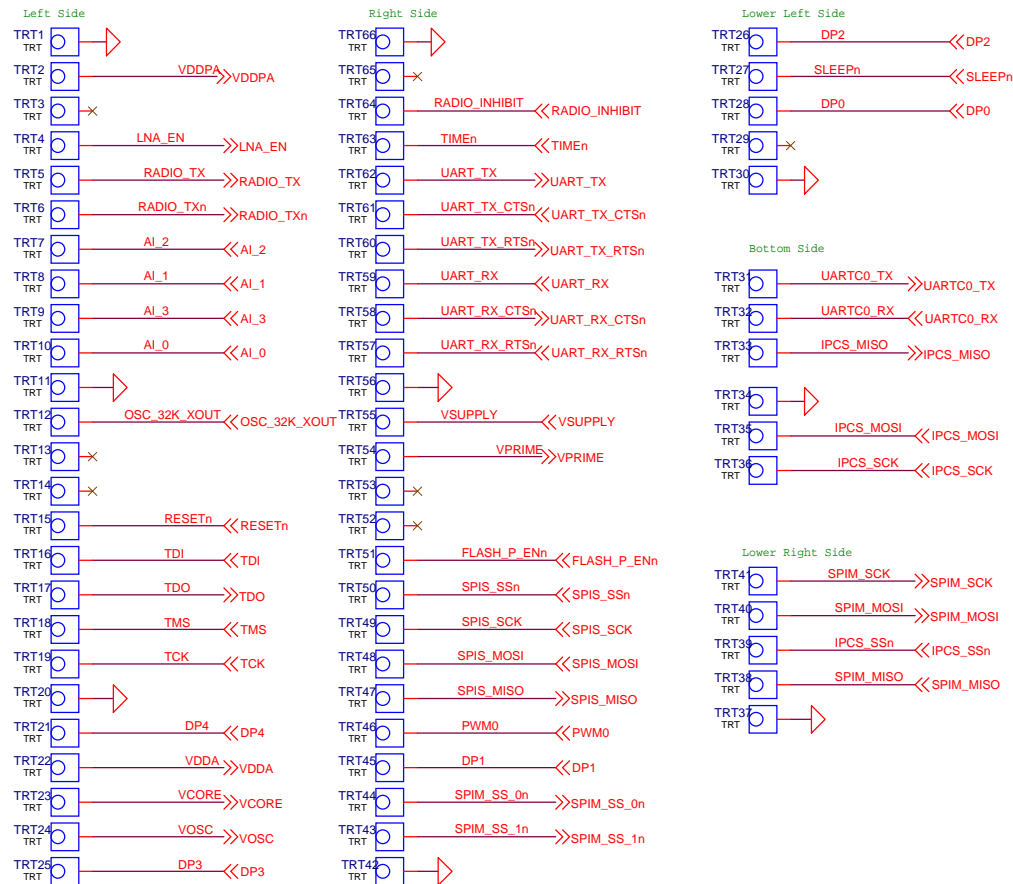
**dust networks™** Linear Technology Corporation  
1630 McCarthy Blvd. Milpitas, CA 95035 Phone: (408)432-1900 Fax: (408)434-0507

TITLE: LTP5902IPC-IPRA  
PCA SCH, ETERNA IP CASTELLATED MNGR,CANADIAN

SIZE A DWG NO. 710-0208 REV 03

DATE: Wednesday, July 29, 2015 SHEET 2 OF 4

# CASTELLATIONS



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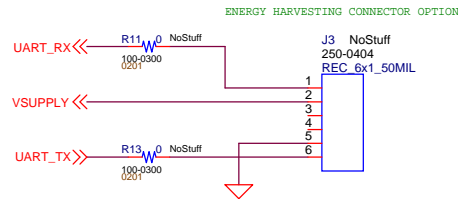
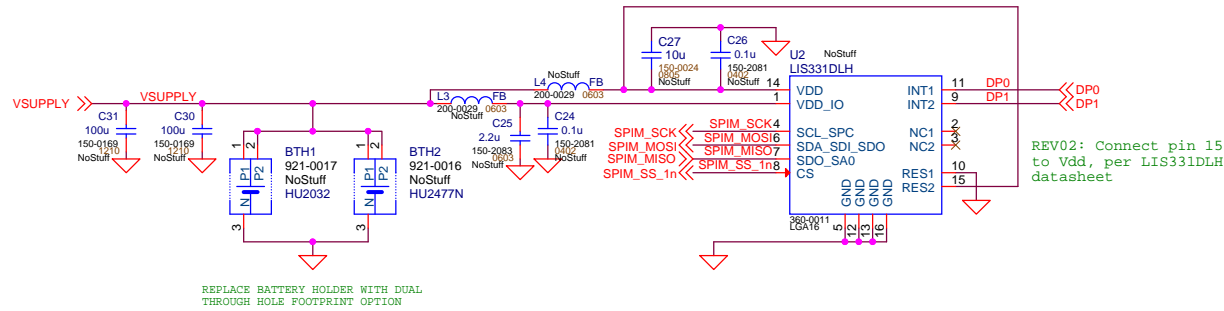
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# BATTERY HOLDER & ACCELEROMETER OPTIONS



PLACE R11, R13 & J3 ON BOTTOM, MAY INTERFERE WITH BATTERY HOLDER.  
J3 SHROUD SHALL PROTRUDE FROM EDGE OF BOARD OPPOSITE TO CHIP ANTENNA.  
PLACE R11 and R13 NEAR U1 TO MINIMIZE UART\_RX AND UART\_TX NET LENGTH.



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