


## MCU 16-bit MSP430 RISC 8KB Flash 2.5V/3.3V 32-Pin VQFN EP T/R

<b>Manufacturer:</b>	<a href="#">Texas Instruments, Inc</a>
<b>Package/Case:</b>	VQFN-32
<b>Product Type:</b>	Embedded Processors & Controllers
<b>RoHS:</b>	RoHS Compliant/Lead free 
<b>Lifecycle:</b>	Active



Images are for reference only

[Inquiry](#)

### General Description

The TUSB215-Q1 is a USB High-Speed (HS) signal conditioner, designed to compensate for ISI signal loss in a transmission channel which helps passing USB electrical compliance tests.

TUSB215-Q1 has a patent-pending design which is agnostic to USB Low Speed (LS) and Full Speed (FS) signals. LS and FS signal characteristics are unaffected by the TUSB215-Q1 while HS signals are compensated.

Programmable signal AC boost and DC boost permits fine tuning device performance to optimize High Speed signals at the connector, this allows use in many different applications.

In addition, TUSB215-Q1 is compatible with the USB On-The-Go (OTG) and Battery Charging (BC) protocols. TUSB215-Q1 further acts as Charging Downstream Port (CDP) controller and handles the necessary handshakes with the downstream device.

## Key Features

16-bit RISC architecture, 62.5ns instruction cycle time

Internal frequencies up to 16MHz with four calibrated frequencies to  $\pm 1\%$

Internal very-low-power low-frequency oscillator

32kHz Crystal

High-frequency (HF) crystal up to 16MHz

Resonator clock

External digital clock source

External resistor

16-bit Timer0\_A3 with 3 Capture/Compare registers

16-bit Timer1\_A2 with 2 Capture/Compare registers

On-chip comparator for analog signal compare function or slope ADC

10-bit 200ksps ADC with internal reference, sample-and-hold, autoscan and data transfer controller

Enhanced UART supporting auto-baudrate detection (LIN)

IrDA Encoder and decoder

Synchronous SPI

Brownout detector

Serial on-board programming

No external programming voltage needed

Programmable code protection by security fuse

Bootstrap loader

## Recommended For You

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### **TMS320DM642AZN6**

Texas Instruments, Inc

BGA

### **TMS320C31PQA40**

Texas Instruments, Inc

QFP

### **TMS320C6726BRFP266**

Texas Instruments, Inc

QFP144

### **MSP430F147IPM**

Texas Instruments, Inc

QFP64

### **MSP430F135IPMR**

Texas Instruments, Inc

LQFP64

### **TMS320DM648ZUTD9**

Texas Instruments, Inc

BGA

**TMS320C203PZ80**

Texas Instruments, Inc  
QFP

**MSP430G2452IPW20**

Texas Instruments, Inc  
TSSOP20

**MSP430G2231IPW14R**

Texas Instruments, Inc  
TSSOP14

**TMS320F28027PIT**

Texas Instruments, Inc  
LQFP48

**TMS5703137DZWTQQ1**

Texas Instruments, Inc  
NFBGA-337

**TMS34010FNL-40**

Texas Instruments, Inc  
PLCC

**TMS320C6670ACYP A2**

Texas Instruments, Inc  
FCBGA84

**TMS320VC5402APGE16**

Texas Instruments, Inc  
LQFP-144

**TMS320DM642AGDKA5**

Texas Instruments, Inc  
FCCSP(GDK)