

# 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**  
700-0206 REV3



**ASY DWG**  
705-0176 REV3

## Revision History:

Rev	Description	ECO	Author
01	Initial release Based on 700-0176 rev4 using LTC5800IWR-WHMA	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**

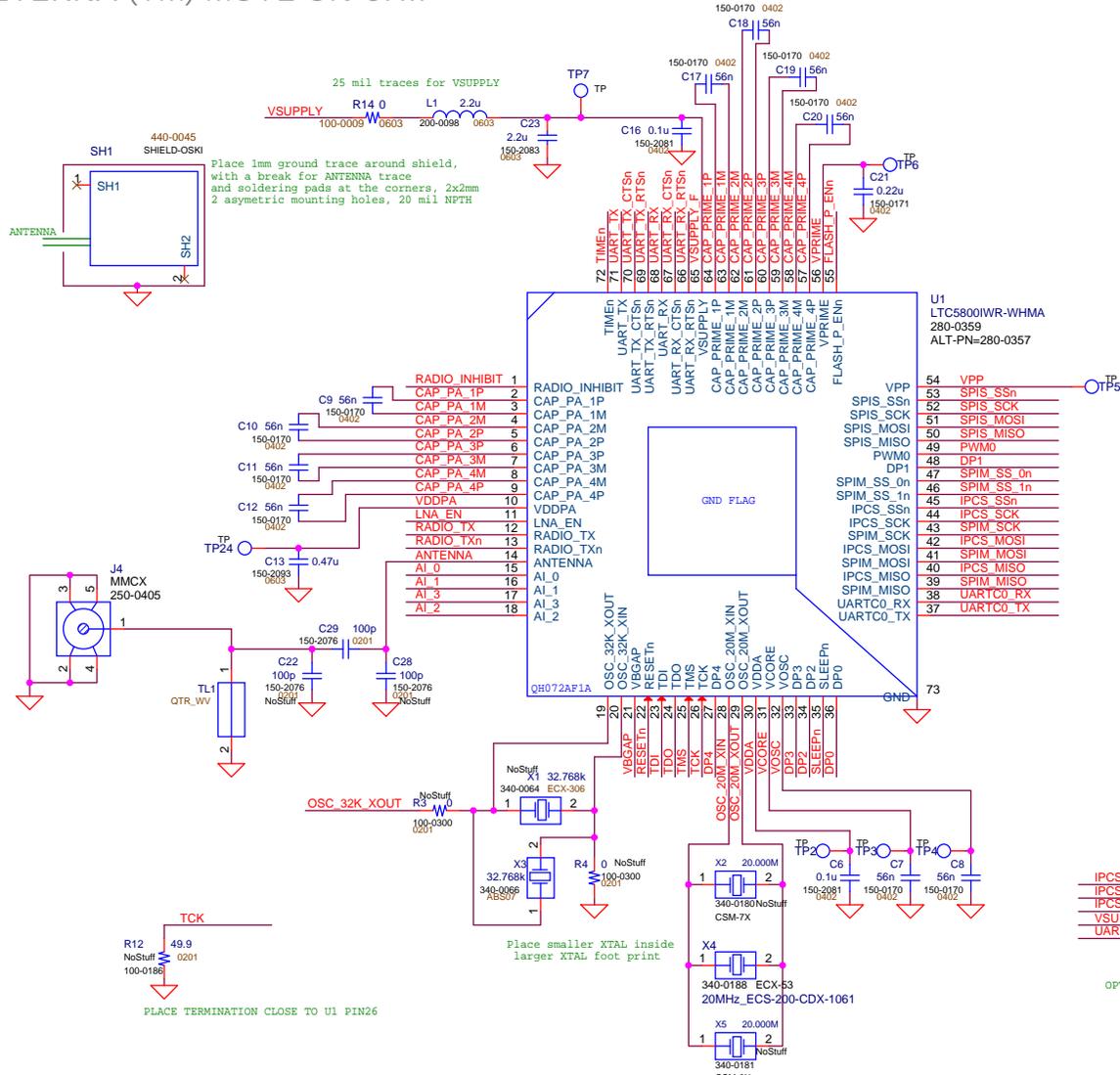
1630 McCarthy Blvd. Phone: (408)432-1900  
Milpitas, CA 95035 Fax: (408)434-0507

TITLE:  
**LTP5902IPC-WHMA  
PCA SCH, ETERNA WH CASTELLATED MOTE, CANADIAN**

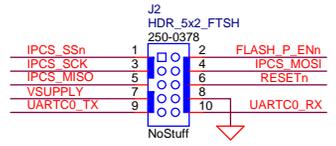
SIZE **A** DWG NO. **710-0206** REV **03**

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
- 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
- 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
- IPCS\_MISO << IPCS\_MISO
- IPCS\_MOSI << IPCS\_MOSI
- IPCS\_SCK << IPCS\_SCK
- IPCS\_SSn << IPCS\_SSn
- DP1 << DP1
- PWM0 << PWM0
- SPIS\_MISO << SPIS\_MISO
- SPIS\_MOSI << SPIS\_MOSI
- SPIS\_SCK << SPIS\_SCK
- SPIS\_SSn << SPIS\_SSn

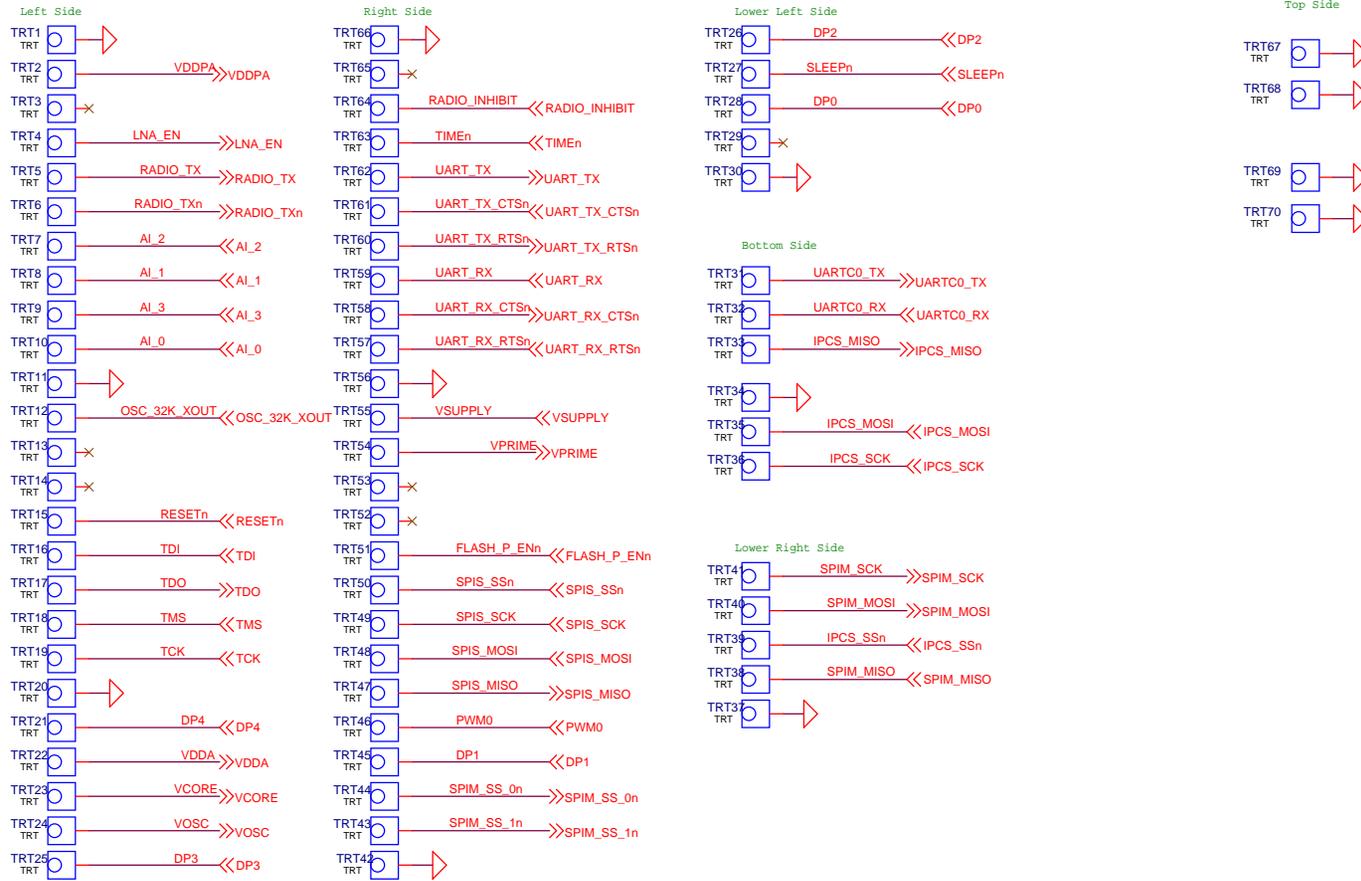


OPTION: STAND-ALONE SPI W/ CLI LOCK/UNLOCK



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				APPROVED:	
ENGINEER:	DESIGNER:	TITLE:	<b>LTP5902IPC-WHMA</b> <b>PCA SCH, ETERNA WH CASTELLATED MOTE, CANADIAN</b>		
THIS CIRCUIT IS PROPRIETARY TO LINEAR TECHNOLOGY AND IS SUPPLIED FOR USE WITH LINEAR TECHNOLOGY PARTS.		SIZE	DWG NO.	REV	
		<b>A</b>	<b>710-0206</b>	<b>03</b>	
		DATE:	Tuesday, July 28, 2015		SHEET 2 OF 4

# CASTELLATIONS



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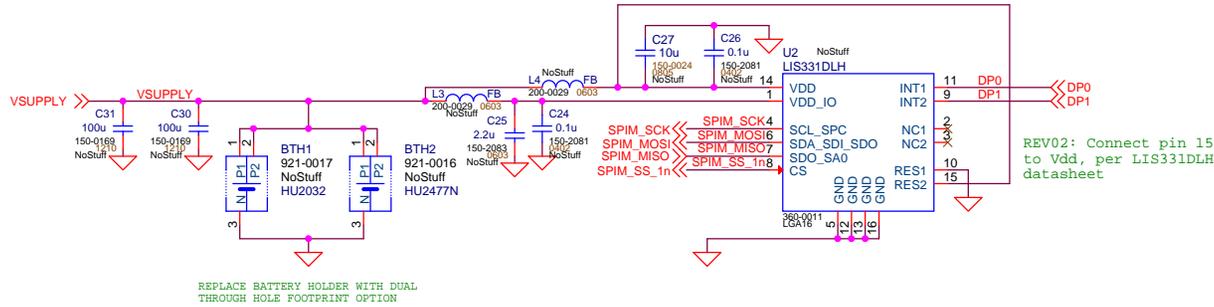
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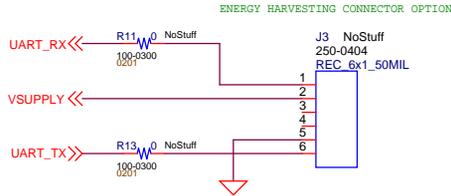
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# BATTERY HOLDER & ACCELEROMETER OPTIONS



REPLACE BATTERY HOLDER WITH DUAL THROUGH HOLE FOOTPRINT OPTION



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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SHEET 4 OF 4