

# QUICK START GUIDE FOR DEMONSTRATION CIRCUIT DC1466

## OCTAL 12-BIT DAC WITH INTERNAL REFERENCE

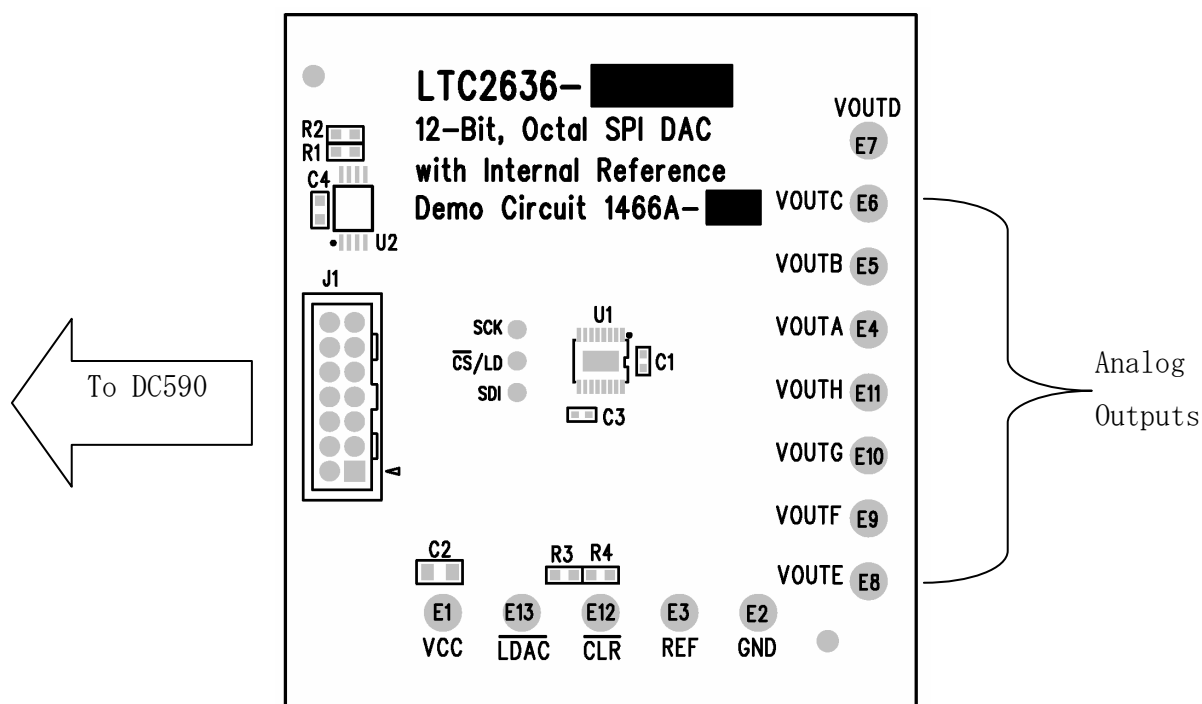
LTC2636

### DESCRIPTION

Demonstration circuit DC1466 features the LTC2636 Octal 12-bit DAC. This device has an integrated, high accuracy, low-drift reference. It has a rail-to-rail output buffer and is guaranteed monotonic. This DAC commu-

nicates through the simple SPI/MICROWIRE™ compatible interface.

Design files for this circuit board are available. Call the LTC factory.



| Demoboard Type | LTC2636 Variation | Power Up | Full Scale |
|----------------|-------------------|----------|------------|
| A              | LZ                | Zero     | 2.5V       |
| B              | LMI               | Midscale | 2.5V       |
| C              | HZ                | Zero     | 4.096V     |
| D              | HMI               | Midscale | 4.096      |

## QUICK START PROCEDURE

Connect DC1466 to a DC590 USB serial controller using the supplied 14 conductor ribbon cable. Connect DC590 to a host PC with a standard USB A/B cable. Run the evaluation software supplied with DC590 or download it from [www.linear.com](http://www.linear.com). The correct control panel will be loaded automatically. Click the COLLECT button to begin outputting codes to the DACs and reading

back the resulting output voltage for each DAC.

Complete software documentation is available from the Help menu item, as features may be added periodically.

|   | Output     | Enable                              |
|---|------------|-------------------------------------|
| A | 0          | <input checked="" type="checkbox"/> |
| C | 0          | <input checked="" type="checkbox"/> |
| E | 2.49938964 | <input checked="" type="checkbox"/> |
| G | 0          | <input checked="" type="checkbox"/> |

|   | Output     | Enable                              |
|---|------------|-------------------------------------|
| B | 2.00012207 | <input checked="" type="checkbox"/> |
| D | 0          | <input checked="" type="checkbox"/> |
| F | 0          | <input checked="" type="checkbox"/> |
| H | 0          | <input checked="" type="checkbox"/> |

## HARDWARE SET-UP

### ANALOG CONNECTIONS

DAC outputs - The eight DAC outputs from the LTC2636 are brought out to turrets labeled VOUTA through VOUTH. These may be connected to external instruments or other circuitry.

**NOTE:** DAC outputs are not in alphabetical order on the circuit board.

Vref - The Ref turret is connected directly to the reference terminals of the LTC2636. When the integrated reference is being used, the reference voltage may be monitored at this point. An external reference

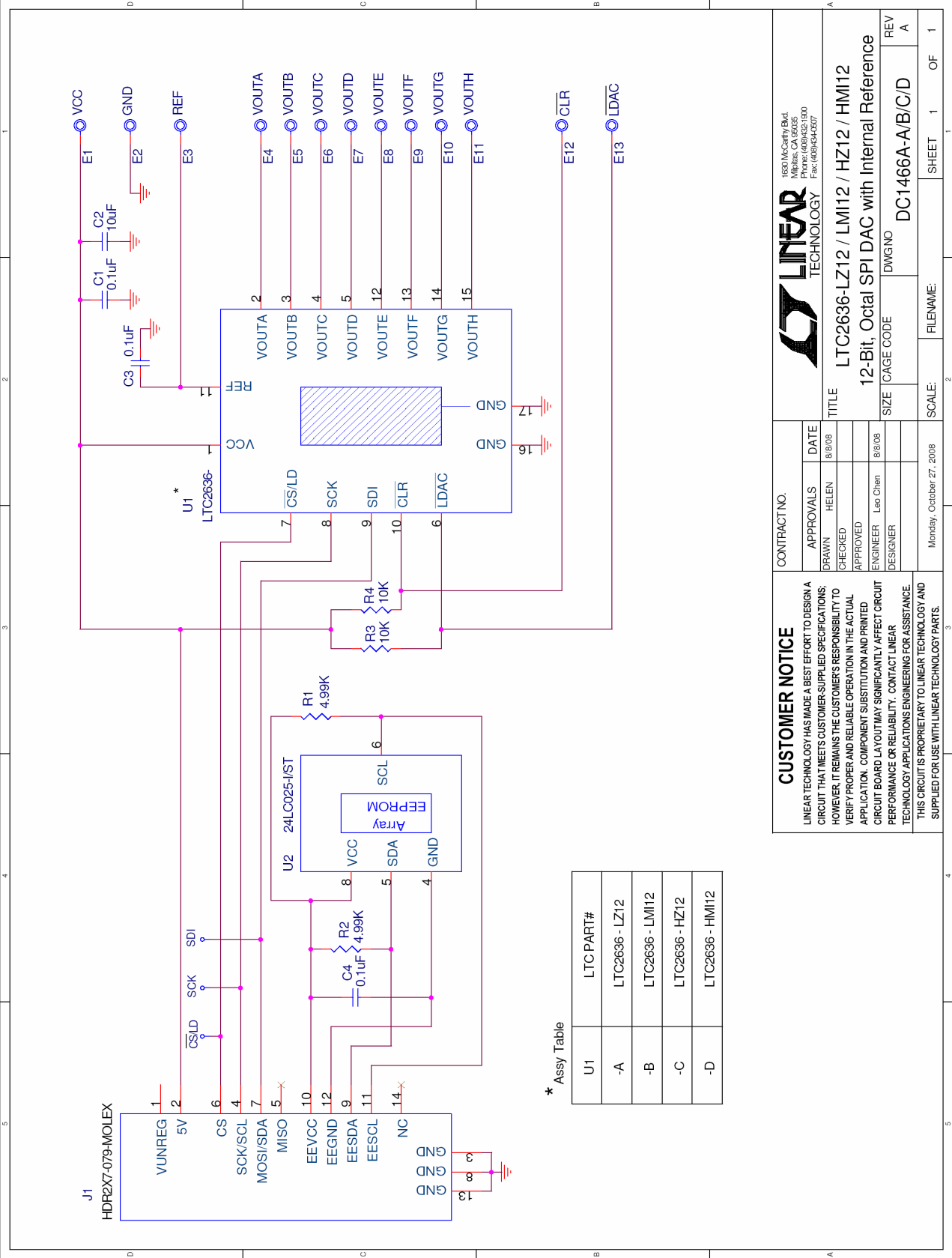
may also be applied to this turret after changing the setting in the QuickEval software.

### GROUNDING AND POWER CONNECTIONS

Power (Vcc) - Normally DC1466 is powered by the DC590 controller. Vcc can be supplied to this turret, however the power supply on DC590 must be disabled! Refer to DC590 Quick Start Guide for more details on this mode of operation.

Grounding - Ground turrets as well as 2 grounding strips are provided.

QUICK START GUIDE FOR DEMONSTRATION CIRCUIT DC1466  
OCTAL 12-BIT DAC WITH INTERNAL REFERENCE



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**CONTRACT NO.**

| APPROVALS          | DATE   |
|--------------------|--------|
| DRAWN: HELEN       | 8/9/08 |
| CHECKED:           |        |
| APPROVED:          |        |
| ENGINEER: Leo Chen | 8/9/08 |
| DESIGNER:          |        |

|                                               |                 |
|-----------------------------------------------|-----------------|
| TITLE                                         |                 |
| LTC2636-LZ12 / LM12 / HZ12 / HM12             |                 |
| 12-Bit, Octal SPI DAC with Internal Reference |                 |
| SIZE                                          | DWGNO           |
| CAGE CODE                                     | DC1466A-A/B/C/D |
| REV                                           | A               |

|        |           |       |   |    |   |
|--------|-----------|-------|---|----|---|
| SCALE: | FILENAME: | SHEET | 1 | OF | 1 |
|--------|-----------|-------|---|----|---|