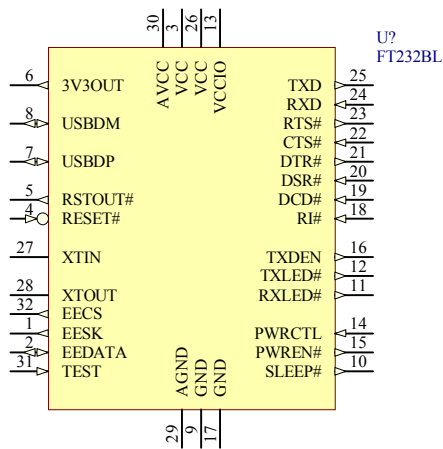


# Schematic Library Report

<b>Library File Name</b>	FTDI Symbols.SchLib
<b>Library File Date/Time</b>	21 January 2011 15:43:10
<b>Library File Size</b>	175616
<b>Number of Components</b>	22
<b>Component List</b>	FT2232D, FT2232HL, FT2232HQ, FT232BL, FT232BM, FT232BQ, FT232RL, FT232RQ, FT245BL, FT245BM, FT245BQ, FT245RL, FT245RQ, FT4232HL, FT4232HQ, VNC1L, VNC2-32L, VNC2-32Q, VNC2-48L, VNC2-48Q, VNC2-64L, VNC2-64Q

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**Library Reference**

**FT232BL**

**Description**

USB to UART interface; LQFP-32, Pb-Free

**Kind**

Standard

**Aliases**

Component has no aliases

**Designator**

U?

**Number of Parameters**

23

**Number of Pins**

32

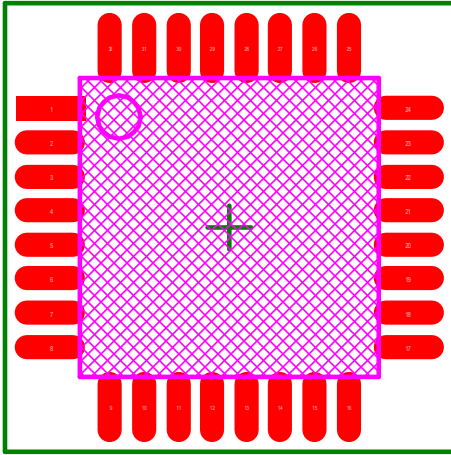
**Number of Models**

1

**Parameters**

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LatestRevisionNote	IPC-7351 Footprint Added.	STRING	False
DatasheetVersion	ver 1.7, Feb-2005	STRING	False
PackageVersion	Jan-2011	STRING	False
PackageReference	LQFP80P700X700X16-32N	STRING	False
Publisher	FTDI Ltd.	STRING	False
PackageDescription	32-Pin Thin Quad Flat Pack 0.8 mm Pitch, 7.0x7.0mm body; IPC Medium Density	STRING	False
ComponentLink1Description	Manufacturer Link	STRING	False
ComponentLink1URL	<a href="http://www.ftdichip.com/Products/ICs/FT232B.htm">http://www.ftdichip.com/Products/ICs/FT232B.htm</a>	STRING	False
ComponentLink2Description	Datasheet	STRING	False
ComponentLink2URL	<a href="http://www.ftdichip.com/Documents/DataSheets/ds232bl17.pdf">http://www.ftdichip.com/Documents/DataSheets/ds232bl17.pdf</a>	STRING	False
DigiKeyPartNo	768-1009-1-ND	STRING	False
Manufacturer	Future Technology Devices International Ltd. (FTDI)	STRING	False
ManufacturerPartNo	FT232BL	STRING	False
Note		STRING	False
Supplier 1	Digi-Key	STRING	False
Supplier 2	Newark	STRING	False
Supplier 3	Farnell	STRING	False
Supplier Part Number 1	768-1009-2-ND	STRING	False
Supplier Part Number 2	38K1551	STRING	False
Supplier Part Number 3	9519769	STRING	False
Created	27/03/2006	STRING	True
Comment	FT232BL	STRING	True
Comment	FT232BL	STRING	True

## Models



**Model Name**

**LQFP80P700X700X16-32N**

**Model Type**

Footprint

**Description**

32-Pin Thin Quad Flat Pack 0.8 mm Pitch,  
7.0x7.0mm body; IPC Medium Density

**Height**

62.992mil

**Dimension**

417.323mil x 417.323mil

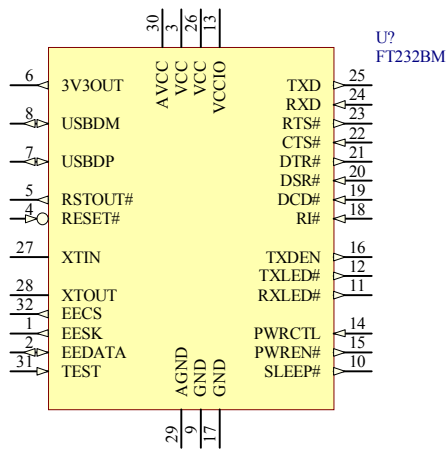
**Number of Pads**

32

**Number of**

50

**Primitives**

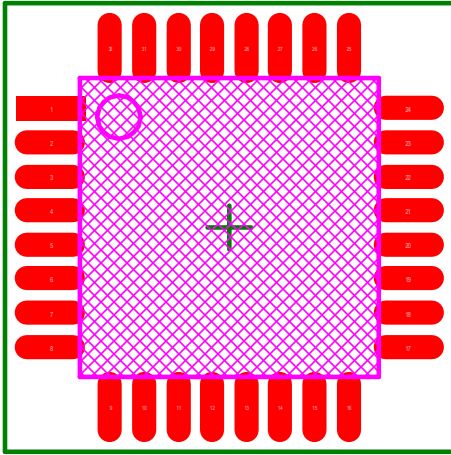


<b>Library Reference</b>	<b>FT232BM</b>
<b>Description</b>	USB to UART interface; LQFP-32
<b>Kind</b>	Standard
<b>Aliases</b>	Component has no aliases
<b>Designator</b>	U?
<b>Number of Parameters</b>	16
<b>Number of Pins</b>	32
<b>Number of Models</b>	1

## Parameters

Name	Value	Type	Visible
Published	6-Oct-2005	STRING	False
LatestRevisionNote	IPC-7351 Footprint Added.	STRING	False
DatasheetVersion	ver 1.7, Feb-2005	STRING	False
PackageVersion	Jan-2011	STRING	False
PackageReference	LQFP80P700X700X16-32N	STRING	False
Publisher	FTDI Ltd.	STRING	False
PackageDescription	32-Pin Thin Quad Flat Pack 0.8 mm Pitch, 7.0x7.0mm body; IPC Medium Density	STRING	False
ComponentLink1Description	Manufacturer Link	STRING	False
ComponentLink1URL	<a href="http://www.ftdichip.com/Products/FT232BM.htm">http://www.ftdichip.com/Products/FT232BM.htm</a>	STRING	False
ComponentLink2Description	Datasheet	STRING	False
ComponentLink2URL	<a href="http://www.ftdichip.com/Documents/DataSheets/ds232b17.pdf">http://www.ftdichip.com/Documents/DataSheets/ds232b17.pdf</a>	STRING	False
DigiKeyPartNo	Not available	STRING	False
Manufacturer	Future Technology Devices International Ltd. (FTDI)	STRING	False
ManufacturerPartNo	FT232BM	STRING	False
Note		STRING	False
Comment	FT232BM	STRING	True

## Models



**Model Name**

**LQFP80P700X700X16-32N**

**Model Type**

Footprint

**Description**

32-Pin Thin Quad Flat Pack 0.8 mm Pitch,  
7.0x7.0mm body; IPC Medium Density

**Height**

62.992mil

**Dimension**

417.323mil x 417.323mil

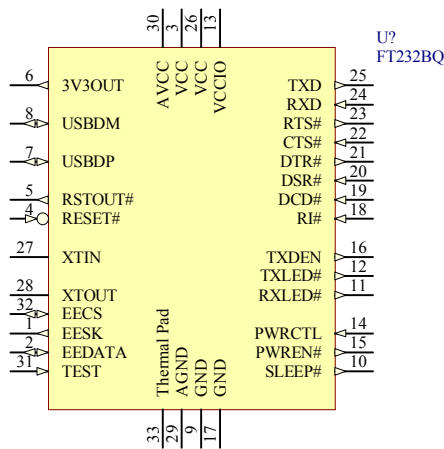
**Number of Pads**

32

**Number of**

50

**Primitives**



## Library Reference

**FT232BQ**

## Description

USB to UART interface; QFN32, Pb-Free

## Kind

Standard

## Aliases

Component has no aliases

## Designator

U?

## Number of Parameters

18

## Number of Pins

33

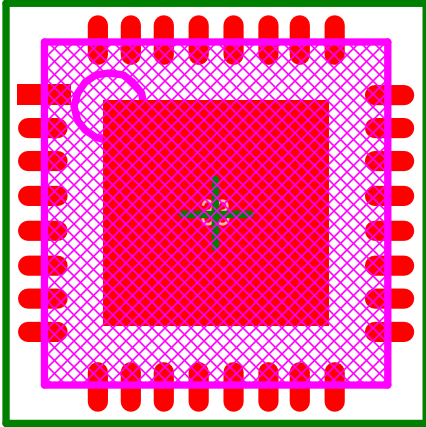
## Number of Models

1

## Parameters

Name	Value	Type	Visible
Published	6-Oct-2005	STRING	False
LatestRevisionNote	IPC-7351 Footprint Added.	STRING	False
DatasheetVersion	ver 1.7, Feb-2005	STRING	False
PackageVersion	Jan-2011	STRING	False
PackageReference	QFN50P500X500X10-32N	STRING	False
Publisher	FTDI Ltd.	STRING	False
PackageDescription	QFN, 32-Leads, Body 5.0x5.0mm (max), Pitch 0.50mm, IPC Medium Density	STRING	False
ComponentLink1Description	Manufacturer Link	STRING	False
ComponentLink1URL	<a href="http://www.ftdichip.com/Products/FT232BM.htm">http://www.ftdichip.com/Products/FT232BM.htm</a>	STRING	False
ComponentLink2Description	Datasheet	STRING	False
ComponentLink2URL	<a href="http://www.ftdichip.com/Documents/DataSheets/ds232bq17.pdf">http://www.ftdichip.com/Documents/DataSheets/ds232bq17.pdf</a>	STRING	False
DigiKeyPartNo	768-1067-1-ND	STRING	False
Manufacturer	Future Technology Devices International Ltd. (FTDI)	STRING	False
ManufacturerPartNo	FT232BQ	STRING	False
Note		STRING	False
Supplier 1	Digi-Key	STRING	False
Supplier Part Number 1	768-1067-2-ND	STRING	False
Comment	FT232BQ	STRING	True

## Models



**Model Name**

**QFN50P500X500X10-32N**

**Model Type**

Footprint

**Description**

QFN, 32-Leads, Body 5.0x5.0mm (max), Pitch 0.50mm, IPC Medium Density

**Height**

39.37mil

**Dimension**

263.78mil x 248.031mil

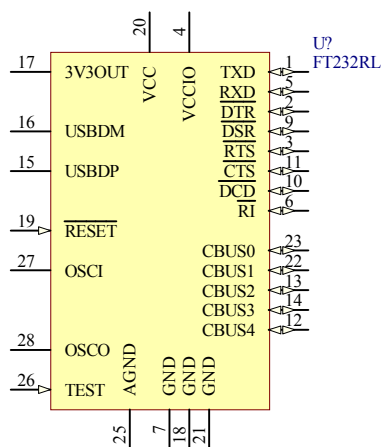
**Number of Pads**

33

**Number of**

54

**Primitives**

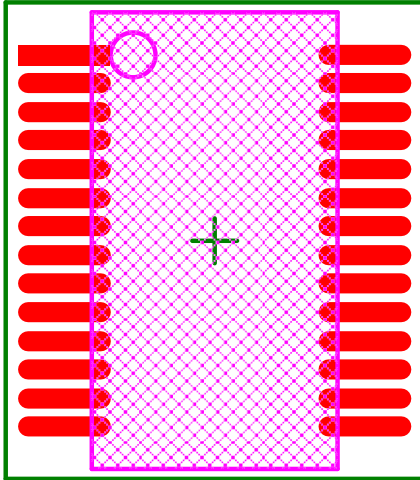


<b>Library Reference</b>	<b>FT232RL</b>
<b>Description</b>	USB to UART interface in SSOP-28 package
<b>Kind</b>	Standard
<b>Aliases</b>	Component has no aliases
<b>Designator</b>	U?
<b>Number of Parameters</b>	22
<b>Number of Pins</b>	28
<b>Number of Models</b>	1

## Parameters

Name	Value	Type	Visible
Manufacturer	Future Technology Devices International Ltd. (FTDI)	STRING	False
Note	*	STRING	False
DigiKeyPartNo	768-1007-1-ND	STRING	False
ManufacturerPartNo	FT232RL	STRING	False
ComponentLink1Description	Manufacturer Link	STRING	False
ComponentLink1URL	<a href="http://www.ftdichip.com/Products/FT232R.htm">http://www.ftdichip.com/Products/FT232R.htm</a>	STRING	False
ComponentLink2Description	Datasheet	STRING	False
ComponentLink2URL	<a href="http://www.ftdichip.com/Documents/DataSheets/DS_FT232R_V204.pdf">http://www.ftdichip.com/Documents/DataSheets/DS_FT232R_V204.pdf</a>	STRING	False
DatasheetVersion	ver 2.04, Jun-2009	STRING	False
LatestRevisionNote	IPC-7351 Footprint Added.	STRING	False
PackageReference	SSOP65P780X200-28N	STRING	False
PackageDescription	SSOP, 28-Leads, Body 10.3x5.6mm (max), Pitch 0.65mm, IPC Medium Density	STRING	False
PackageVersion	Jan-2011	STRING	False
Published	27-Oct-2009	STRING	False
Publisher	FTDI Ltd.	STRING	False
Supplier 1	Digi-Key	STRING	False
Supplier 2	Newark	STRING	False
Supplier 3	Farnell	STRING	False
Supplier Part Number 1	768-1007-2-ND	STRING	False
Supplier Part Number 2	91K9918	STRING	False
Supplier Part Number 3	1146032	STRING	False
Comment	FT232RL	STRING	True

## Models



**Model Name**

**SSOP65P780X200-28N**

**Model Type**

Footprint

**Description**

SSOP, 28-Leads, Body 10.3x5.6mm (max), Pitch  
0.65mm, IPC Medium Density

**Height**

78.74mil

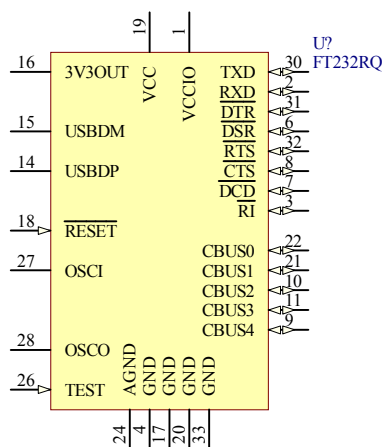
**Dimension**

377.953mil x 429.134mil

**Number of Pads**

28

**Number of Primitives** 46

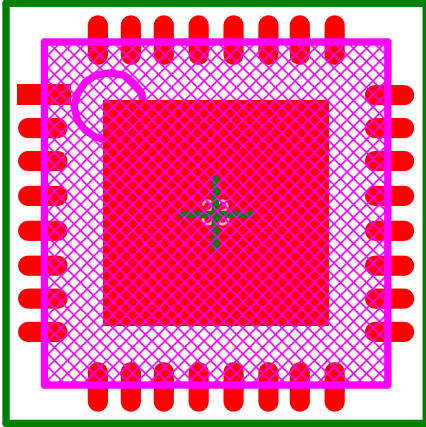


**Library Reference** FT232RQ  
**Description** USB to UART interface in QFN-32 package  
**Kind** Standard  
**Aliases** Component has no aliases  
**Designator** U?  
**Number of Parameters** 22  
**Number of Pins** 33  
**Number of Models** 1

## Parameters

Name	Value	Type	Visible
Manufacturer	Future Technology Devices International Ltd. (FTDI)	STRING	False
Note	*	STRING	False
DigiKeyPartNo	768-1008-1-ND	STRING	False
ManufacturerPartNo	FT232RQ	STRING	False
ComponentLink1Description	Manufacturer Link	STRING	False
ComponentLink1URL	<a href="http://www.ftdichip.com/Products/FT232R.htm">http://www.ftdichip.com/Products/FT232R.htm</a>	STRING	False
ComponentLink2Description	Datasheet	STRING	False
ComponentLink2URL	<a href="http://www.ftdichip.com/Documents/DataSheets/DS_FT232R_V204.pdf">http://www.ftdichip.com/Documents/DataSheets/DS_FT232R_V204.pdf</a>	STRING	False
DatasheetVersion	ver 2.04, Jun-2009	STRING	False
LatestRevisionNote	IPC-7351 Footprint Added.	STRING	False
PackageDescription	QFN, 32-Leads, Body 5.0x5.0mm (max), Pitch 0.50mm, IPC Medium Density	STRING	False
PackageReference	QFN50P500X500X10-32N	STRING	False
PackageVersion	Jan-2011	STRING	False
Published	27-Oct-2009	STRING	False
Publisher	FTDI Ltd.	STRING	False
Supplier 1	Digi-Key	STRING	False
Supplier 2	Newark	STRING	False
Supplier 3	Farnell	STRING	False
Supplier Part Number 1	768-1008-2-ND	STRING	False
Supplier Part Number 2	91K9919	STRING	False
Supplier Part Number 3	1146033	STRING	False
Comment	FT232RQ	STRING	True

## Models



**Model Name**

**QFN50P500X500X10-32N**

**Model Type**

Footprint

**Description**

QFN, 32-Leads, Body 5.0x5.0mm (max), Pitch 0.50mm, IPC Medium Density

**Height**

39.37mil

**Dimension**

263.78mil x 248.031mil

**Number of Pads**

33

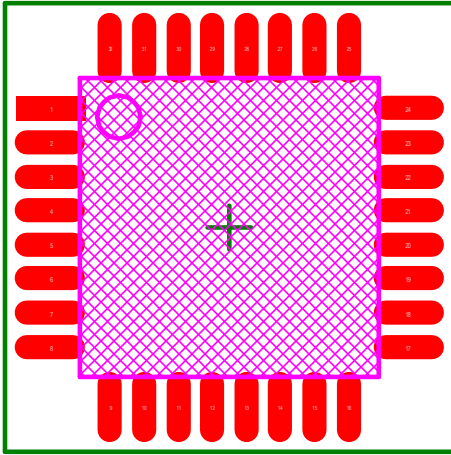
**Number of**

54

**Primitives**



## Models



**Model Name**

**LQFP80P700X700X16-32N**

**Model Type**

Footprint

**Description**

32-Pin Thin Quad Flat Pack 0.8 mm Pitch,  
7.0x7.0mm body; IPC Medium Density

**Height**

62.992mil

**Dimension**

417.323mil x 417.323mil

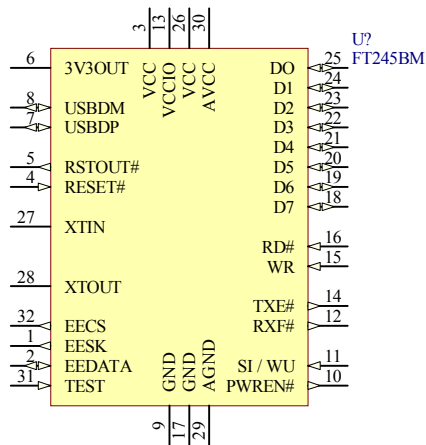
**Number of Pads**

32

**Number of**

50

**Primitives**



## Library Reference

**FT245BM**

## Description

USB/Parallel FIFO Bi-Directional Data Transfer Chip, LQFP-32

## Kind

Standard

## Aliases

Component has no aliases

## Designator

U?

## Number of Parameters

18

## Number of Pins

32

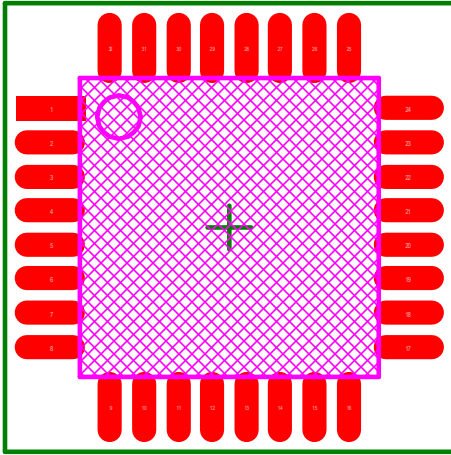
## Number of Models

1

## Parameters

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Published	6-Jun-2005	STRING	False
LatestRevisionNote	IPC-7351 Footprint Added.	STRING	False
DatasheetVersion	ver 1.6, Feb-2005	STRING	False
PackageVersion	Jan-2011	STRING	False
PackageReference	LQFP80P700X700X16-32N	STRING	False
Publisher	FTDI Ltd.	STRING	False
PackageDescription	32-Pin Thin Quad Flat Pack 0.8 mm Pitch, 7.0x7.0mm body; IPC Medium Density	STRING	False
ComponentLink1Description	Manufacturer Link	STRING	False
ComponentLink1URL	<a href="http://www.ftdichip.com/Products/FT245BM.htm">http://www.ftdichip.com/Products/FT245BM.htm</a>	STRING	False
ComponentLink2Description	Datasheet	STRING	False
ComponentLink2URL	<a href="http://www.ftdichip.com/Documents/DataSheets/ds245b16.pdf">http://www.ftdichip.com/Documents/DataSheets/ds245b16.pdf</a>	STRING	False
DigiKeyPartNo	Not available	STRING	False
Manufacturer	Future Technology Devices International Ltd. (FTDI)	STRING	False
ManufacturerPartNo	FT245BM	STRING	False
Note		STRING	False
Supplier 1	Farnell	STRING	False
Supplier Part Number 1	9519785	STRING	False
Created	27/03/2006	STRING	True
Comment	FT245BM	STRING	True

## Models



**Model Name**

**LQFP80P700X700X16-32N**

**Model Type**

Footprint

**Description**

32-Pin Thin Quad Flat Pack 0.8 mm Pitch,  
7.0x7.0mm body; IPC Medium Density

**Height**

62.992mil

**Dimension**

417.323mil x 417.323mil

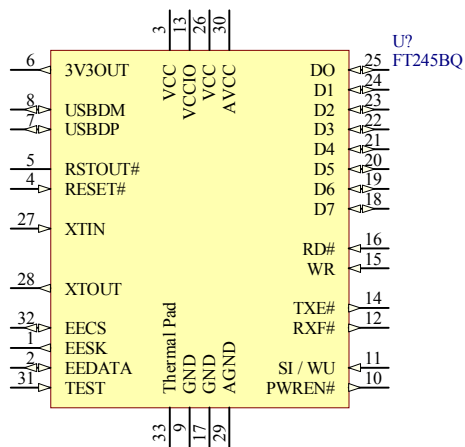
**Number of Pads**

32

**Number of**

50

**Primitives**



**Library Reference**

**FT245BQ**

**Description**

USB/Parallel FIFO Bi-Directional Data Transfer Chip, QFN32, Pb-Free

**Kind**

Standard

**Aliases**

Component has no aliases

**Designator**

U?

**Number of Parameters**

16

**Number of Pins**

33

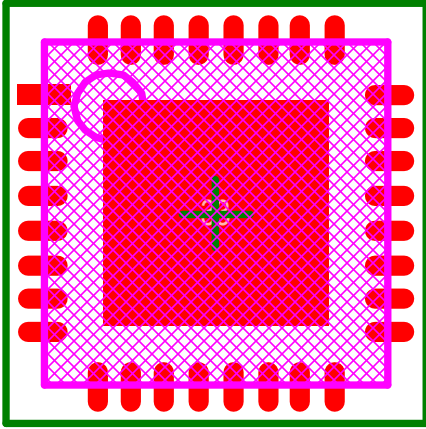
**Number of Models**

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**Parameters**

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LatestRevisionNote	IPC-7351 Footprint Added.	STRING	False
DatasheetVersion	ver 1.6, Feb-2005	STRING	False
PackageVersion	Jan-2011	STRING	False
PackageReference	QFN50P500X500X10-32N	STRING	False
Publisher	FTDI Ltd.	STRING	False
PackageDescription	QFN, 32-Leads, Body 5.0x5.0mm (max), Pitch 0.50mm, IPC Medium Density	STRING	False
ComponentLink1Description	Manufacturer Link	STRING	False
ComponentLink1URL	<a href="http://www.ftdichip.com/Products/FT245BM.htm">http://www.ftdichip.com/Products/FT245BM.htm</a>	STRING	False
ComponentLink2Description	Datasheet	STRING	False
ComponentLink2URL	<a href="http://www.ftdichip.com/Documents/DataSheets/ds245bq16.pdf">http://www.ftdichip.com/Documents/DataSheets/ds245bq16.pdf</a>	STRING	False
DigiKeyPartNo	Not available	STRING	False
Manufacturer	Future Technology Devices International Ltd. (FTDI)	STRING	False
ManufacturerPartNo	FT245BQ	STRING	False
Note		STRING	False
Created	11/04/2006	STRING	True
Comment	FT245BQ	STRING	True

## Models



**Model Name**

**QFN50P500X500X10-32N**

**Model Type**

Footprint

**Description**

QFN, 32-Leads, Body 5.0x5.0mm (max), Pitch 0.50mm, IPC Medium Density

**Height**

39.37mil

**Dimension**

263.78mil x 248.031mil

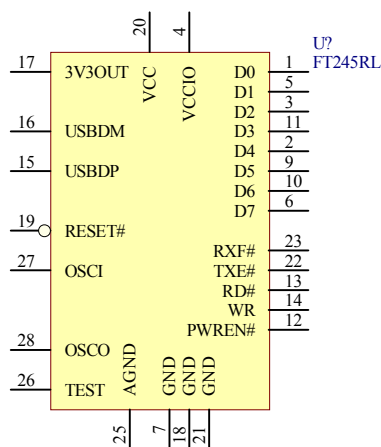
**Number of Pads**

33

**Number of**

54

**Primitives**



## Library Reference

**FT245RL**

## Description

USB/Parallel FIFO Bi-Directional Data Transfer Chip;  
SSOP-28 package

## Kind

Standard

## Aliases

Component has no aliases

## Designator

U?

## Number of Parameters

22

## Number of Pins

28

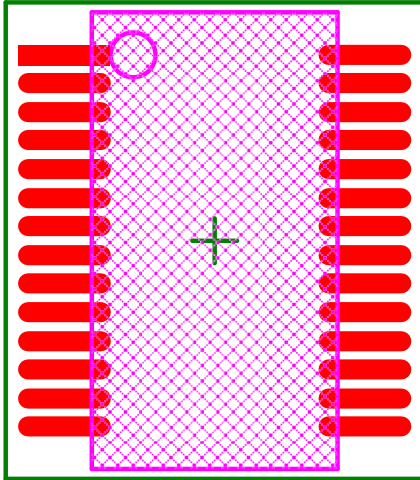
## Number of Models

1

## Parameters

Name	Value	Type	Visible
Manufacturer	Future Technology Devices International Ltd. (FTDI)	STRING	False
Note	*	STRING	False
DigiKeyPartNo	768-1011-1-ND	STRING	False
ManufacturerPartNo	FT245RL	STRING	False
ComponentLink1Description	Manufacturer Link	STRING	False
ComponentLink1URL	<a href="http://www.ftdichip.com/Products/FT245R.htm">http://www.ftdichip.com/Products/FT245R.htm</a>	STRING	False
ComponentLink2Description	Datasheet	STRING	False
ComponentLink2URL	<a href="http://www.ftdichip.com/Documents/DataSheets/DS_FT245R_V206.pdf">http://www.ftdichip.com/Documents/DataSheets/DS_FT245R_V206.pdf</a>	STRING	False
DatasheetVersion	ver 2.06, Jun-2009	STRING	False
LatestRevisionNote	IPC-7351 Footprint Added.	STRING	False
PackageDescription	SSOP, 28-Leads, Body 10.3x5.6mm (max), Pitch 0.65mm, IPC Medium Density	STRING	False
PackageReference	SSOP65P780X200-28N	STRING	False
PackageVersion	Jan-2011	STRING	False
Published	27-Oct-2009	STRING	False
Publisher	FTDI Ltd.	STRING	False
Supplier 1	Digi-Key	STRING	False
Supplier 2	Newark	STRING	False
Supplier 3	Farnell	STRING	False
Supplier Part Number 1	768-1011-2-ND	STRING	False
Supplier Part Number 2	91K9920	STRING	False
Supplier Part Number 3	1146034	STRING	False
Comment	FT245RL	STRING	True

## Models



**Model Name**

**SSOP65P780X200-28N**

**Model Type**

Footprint

**Description**

SSOP, 28-Leads, Body 10.3x5.6mm (max), Pitch 0.65mm, IPC Medium Density

**Height**

78.74mil

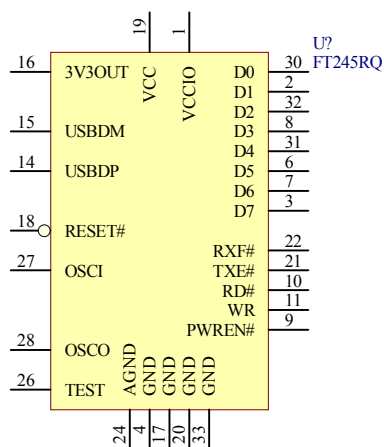
**Dimension**

377.953mil x 429.134mil

**Number of Pads**

28

**Number of Primitives** 46



### Library Reference

**FT245RQ**

### Description

USB/Parallel FIFO Bi-Directional Data Transfer Chip;  
QFN-32 package

### Kind

Standard

### Aliases

Component has no aliases

### Designator

U?

### Number of Parameters

22

### Number of Pins

33

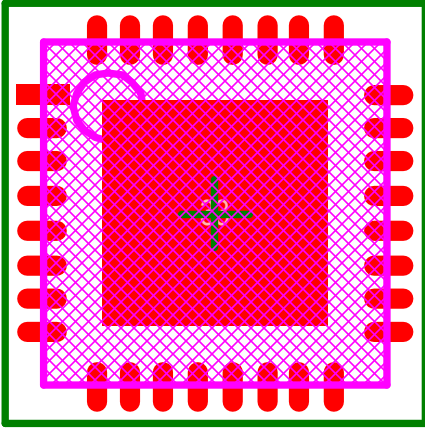
### Number of Models

1

## Parameters

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Manufacturer	Future Technology Devices International Ltd. (FTDI)	STRING	False
Note	*	STRING	False
DigiKeyPartNo	768-1012-1-ND	STRING	False
ManufacturerPartNo	FT245RQ	STRING	False
ComponentLink1Description	Manufacturer Link	STRING	False
ComponentLink1URL	<a href="http://www.ftdichip.com/Products/FT245R.htm">http://www.ftdichip.com/Products/FT245R.htm</a>	STRING	False
ComponentLink2Description	Datasheet	STRING	False
ComponentLink2URL	<a href="http://www.ftdichip.com/Documents/DataSheets/DS_FT245R_V206.pdf">http://www.ftdichip.com/Documents/DataSheets/DS_FT245R_V206.pdf</a>	STRING	False
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LatestRevisionNote	IPC-7351 Footprint Added.	STRING	False
PackageDescription	QFN, 32-Leads, Body 5.0x5.0mm (max), Pitch 0.50mm, IPC Medium Density	STRING	False
PackageReference	QFN50P500X500X10-32N	STRING	False
PackageVersion	Jan-2011	STRING	False
Published	27-Oct-2009	STRING	False
Publisher	FTDI Ltd.	STRING	False
Supplier 1	Digi-Key	STRING	False
Supplier 2	Newark	STRING	False
Supplier 3	Farnell	STRING	False
Supplier Part Number 1	768-1012-2-ND	STRING	False
Supplier Part Number 2	91K9921	STRING	False
Supplier Part Number 3	1146035	STRING	False
Comment	FT245RQ	STRING	True

## Models



**Model Name**

**QFN50P500X500X10-32N**

**Model Type**

Footprint

**Description**

QFN, 32-Leads, Body 5.0x5.0mm (max), Pitch 0.50mm, IPC Medium Density

**Height**

39.37mil

**Dimension**

263.78mil x 248.031mil

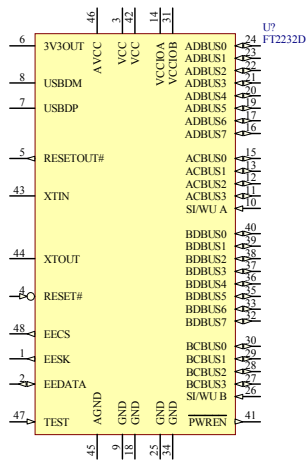
**Number of Pads**

33

**Number of**

54

**Primitives**

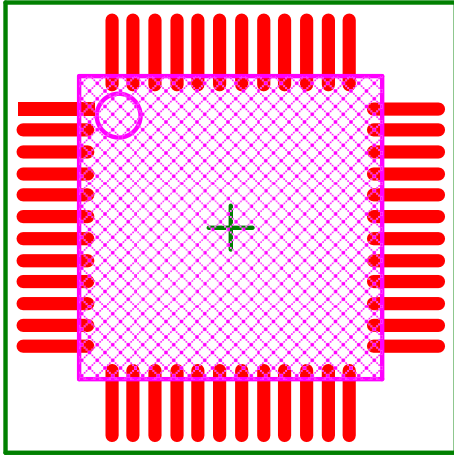


**Library Reference** FT2232D  
**Description** Dual Channel USB UART/FIFO Chip, LQFP-48  
**Kind** Standard  
**Aliases** Component has no aliases  
**Designator** U?  
**Number of Parameters** 22  
**Number of Pins** 48  
**Number of Models** 1

## Parameters

Name	Value	Type	Visible
Manufacturer	Future Technology Devices International Ltd. (FTDI)	STRING	False
Note	*	STRING	False
DigiKeyPartNo	768-1010-1-ND	STRING	False
ManufacturerPartNo	FT2232D	STRING	False
ComponentLink1Description	Manufacturer Link	STRING	False
ComponentLink1URL	<a href="http://www.ftdichip.com/Products/FT2232C.htm">http://www.ftdichip.com/Products/FT2232C.htm</a>	STRING	False
ComponentLink2Description	Datasheet	STRING	False
ComponentLink2URL	<a href="http://www.ftdichip.com/Documents/DataSheets/DS_FT2232D.pdf">http://www.ftdichip.com/Documents/DataSheets/DS_FT2232D.pdf</a>	STRING	False
DatasheetVersion	ver.0.91, Oct-2006	STRING	False
LatestRevisionNote	IPC-7351 Footprint Added.	STRING	False
PackageDescription	48-Pin Thin Quad Flat Pack 0.5 mm Pitch, IPC Medium Density	STRING	False
PackageReference	LQFP50P700X700X16-48N	STRING	False
PackageVersion	Jan-2011	STRING	False
Published	27-Oct-2009	STRING	False
Publisher	FTDI Ltd.	STRING	False
Supplier 1	Digi-Key	STRING	False
Supplier 2	Newark	STRING	False
Supplier 3	Farnell	STRING	False
Supplier Part Number 1	768-1010-2-ND	STRING	False
Supplier Part Number 2	14N9294	STRING	False
Supplier Part Number 3	1615843	STRING	False
Comment	FT2232D	STRING	True

## Models



**Model Name**

**LQFP50P700X700X16-48N**

**Model Type**

Footprint

**Description**

48-Pin Thin Quad Flat Pack 0.5 mm Pitch, IPC  
Medium Density

**Height**

62.992mil

**Dimension**

413.386mil x 413.386mil

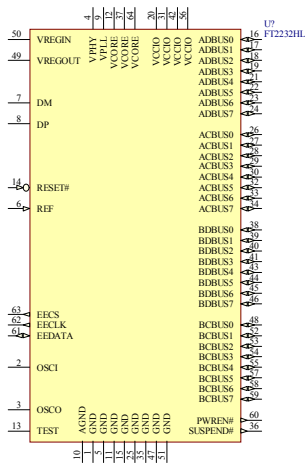
**Number of Pads**

48

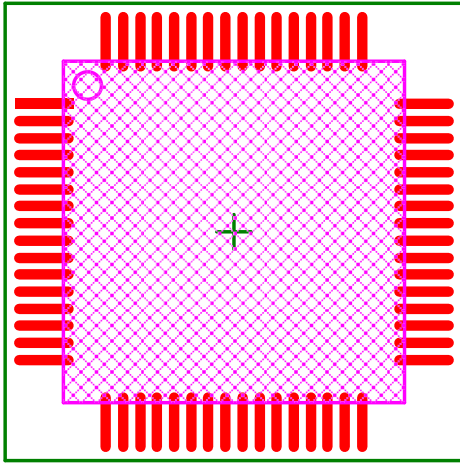
**Number of**

66

**Primitives**



## Models



**Model Name**

**LQFP50P1000X1000X16-64N**

**Model Type**

Footprint

**Description**

LQFP, 64-Leads, Body 10x10mm (max), Pitch 0.50mm, IPC Medium Density

**Height**

62.992mil

**Dimension**

531.496mil x 531.496mil

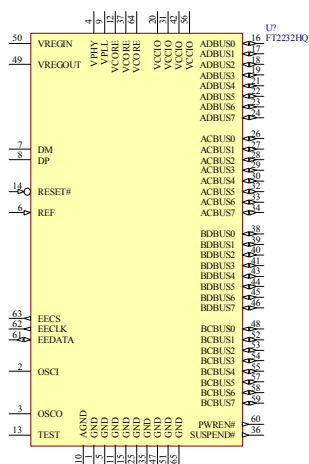
**Number of Pads**

64

**Number of**

82

**Primitives**



**Library Reference** FT2232HQ

**Description** Dual High Speed USB to Multipurpose UART/FIFO/MPSSE IC; LQFP-64

**Kind** Standard

**Aliases** Component has no aliases

**Designator** U?

**Number of Parameters** 22

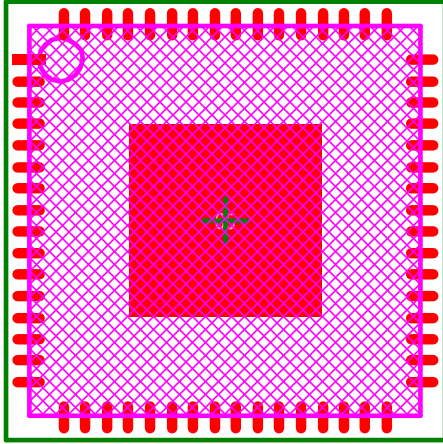
**Number of Pins** 65

**Number of Models** 1

## Parameters

Name	Value	Type	Visible
Manufacturer	Future Technology Devices International Ltd. (FTDI)	STRING	False
Note	*	STRING	False
DigiKeyPartNo	768-1025-1-ND	STRING	False
ManufacturerPartNo	FT2232HQ	STRING	False
ComponentLink1Description	Manufacturer Link	STRING	False
ComponentLink1URL	<a href="http://www.ftdichip.com/Products/FT2232H.htm">http://www.ftdichip.com/Products/FT2232H.htm</a>	STRING	False
ComponentLink2Description	Datasheet	STRING	False
ComponentLink2URL	<a href="http://www.ftdichip.com/Documents/DataSheets/DS_FT2232H_V206.pdf">http://www.ftdichip.com/Documents/DataSheets/DS_FT2232H_V206.pdf</a>	STRING	False
DatasheetVersion	ver.2.06, Sep-2009	STRING	False
LatestRevisionNote	IPC-7351 Footprint Added.	STRING	False
PackageDescription	QFN, 64-Leads, Body 9.0x9.0mm, Pitch 0.50mm, IPC Medium Density	STRING	False
PackageReference	QFN50P900X900X10-64N	STRING	False
PackageVersion	Jan-2011	STRING	False
Published	27-Oct-2009	STRING	False
Publisher	FTDI Ltd.	STRING	False
Supplier 1	Digi-Key	STRING	False
Supplier 2	Newark	STRING	False
Supplier 3	Farnell	STRING	False
Supplier Part Number 1	768-1025-2-ND	STRING	False
Supplier Part Number 2	80P4237	STRING	False
Supplier Part Number 3	1697462	STRING	False
Comment	FT2232HQ	STRING	True

## Models



**Model Name**

**QFN50P900X900X10-64N**

**Model Type**

Footprint

**Description**

QFN, 64-Leads, Body 9.0x9.0mm, Pitch 0.50mm,  
IPC Medium Density

**Height**

39.37mil

**Dimension**

425.197mil x 405.512mil

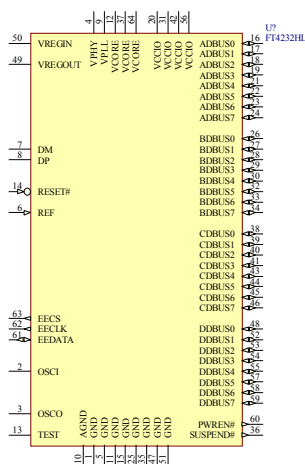
**Number of Pads**

65

**Number of**

86

**Primitives**

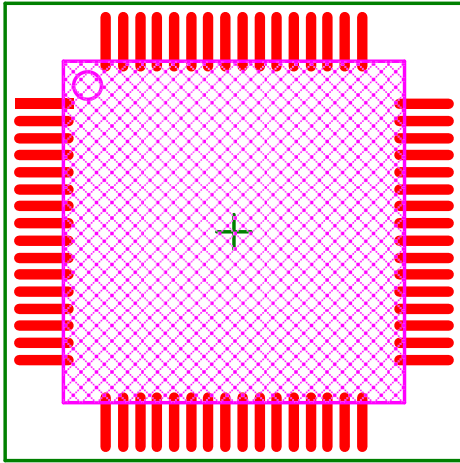


**Library Reference** FT4232HL  
**Description** Quad High Speed USB to Multipurpose UART, MPSSE IC; LQFP-64  
**Kind** Standard  
**Aliases** Component has no aliases  
**Designator** U?  
**Number of Parameters** 22  
**Number of Pins** 64  
**Number of Models** 1

**Parameters**

Name	Value	Type	Visible
Manufacturer	Future Technology Devices International Ltd. (FTDI)	STRING	False
Note	*	STRING	False
DigiKeyPartNo	768-1026-1-ND	STRING	False
ManufacturerPartNo	FT4232HL	STRING	False
ComponentLink1Description	Manufacturer Link	STRING	False
ComponentLink1URL	<a href="http://www.ftdichip.com/Products/FT4232H.htm">http://www.ftdichip.com/Products/FT4232H.htm</a>	STRING	False
ComponentLink2Description	Datasheet	STRING	False
ComponentLink2URL	<a href="http://www.ftdichip.com/Documents/DataSheets/DS_FT4232H_V206.pdf">http://www.ftdichip.com/Documents/DataSheets/DS_FT4232H_V206.pdf</a>	STRING	False
DatasheetVersion	ver.2.06, Sep-2009	STRING	False
LatestRevisionNote	IPC-7351 Footprint Added.	STRING	False
PackageDescription	LQFP, 64-Leads, Body 10x10mm (max), Pitch 0.50mm, IPC Medium Density	STRING	False
PackageReference	LQFP50P1000X1000X16-64N	STRING	False
PackageVersion	Jan-2011	STRING	False
Published	27-Oct-2009	STRING	False
Publisher	FTDI Ltd.	STRING	False
Supplier 1	Digi-Key	STRING	False
Supplier 2	Newark	STRING	False
Supplier 3	Farnell	STRING	False
Supplier Part Number 1	768-1026-2-ND	STRING	False
Supplier Part Number 2	80P4241	STRING	False
Supplier Part Number 3	1697463	STRING	False
Comment	FT4232HL	STRING	True

## Models



**Model Name**

**LQFP50P1000X1000X16-64N**

**Model Type**

Footprint

**Description**

LQFP, 64-Leads, Body 10x10mm (max), Pitch 0.50mm, IPC Medium Density

**Height**

62.992mil

**Dimension**

531.496mil x 531.496mil

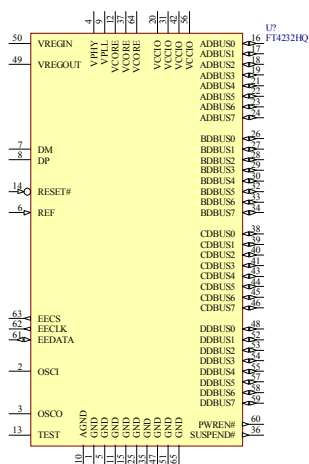
**Number of Pads**

64

**Number of**

82

**Primitives**



**Library Reference**

**FT4232HQ**

**Description**

Quad High Speed USB to Multipurpose UART, MPSSE IC; QFN-64

**Kind**

Standard

**Aliases**

Component has no aliases

**Designator**

U?

**Number of Parameters**

22

**Number of Pins**

65

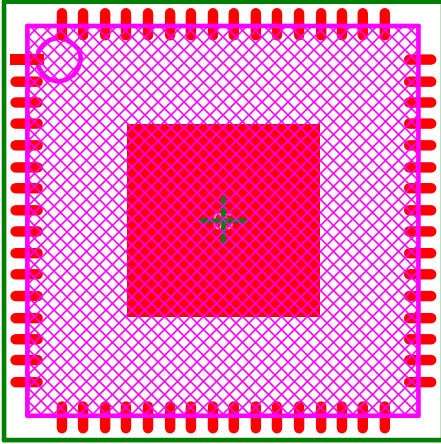
**Number of Models**

1

## Parameters

Name	Value	Type	Visible
Manufacturer	Future Technology Devices International Ltd. (FTDI)	STRING	False
Note	*	STRING	False
DigiKeyPartNo	768-1027-1-ND	STRING	False
ManufacturerPartNo	FT4232HQ	STRING	False
ComponentLink1Description	Manufacturer Link	STRING	False
ComponentLink1URL	<a href="http://www.ftdichip.com/Products/FT4232H.htm">http://www.ftdichip.com/Products/FT4232H.htm</a>	STRING	False
ComponentLink2Description	Datasheet	STRING	False
ComponentLink2URL	<a href="http://www.ftdichip.com/Documents/DataSheets/DS_FT4232H_V206.pdf">http://www.ftdichip.com/Documents/DataSheets/DS_FT4232H_V206.pdf</a>	STRING	False
DatasheetVersion	ver.2.06, Sep-2009	STRING	False
LatestRevisionNote	IPC-7351 Footprint Added.	STRING	False
PackageDescription	QFN, 64-Leads, Body 9.0x9.0mm, Pitch 0.50mm, IPC Medium Density	STRING	False
PackageReference	QFN50P900X900X10-64N	STRING	False
PackageVersion	Jan-2011	STRING	False
Published	27-Oct-2009	STRING	False
Publisher	FTDI Ltd.	STRING	False
Supplier 1	Digi-Key	STRING	False
Supplier 2	Newark	STRING	False
Supplier 3	Farnell	STRING	False
Supplier Part Number 1	768-1027-2-ND	STRING	False
Supplier Part Number 2	80P4243	STRING	False
Supplier Part Number 3	1697464	STRING	False
Comment	FT4232HQ	STRING	True

## Models



**Model Name**

**QFN50P900X900X10-64N**

**Model Type**

Footprint

**Description**

QFN, 64-Leads, Body 9.0x9.0mm, Pitch 0.50mm, IPC Medium Density

**Height**

39.37mil

**Dimension**

425.197mil x 405.512mil

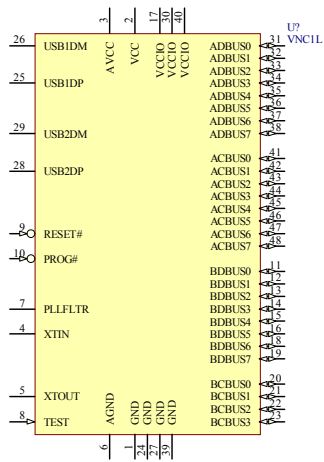
**Number of Pads**

65

**Number of**

86

**Primitives**



### Library Reference

**VNC1L**

### Description

Single chip, Two ports, Embedded USB Host Controller; LQFP-48

### Kind

Standard

### Aliases

Component has no aliases

### Designator

U?

### Number of Parameters

22

### Number of Pins

48

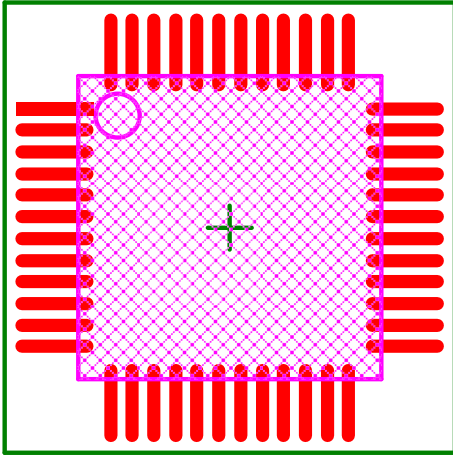
### Number of Models

1

### Parameters

Name	Value	Type	Visible
Manufacturer	Future Technology Devices International Ltd. (FTDI)	STRING	False
Note	*	STRING	False
DigiKeyPartNo	768-1000-1-ND	STRING	False
ManufacturerPartNo	VNC1L-1A	STRING	False
ComponentLink1Description	Manufacturer Link	STRING	False
ComponentLink1URL	<a href="http://www.ftdichip.com/Products/ICs/VNC1L.htm">http://www.ftdichip.com/Products/ICs/VNC1L.htm</a>	STRING	False
ComponentLink2Description	Datasheet	STRING	False
ComponentLink2URL	<a href="http://www.ftdichip.com/Support/Documents/DataSheets/ICs/DS_VNC1L.pdf">http://www.ftdichip.com/Support/Documents/DataSheets/ICs/DS_VNC1L.pdf</a>	STRING	False
DatasheetVersion	ver.2.02, August-2010	STRING	False
LatestRevisionNote	IPC-7351 Footprint Added.	STRING	False
PackageDescription	48-Pin Thin Quad Flat Pack 0.5 mm Pitch, IPC Medium Density	STRING	False
PackageReference	LQFP50P700X700X16-48N	STRING	False
PackageVersion	Jan-2011	STRING	False
Published	27-Oct-2009	STRING	False
Publisher	FTDI Ltd.	STRING	False
Supplier 1	Digi-Key	STRING	False
Supplier 2	Newark	STRING	False
Supplier 3	Farnell	STRING	False
Supplier Part Number 1	768-1000-2-ND	STRING	False
Supplier Part Number 2	34M8951	STRING	False
Supplier Part Number 3	1329312	STRING	False
Comment	VNC1L	STRING	True

## Models



**Model Name**

**LQFP50P700X700X16-48N**

**Model Type**

Footprint

**Description**

48-Pin Thin Quad Flat Pack 0.5 mm Pitch, IPC  
Medium Density

**Height**

62.992mil

**Dimension**

413.386mil x 413.386mil

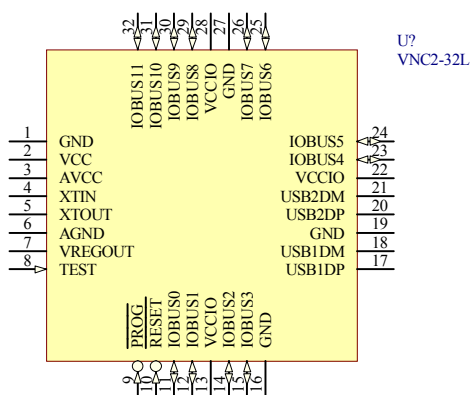
**Number of Pads**

48

**Number of**

66

**Primitives**

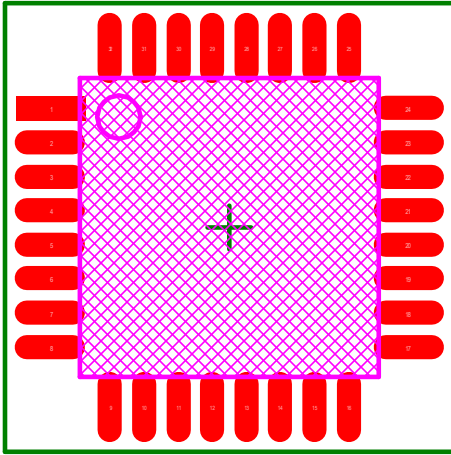


<b>Library Reference</b>	<b>VNC2-32L</b>
<b>Description</b>	Vinculum-II Embedded USB Host Controller IC; 32 pin LQFP
<b>Kind</b>	Standard
<b>Aliases</b>	Component has no aliases
<b>Designator</b>	U?
<b>Number of Parameters</b>	22
<b>Number of Pins</b>	32
<b>Number of Models</b>	1

## Parameters

Name	Value	Type	Visible
Manufacturer	Future Technology Devices International Ltd. (FTDI)	STRING	False
Note	*	STRING	False
DigiKeyPartNo	768-1051-1-ND	STRING	False
ManufacturerPartNo	VNC2-32L	STRING	False
ComponentLink1Description	Manufacturer Link	STRING	False
ComponentLink1URL	<a href="http://www.ftdichip.com/Products/ICs/VNC2.htm">http://www.ftdichip.com/Products/ICs/VNC2.htm</a>	STRING	False
ComponentLink2Description	Datasheet	STRING	False
ComponentLink2URL	<a href="http://www.ftdichip.com/Support/Documents/DataSheets/ICs/DS_Vinculum-II.pdf">http://www.ftdichip.com/Support/Documents/DataSheets/ICs/DS_Vinculum-II.pdf</a>	STRING	False
DatasheetVersion	ver.1.2, October-2010	STRING	False
LatestRevisionNote	IPC-7351 Footprint Added.	STRING	False
PackageDescription	32-Pin Thin Quad Flat Pack 0.8 mm Pitch, 7.0x7.0mm body; IPC Medium Density	STRING	False
PackageVersion	Jan-2011	STRING	False
Publisher	FTDI Ltd.	STRING	False
PackageReference	LQFP80P700X700X16-32N	STRING	False
Published	21-Jan-2011	STRING	False
Supplier 1	Newark	STRING	False
Supplier 2	Digi-Key	STRING	False
Supplier 3	Farnell	STRING	False
Supplier Part Number 1	91R1764	STRING	False
Supplier Part Number 2	768-1051-2-ND	STRING	False
Supplier Part Number 3	1825843	STRING	False
Comment	VNC2-32L	STRING	True

## Models



**Model Name**

**LQFP80P700X700X16-32N**

**Model Type**

Footprint

**Description**

32-Pin Thin Quad Flat Pack 0.8 mm Pitch,  
7.0x7.0mm body; IPC Medium Density

**Height**

62.992mil

**Dimension**

417.323mil x 417.323mil

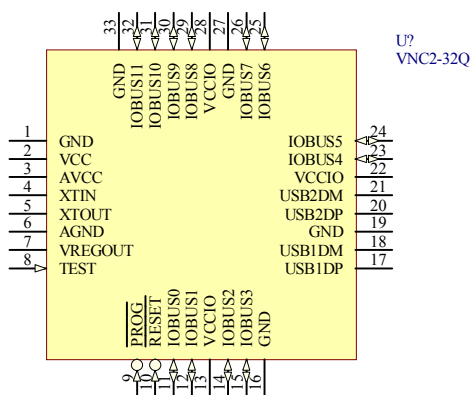
**Number of Pads**

32

**Number of**

50

**Primitives**

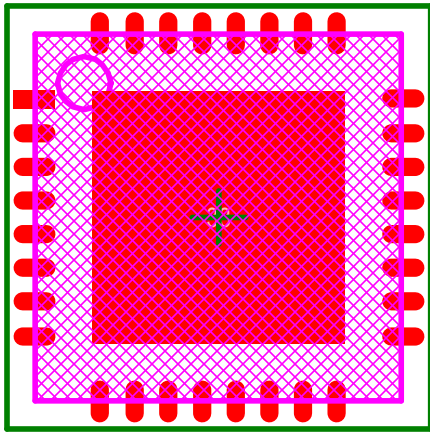


<b>Library Reference</b>	<b>VNC2-32Q</b>
<b>Description</b>	Vinculum-II Embedded USB Host Controller; 32 pin QFN
<b>Kind</b>	Standard
<b>Aliases</b>	Component has no aliases
<b>Designator</b>	U?
<b>Number of Parameters</b>	22
<b>Number of Pins</b>	33
<b>Number of Models</b>	1

### Parameters

Name	Value	Type	Visible
Manufacturer	Future Technology Devices International Ltd. (FTDI)	STRING	False
Note	*	STRING	False
DigiKeyPartNo	768-1050-1-ND	STRING	False
ManufacturerPartNo	VNC2-32Q	STRING	False
ComponentLink1Description	Manufacturer Link	STRING	False
ComponentLink1URL	<a href="http://www.ftdichip.com/Products/ICs/VNC2.htm">http://www.ftdichip.com/Products/ICs/VNC2.htm</a>	STRING	False
ComponentLink2Description	Datasheet	STRING	False
ComponentLink2URL	<a href="http://www.ftdichip.com/Support/Documents/DataSheets/ICs/DS_Vinculum-II.pdf">http://www.ftdichip.com/Support/Documents/DataSheets/ICs/DS_Vinculum-II.pdf</a>	STRING	False
DatasheetVersion	ver.1.2, October-2010	STRING	False
LatestRevisionNote	IPC-7351 Footprint Added.	STRING	False
PackageVersion	Jan-2011	STRING	False
Publisher	FTDI Ltd.	STRING	False
PackageReference	QFN65P700X700X10-32N	STRING	False
PackageDescription	QFN, 32-Leads, Body 7.0x7.0mm (max), Pitch 0.65mm, IPC Medium Density	STRING	False
Published	21-Jan-2011	STRING	False
Supplier 1	Newark	STRING	False
Supplier 2	Farnell	STRING	False
Supplier 3	Digi-Key	STRING	False
Supplier Part Number 1	91R1765	STRING	False
Supplier Part Number 2	1825844	STRING	False
Supplier Part Number 3	768-1050-2-ND	STRING	False
Comment	VNC2-32Q	STRING	True

### Models



**Model Name**

**QFN65P700X700X10-32N**

**Model Type**

Footprint

**Description**

QFN, 32-Leads, Body 7.0x7.0mm (max), Pitch  
0.65mm, IPC Medium Density

**Height**

39.37mil

**Dimension**

348.425mil x 326.772mil

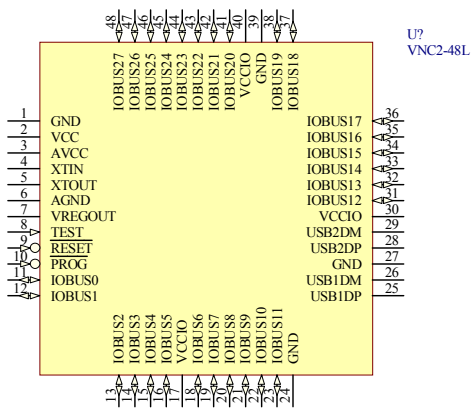
**Number of Pads**

33

**Number of  
Primitives**

54

---



## Library Reference

**VNC2-48L**

### Description

Vinculum-II Embedded USB Host Controller IC; 48-pin LQFP

### Kind

Standard

### Aliases

Component has no aliases

### Designator

U?

### Number of Parameters

22

### Number of Pins

48

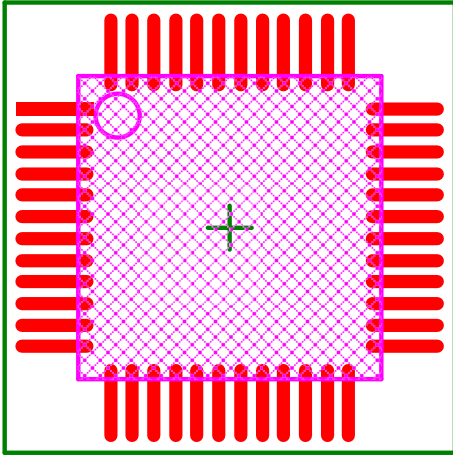
### Number of Models

1

## Parameters

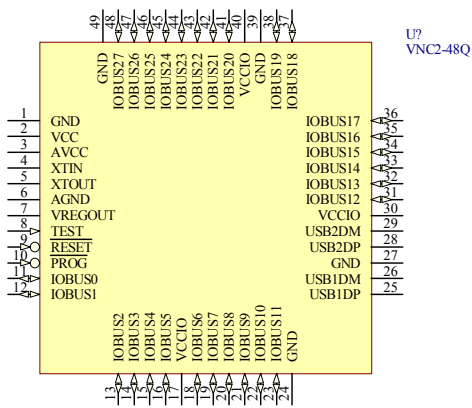
Name	Value	Type	Visible
Manufacturer	Future Technology Devices International Ltd. (FTDI)	STRING	False
Note	*	STRING	False
DigiKeyPartNo	768-1049-1-ND	STRING	False
ManufacturerPartNo	VNC2-48L	STRING	False
ComponentLink1Description	Manufacturer Link	STRING	False
ComponentLink1URL	<a href="http://www.ftdichip.com/Products/ICs/VNC2.htm">http://www.ftdichip.com/Products/ICs/VNC2.htm</a>	STRING	False
ComponentLink2Description	Datasheet	STRING	False
ComponentLink2URL	<a href="http://www.ftdichip.com/Support/Documents/DataSheets/ICs/DS_Vinculum-II.pdf">http://www.ftdichip.com/Support/Documents/DataSheets/ICs/DS_Vinculum-II.pdf</a>	STRING	False
DatasheetVersion	ver.1.2, October-2010	STRING	False
LatestRevisionNote	IPC-7351 Footprint Added.	STRING	False
PackageVersion	Jan-2011	STRING	False
Publisher	FTDI Ltd.	STRING	False
PackageReference	LQFP50P700X700X16-48N	STRING	False
PackageDescription	48-Pin Thin Quad Flat Pack 0.5 mm Pitch, IPC Medium Density	STRING	False
Published	21-Jan-2011	STRING	False
Supplier 1	Farnell	STRING	False
Supplier 2	Newark	STRING	False
Supplier 3	Digi-Key	STRING	False
Supplier Part Number 1	1825845	STRING	False
Supplier Part Number 2	91R1766	STRING	False
Supplier Part Number 3	768-1049-2-ND	STRING	False
Comment	VNC2-48L	STRING	True

## Models



<b>Model Name</b>	<b>LQFP50P700X700X16-48N</b>
<b>Model Type</b>	Footprint
<b>Description</b>	48-Pin Thin Quad Flat Pack 0.5 mm Pitch, IPC Medium Density
<b>Height</b>	62.992mil
<b>Dimension</b>	413.386mil x 413.386mil
<b>Number of Pads</b>	48
<b>Number of Primitives</b>	66

---



## Library Reference

**VNC2-48Q**

## Description

Vinculum-II Embedded USB Host Controller IC; 48-pin QFN

## Kind

Standard

## Aliases

Component has no aliases

## Designator

U?

## Number of Parameters

22

## Number of Pins

49

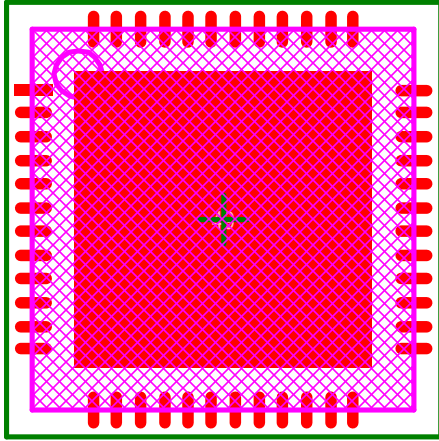
## Number of Models

1

## Parameters

Name	Value	Type	Visible
Manufacturer	Future Technology Devices International Ltd. (FTDI)	STRING	False
Note	*	STRING	False
DigiKeyPartNo	768-1048-1-ND	STRING	False
ManufacturerPartNo	VNC2-48Q	STRING	False
ComponentLink1Description	Manufacturer Link	STRING	False
ComponentLink1URL	<a href="http://www.ftdichip.com/Products/ICs/VNC2.htm">http://www.ftdichip.com/Products/ICs/VNC2.htm</a>	STRING	False
ComponentLink2Description	Datasheet	STRING	False
ComponentLink2URL	<a href="http://www.ftdichip.com/Support/Documents/DataSheets/ICs/DS_Vinculum-II.pdf">http://www.ftdichip.com/Support/Documents/DataSheets/ICs/DS_Vinculum-II.pdf</a>	STRING	False
DatasheetVersion	ver.1.2, October-2010	STRING	False
LatestRevisionNote	IPC-7351 Footprint Added.	STRING	False
PackageVersion	Jan-2011	STRING	False
Publisher	FTDI Ltd.	STRING	False
PackageReference	QFN50P800X800X10-48N	STRING	False
PackageDescription	QFN, 48-Leads, Body 8.0x8.0mm (max), Pitch 0.50mm, IPC Medium Density	STRING	False
Published	21-Jan-2011	STRING	False
Supplier 1	Farnell	STRING	False
Supplier 2	Digi-Key	STRING	False
Supplier 3	Newark	STRING	False
Supplier Part Number 1	1825846	STRING	False
Supplier Part Number 2	768-1048-2-ND	STRING	False
Supplier Part Number 3	91R1767	STRING	False
Comment	VNC2-48Q	STRING	True

## Models



**Model Name**

**QFN50P800X800X10-48N**

**Model Type**

Footprint

**Description**

QFN, 48-Leads, Body 8.0x8.0mm (max), Pitch 0.50mm, IPC Medium Density

**Height**

39.37mil

**Dimension**

385.827mil x 366.142mil

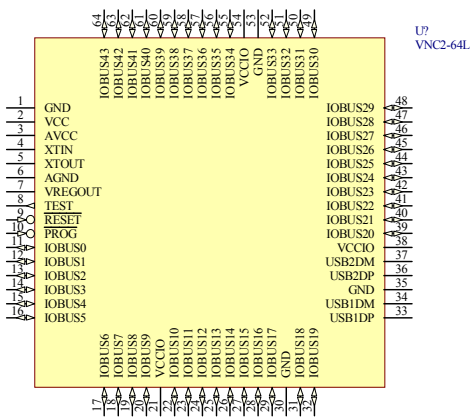
**Number of Pads**

49

**Number of**

70

**Primitives**



## Library Reference

**VNC2-64L**

### Description

Vinculum-II Embedded USB Host Controller IC; 64-pin LQFP

### Kind

Standard

### Aliases

Component has no aliases

### Designator

U?

### Number of Parameters

22

### Number of Pins

64

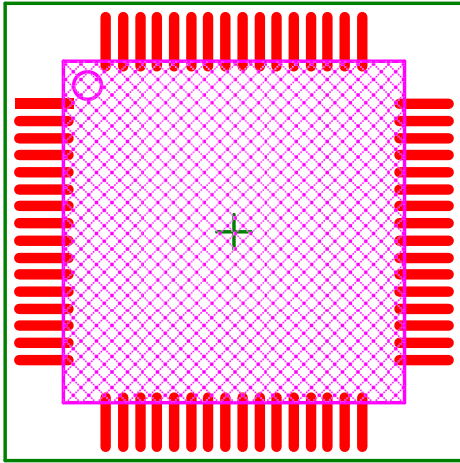
### Number of Models

1

## Parameters

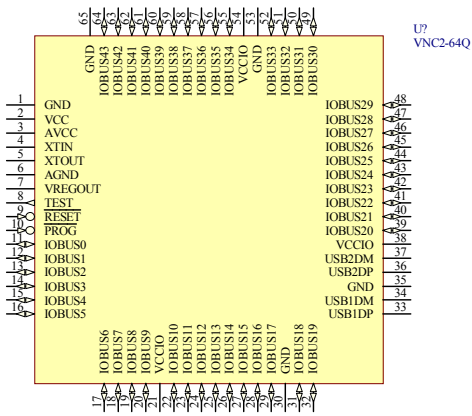
Name	Value	Type	Visible
Manufacturer	Future Technology Devices International Ltd. (FTDI)	STRING	False
Note	*	STRING	False
DigiKeyPartNo	768-1047-1-ND	STRING	False
ManufacturerPartNo	VNC2-64L	STRING	False
ComponentLink1Description	Manufacturer Link	STRING	False
ComponentLink1URL	<a href="http://www.ftdichip.com/Products/ICs/VNC2.htm">http://www.ftdichip.com/Products/ICs/VNC2.htm</a>	STRING	False
ComponentLink2Description	Datasheet	STRING	False
ComponentLink2URL	<a href="http://www.ftdichip.com/Support/Documents/DataSheets/ICs/DS_Vinculum-II.pdf">http://www.ftdichip.com/Support/Documents/DataSheets/ICs/DS_Vinculum-II.pdf</a>	STRING	False
DatasheetVersion	ver.1.2, October-2010	STRING	False
LatestRevisionNote	IPC-7351 Footprint Added.	STRING	False
PackageVersion	Jan-2011	STRING	False
Publisher	FTDI Ltd.	STRING	False
PackageReference	LQFP50P1000X1000X16-64N	STRING	False
PackageDescription	LQFP, 64-Leads, Body 10x10mm (max), Pitch 0.50mm, IPC Medium Density	STRING	False
Published	21-Jan-2011	STRING	False
Supplier 1	Digi-Key	STRING	False
Supplier 2	Newark	STRING	False
Supplier 3	Farnell	STRING	False
Supplier Part Number 1	768-1047-2-ND	STRING	False
Supplier Part Number 2	91R1768	STRING	False
Supplier Part Number 3	1825848	STRING	False
Comment	VNC2-64L	STRING	True

## Models



<b>Model Name</b>	<b>LQFP50P1000X1000X16-64N</b>
<b>Model Type</b>	Footprint
<b>Description</b>	LQFP, 64-Leads, Body 10x10mm (max), Pitch 0.50mm, IPC Medium Density
<b>Height</b>	62.992mil
<b>Dimension</b>	531.496mil x 531.496mil
<b>Number of Pads</b>	64
<b>Number of Primitives</b>	82

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**Library Reference** VNC2-64Q

**Description** Vinculum-II Embedded USB Host Controller IC; 64-pin QFN

**Kind** Standard

**Aliases** Component has no aliases

**Designator** U?

**Number of Parameters** 22

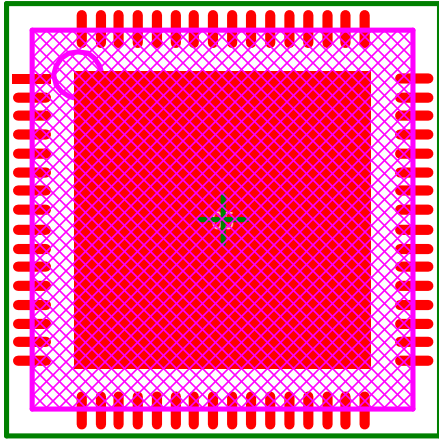
**Number of Pins** 65

**Number of Models** 1

**Parameters**

Name	Value	Type	Visible
Manufacturer	Future Technology Devices International Ltd. (FTDI)	STRING	False
Note	*	STRING	False
DigiKeyPartNo	768-1046-1-ND	STRING	False
ManufacturerPartNo	VNC2-64Q	STRING	False
ComponentLink1Description	Manufacturer Link	STRING	False
ComponentLink1URL	<a href="http://www.ftdichip.com/Products/ICs/VNC2.htm">http://www.ftdichip.com/Products/ICs/VNC2.htm</a>	STRING	False
ComponentLink2Description	Datasheet	STRING	False
ComponentLink2URL	<a href="http://www.ftdichip.com/Support/Documents/DataSheets/ICs/DS_Vinculum-II.pdf">http://www.ftdichip.com/Support/Documents/DataSheets/ICs/DS_Vinculum-II.pdf</a>	STRING	False
DatasheetVersion	ver.1.2, October-2010	STRING	False
LatestRevisionNote	IPC-7351 Footprint Added.	STRING	False
PackageVersion	Jan-2011	STRING	False
Publisher	FTDI Ltd.	STRING	False
PackageReference	QFN40P800X800X10-64N	STRING	False
PackageDescription	QFN, 64-Leads, Body 8x8mm (max), Pitch 0.40mm, IPC Medium Density	STRING	False
Published	21-Jan-2011	STRING	False
Supplier 1	Newark	STRING	False
Supplier 2	Digi-Key	STRING	False
Supplier 3	Farnell	STRING	False
Supplier Part Number 1	91R1769	STRING	False
Supplier Part Number 2	768-1046-2-ND	STRING	False
Supplier Part Number 3	1825849	STRING	False
Comment	VNC2-64Q	STRING	True

## Models



**Model Name**

**QFN40P800X800X10-64N**

**Model Type**

Footprint

**Description**

QFN, 64-Leads, Body 8x8mm (max), Pitch 0.40mm, IPC Medium Density

**Height**

39.37mil

**Dimension**

385.827mil x 366.142mil

**Number of Pads**

65

**Number of**

86

**Primitives**