

LPC1830-Xplorer





About NGX Technologies

NGX Technologies is a premier supplier of development tools for the ARM7, ARM Cortex M0, M3 and M4 series of microcontrollers. NGX provides innovative and cost effective design solutions for embedded systems. We specialize in ARM MCU portfolio, which includes ARM7, Cortex-M0, M3 & M4 microcontrollers. Our experience with developing evaluation platforms for NXP controller enables us to provide solutions with shortened development time thereby ensuring reduced time to market and lower development costs for our customers. Our cost effective and feature rich development tool offering, serves as a testimony for our expertise, cost effectiveness and quality.

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CE certification:

NGX Technologies LPC1830-Xplorer board has been tested for radiated emission as per EN55022 class a standard. The device is under the limits of the standard EN55022 class A and hence CE marked. No other test have been conducted other than the radiated emission (EN55022 class A standard). The device was tested with the ports like USB, Serial, and Power excluding the GPIO ports. Any external connection made to the GPIO ports may alter the EMC behavior. Usage of this device under domestic environment may cause unwanted interference with other electronic equipment's. User is expected to take adequate measures. The device is not intended to be used in and end product or any subsystem unless the user re-evaluates applicable directive/conformance.



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1.0 INTRODUCTION

This document is the 'User Manual' for LPC1830-Xplorer; a cost effective evaluation platform for NXP's LPC18xx MCU. This document reflects its contents which include system setup, debugging, and software components. This document provides detailed information on the overall design and usage of the board from a systems perspective.

Before proceeding further please refer the quick start guide for Xplorer features, Xplorer Unboxing and Xplorer verification.

Before proceeding further please refer the <u>Quick Start Guide</u> for Xplorer features, Xplorer Unboxing and Xplorer verification. Kindly refer to the <u>product page</u> for the latest information.

Note: To restore the Factory Default for 'LPC1830 Xplorer Board' kindly refer to <u>section 4.0</u>



2.0 LPC1830-Xplorer Development Tool Setup

2.1 LPC-link and LPCXpresso

NGX's MCU evaluation platforms are not coupled tightly with any one particular combination of IDE and debugger. The following sections will explain the setup for LPCXpresso and NXP LPCLink as the IDE and debugger respectively.

2.2 Installation & Configuration of LPCXpresso software

For installation and configuration of LPCXpresso Click here.

2.3 Setup for NXP LPCLink and LPC1830 Xplorer Board

The Xplorer board has on board '10-pin SWD/JTAG box', the 10-pin ribbon cable is not a part of the LPC1830 Xplorer package and the user needs to buy 10-pin ribbon cable separately.

To run the LPCXpresso examples you will need the following and the image shown the each component:

- NXP LPC-Link
- 10-pin ribbon cable
- LPC1830 Xplorer Board
- One USB AM to Micro B cable



Fig.1



Steps to setup the LPC-Link and LPC1830 Xplorer Board:

(Note: Please refer <u>keil knowledgebase article</u> for Connecting 10-pin ribbon cable to NGX Xplorer)

Step 1: Connect one end of 10-pin ribbon cable to 'LPCLink 10-pin connector'; the 10-pin ribbon cable header notch should facing towards the 'NXP LPCLink' mark as shown in the following image.



LPCLink Mark





Fig.3

Step 2: Connect other end of 10-pin ribbon cable to '10-pin box header' of the LPC1830 Xplorer board and connect one end of 'USB AM to Micro B' cable to LPC1830 Xplorer board and other end to computer, then connect one end of 'USB type mini B' to LPCLink and other end to computer.



Fig.4

Step 4: The setup is now ready to be used for development with LPCXpresso and NXP LPCLink.



3.0 LPC1830 Xplorer firmware Development

3.1 Executing the sample projects in LPCXpresso

Please note that the sample programs are available to download once the product is registered.

Steps to execute the sample project:

Step 1: Open LPCXpresso; Browse the folder which contains **lpc1830_Xplorer_LPCXpresso.zip** project and click OK.

Workspace Launch	er	X
Select a workspa	Select Workspace Directory	
LPCXpresso stores y Choose a workspace	Select the workspace directory to use.	
Workspace:	Test Ipc1830_Xplorer_LPCXpresso	Browse
🔲 Use this as the def	Iest_Report ThermalPrinter usbbootloader_lpc1768 User Manual	
	Folder: OC1830_Xplorer_LPCXpresso	Cancel

Fig.5

Step 2: Click on 'Import and Export' then click on 'Import archived projects (zip)'.



Fig.6



Step 3: Click on Browse to select an archived project (zip) and click on Open.

Import archived projects	(zip)	
Import archived proje Select a directory to search	cts (zip) for existing Eclipse projects.	
 Select root directory: Select archive file: 		Browse
Select archive containin	g the projects to import Ipc1830_Xplorer_LPCXpr >	Search Ipc1830_Xplorer_LPCXp 🔎
Organize 🔻 New fo	lder	III 🔻 🔟 🔞
☆ Favorites	Name	Date modified Type
Dedter	.metadata	26-06-2012 AM 11 File folder
File	nam v lpc1830_Xplorer_LPCXpresso.zip) *,jar,*,zip;*,tar,*,tar,gz;*,tgz Open Cancel

Fig.7



Fig.8

Step 4: Click Finish.



Step 5: Right click on "LPC1830_Xplorer_Blinky" and left click on 'Build Project'.



Fig.9

Step 6: The default 'Debug Option' will be JTAG (If user needs to debug from JTAG skip the following steps and continue from Step 8), for selecting a SWD debug option, right click on LPC1830_Xplorer_Blinky project, go to 'Lunch Configurations' then select 'Open Current Launch Configurations'.

🔛 Develop - Welcome page - LF	CXpresso		And in case of the second s
File Edit Navigate Search	Project Run Window Help		1
	New Go Into	•	- C R 🗠 🖀 🗅 🐢 .
🎦 Project Ex 🛛 🐰 🖓	Open in New Window		
	Сору	Ctrl+C	file://C:/nxp/LPCXpresso_4.2.3_292/lpcxpresso/pa
▷ 😂 CMSISv2p10_LPC18:	Paste	Ctrl+V	
D B LPC1830_Xplorer_Au X	Delete	Delete	
↓ LPC1830_Xplorer_Bit	Move		
DEPC1830_Xplorer_Etl	Rename	F2	
▷ PC1830_Xplorer_Ex			
LPC1830_Xplorer_Sc	Import		LPCXpresso4 is f
b 😂 LPC1830_Xplorer_Sd 44	Export		
D LPC1830_Xplorer_Ua	Build Project		Welcome to LPCXpresso 4. The generate and download applicat
DESCRIPTION NOT THE DESCRIPTION OF THE DESCRIPTO	Clean Project		Getting Started
EPC1830_Xplorer_Us	Refresh	F5	Diagon road the getting started of
	Close Project		Please read the getting started g
	Close Unrelated Projects		* LPCXpresso Getting Starte
U Ouickstart 🖄 🕪= V	P. III C. C. W.		· The Red State Guide provi
	Build Configurations		LPCAPIesso Resources
Start here	Make Largets	•	Check the LPCXpresso Support
Project and File wizard	Index	•	Visit www.nxp.com/lpcxpi
Import and Export	Convert To		LPCXpresso Forum
import archived projec	Run As	•	The LPCXpresso Forum commun
1 Import exisiting project	Debug As	•	advice on use of the LPCXpress So, get connected and join the L
XML Import project(c) from	Profile As	•	* To view the forum and to re-
import project(s) nom	Team	•	······································
Import files into 'LPC18	Compare With	+	🖹 Problems 🚺 Memory 📜 Red Trace Previe
Export projects to archi	Restore from Local History		ay at this time.
Export projects and refe	Launch Configurations	•	🧆 Open Current Launch Configuration
🚵 Smart Import wizard	Smart update	۱.	Delete Launch Configurations
E Build and Settings	Utilities	•	W Create Launch Configurations
□ [◆] (PC1830_X)	Properties	Alt+Enter	

Fig.10



Step 7: Select 'LPC1830_Xplorer_Blinky Debug' then select Debugger and select 'NXP LPC18xx (SWD) option' and click on Apply.

E Debug Configurations		x
Create, manage, and run configura	tions	Ť.
Image: Second Secon	Name: LPC1830_Xplorer_Blinky Debug Mair Source Common Stop on startup at: main Advantice Debugger Options Target configuration Main Debugger options: NXP LPC1830 (cortex-m3) NXP LPC18xx (SWD) NXP LPC18xx (SWD) NXP LPC18xx (JTAU) Configuration Option ail: Crystal (XTAL) frequency and PLL value Vector catch Enable Red Trace Semihosting support Debug interface	nced
← III Filter matched 6 of 6 items		Apply Revert
?		Debug Close

Fig.11

Step 8: After building project click on Debug.



Fig.12



Step 9: Click Run and select Resume (F8) to start debugging the project. The two LED's (D2 and D3) start blinking on Xplorer.



Fig.13

3.2 Creating the sample (Blinky) project in LPCXpresso

Step 1: Open an LPCXpresso v4.2.3_292 or higher version.



Fig.14



Step 2: Click Browse.. as shown below.

Workspace Launcher	×
Select a workspace LPCXpresso stores your projects in a folder called	a workspace.
Choose a workspace folder to use for this session	1
Workspace:	▼ Browse
🔲 Use this as the default and do not ask again	
	OK Cancel

Fig.15

Step 3: Please select lpc1830_Xplorer_LPCXpresso folder which downloaded from website and click OK as shown in the following image.

Select Workspace Directory
Select the workspace directory to use.
4 🐌 Test 🔄
Ipc1830_Xplorer_LPCXpresso
> 🚹 .metadata
CMSISv2p10_LPC18xx_DriverLib
LPC1830_Xplorer_Audio
LPC1830_Xplorer_Blinky
Description: De
Folder: Ipc1830_Xplorer_LPCXpresso
Make New Folder OK Cancel

Fig.16



Step 4: Click OK.

Workspace	e Launcher
Select a w	vorkspace
LPCXpresso Choose a w	o stores your projects in a folder called a workspace. Porkspace folder to use for this session.
Workspace:	G:\Test\lpc1830_Xplorer_LPCXpresso
Use this a	as the default and do not ask again OK Cancel

Fig.17

Step 5: Click on File -> New -> Project... as shown below image.

ile	Edit Navigate Search	Run Project Window Help	
	New	Alt+Shift+N	Project 💦 🐚 🚵 🧄
	Open File		Other Ctrl+N
	Close	Ctrl+W	1
	Close All	Ctrl+Shift+W	
	Save	Ctrl+S	
ą.,	Save As		
È)	Save All	Ctrl+Shift+S	
	Revert		
	Move		
	Rename	F2	
	Refresh	F5	
1	Print	Ctrl+P	
	Switch Workspace	•	
	Restart		

Fig.18



Step 6: Select 'LPCXpresso C Project' and click Next as shown in the following image.

Kew Project		X
Select a wizard		\$
Wizards:		
type filter text		
 ▷ General ▷ C/C++ ▷ C++ Project ▷ CPCXpresso C Project ○ LPCXpresso C++ Project ○ Makefile Project with Existing Code ▷ CVS 		
? < Back Next > Finish	Canc	el



Step 7: Select NXP LPC1800 projects -> 'C Project' and click Next as shown in the following image

No. of the second secon		×
New LPCXpresso C Project		
NXP LPC1800 projects -> C Project		
·····		
		_
Wizard		_^î
A NXP		
NXP LPC1100 projects		
NXP LPC1102 projects		
NXP LPC11A00 projects		
NXP LPC11E00 projects		Ξ
NXP LPC11U00 projects		
NXP LPC1200 projects		
NXP LPC1300 (12bit ADC) projects		
NXP LPC1300 projects		
NXP LPC1700 projects		
NXP LPC177x/8x projects		
NXP LPC1800 projects		
C Project		
C Static Library Project		
Semihostina C Proiect		*
	Can	cel

Fig.20



Step 8: Give project name (example: Blinky) and click Next.

New LPC	Xpresso C Project	
NXP LPC1	300 projects -> C Project	
Project na	me: Blinky	
🔽 Use de	fault location	
Location:	G:\Test\lpc1830_Xplorer_LPCXpresso\Blinky	Browse
?	< Back Next > Finish	Cancel

Fig.21

Step 9: Select the target MCU is LPC1830 and click Next as shown in the following image.

North Control of Contr	
New LPCXpresso C Project	
Select the target MCU	
NXP I PC1830	
LPC1815	
LPC1817	
LPC1820	
LPC1822	
LPC1823	
LPC1825	E
LPC1827	
LPC1830	
LPC1837	
Ler Closs	
< Back Next > Finish	Cancel

Fig.22



Step 10: Click Next.

New LPCXpresso C Project	
Select options for this project	
Library projects	
Select standard library projects that yo selected library project(s) must already imported from the Examples subdirect	u want your application to link with. Any exist in your workspace - they can be ory of your IDE installation.
CMSIS peripheral header files, initializ	ration code and DSP library
CMSIS Library to link project to:	CMSISv2p10_LPC18xx_DriverLib 👻
CMSIS DSP Library to link project to:	None
Code Read Protect (CRP)	
Enable CRP in the target image	
Code Read Protection selection places	a CRP word into the appropriate
? < Back Next	> Finish Cancel

Fig.23

Step 11: Click Finish.

External n Optionall	emory configuration file	T Browse
Optionall	allows an existing memory configura	tion file to be colocted
allocated part is con Use of ha Floating p	for use with parts with no internal flasi nected. rdware Floating Point Unit oint unit: <mark>Enabled_SoftABI</mark>	h, but where an external flash
Compiler	language dialect	
Compiler C Dialect	language dialect Default	

Fig.24



Step 12: The new blinky project is created, double click on main.c file as shown in the following image.



Fig.25

Step 13: After double click the main.c file will open in LPCXpresso as shown in the following image.



Fig.26



Step 14: Implement the C instructions need to blink a LED on Xplorer and click on Save. (*Note: Please refer Downloaded LPC1830_Xplorer_Blinky example*)

Develop - Blinky/src/main.c - LPCXpresso		•		
File Edit Source Refactor Navigate Search	Run P	roject	Window Help	
🖆 - 🗐 🕒 📓 🖆 🔍 🗸 🌞 🖉 -		C) b) 🖻 🖆	9, 9, 🧀 👑
Project Ex Save All (Ctrl+Shift+S) 🔓 Periphera		🚺 💼 *ma	ain.c 🛿	
	€ } ▽	83	allow th	e linker to
😤 Blinky		84	heap are	a, and init
🗊 Includes		85	toolsets	, the entry
📇 src		86	file, an	d that star
cr_startup_lpc18xx.c		87	int main(vo	id)
c main.c		88	{	
CMSISv2p10_LPC18xx_DriverLib		89	return	c_entry();
😤 LPC1830_Xplorer_Audio	=	90	}	
😤 LPC1830 Xplorer Blinky		91		
😤 LPC1830 Xplorer Ethernet		92	#ifdef DEB	UG
😤 LPC1830 Xplorer ExtInt		93	/********	*********
E LPC1830 Xplorer PeripheralTest		94	* @brief	Report:
i PC1830 Xplorer Sct		95	*	where .
Sector Strand		96	<pre>* @param[in * @param[in</pre>	j file Po
[™] LPC1830 Xplorer LlartInt		97	- @param[in	j line a:
C LDC1920 Valorer HatPolling	-	98	~ greturn	None

Fig.27

Step 15: To add an 'External SPIFI flash' driver right click on 'Blinky Project' and click on properties.

Project Ex Blink > % B > @ Ir	Build Project Clean Project Refresh Close Project Close Unrelated Projects	F5 Pain.c S 1/^ With 2 allo 3 heap 4 tool 5 file	AKT and GRS w the linker area, and in sets, the ent , and that st
⊿ 2005 SI	Build Configurations Make Targets Index	6 int mai 7 { 8 ret 9 } 0	n(void) urn c_entry()
B B CMS CMS CMS CMS CMS CMS CMS CMS CMS CMS	Convert To Run As Debug As Profile As Team Compare With	1 #ifdef 2 /****** 3 * @brie * Console & ninated> Blir	DEBUG f Repo Problems 0 hky Debug [C/C++ N
New prc Import p Ruild all	Restore from Local History Launch Configurations Smart update Utilities	Closed by GE	DB.

Fig.28



Step 16: Select C/C++ Build -> 'MCU settings' and click Edit.. as shown in the following image.

pe filter text	MCU settir	igs		⇒ ⇒ →	
Resource		LP-04530			1
Builders		LPC4350-M0			
C/C++ Build	Target arch	itecture			
Discovery Options	cortex-m4	L.			
Environment Logging	Memory de	etails r:			
MCU settings Settings	Memo	Name	Location	Size	
Tool Chain Editor	RAM	RamLoc128	0x1000	0x20000	
C/C++ General	RAM	RamLoc72	0x1008	0x12000	
Project References	RAM	RamAHB32	0x2000	0x8000	
Run/Debug Settings	RAM	RamAHB16	0x2000	0x4000	
	RAM	RamAHB_E	0x2000	0x4000	
	Edit				
		Restore D	efaults	Apply	

Fig.29

Step 17: Click 'Add Flash', rename 'new_Flash' to SPIFlash, edit Location to 0x14000000 and size to 0x40000 then click Browse.. as shown in the following image.

anda alaissan				- Denne
asn unver				* DIOW
lemory configu	uration			
Туре	Name	Location	Size	^ Up
RAM	RamLoc72	0x10080000	0x12000	
RAM	RamAHB32	0x20000000	0x8000	Do
RAM	RamAHB16	0x20008000	0x4000	=
RAM	RamAHB_ETB16	0x2000c000	0x4000	
Flash	SPIFlash	0x14000000	(0x40000)	
				-

Fig.30



Step 18: Select the 'LPC1850A_4350A_SPIFI.cfx file', the 'LPC1850A_4350A_SPIFI.cfx file' is normally found at LPCXpresso installation folder (here is the path: 'C:\nxp\LPCXpresso_4.2.3_292\lpcxpresso\bin\Flash') click Open.

Flash driver	0000		
)) • Ipcxpres	sso ▶ bin ▶ Flash	Search Flash	,
Organize 👻 New fol	der		
🚖 Favorites –	Name	Date modified	Туре
E	LPC29XXEMC.cfx	30-05-2012 AM 04	CFX File
📃 Desktop	LPC1850A_4350A_SPIFI.cfx	30-05-2012 AM 04	CFX File
🥽 Libraries	SST39VF3201B_Hitex_LPC1850A_4350A.cfx	30-05-2012 AM 04	CFX File
Documents Music Pictures Videos Nagaraj Computer Notwork	SST39VF3201x_Hitex_LPC1850A_4350A.cfx	30-05-2012 AM 04	CFX File
	•		
File	name: LPC1850A_4350A_SPIFI.cfx 🔹 🔹	cfx Open 🕞 Ca	▼ ancel

Fig.31

Step 19: Select Flash and click on Up button until it reach first position, then click OK.

Гуре	Name	Location	Size	Up
lash	SPIFlash	0x14000000	0x40000	
RAM	RamLoc128	0x10000000	0x20000	Dov
RAM	RamLoc72	0x10080000	0x12000	
RAM	RamAHB32	0x20000000	0x8000	
RAM	RamAHB16	0x20008000	0x4000	
RAM	RamAHB_ETB16	0x2000c000	0x4000	
dd Flash (Add RAM Split	[Import]	Export	

Fig.32



Step 20: Click Apply, OK and OK to completing 'SPIFI flash driver'.

Memory Type	Name	Location	Size
Flash	SPIFlash	0x14000000	0x40000
RAM	RamLoc128	0x10000000	0x20000
RAM	RamLoc72	0x10080000	0x12000
RAM	RamAHB32	0x20000000	0x8000
RAM	RamAHB16	0x20008000	0x4000
RAM	RamAHB_ETB16	0x2000c000	0x4000
٠	III	6	
Edit		Restore <u>D</u> efault	s <u>A</u> pply

Fig.33



Fig.34



Step 21: Right click on 'Blinky Project' and click on 'Build Project', build must be error free.



Fig.35

Step 22: After successful build, click on Debug as shown in the following image.

Develop - Blinky/src/main.c - LPCXpresso		Witness (Inc. Inc. Inc.
File Edit Source Refactor Navigate Search Run	Pr	Project Window Help
<u> </u>		li 🕅 🕹 🖆 🛄 🖟 🐿
Project Ex 🛛 👯 Core Regi 🔀 Perif Debug 'Blink	y' [[[Debug] n.c 🛛
	7	83 allow the linker to gener
🔺 😂 Blinky	<u>~</u>	84 heap area, and initialize
Includes		85 toolsets, the entry point
🔺 📇 src		86 file, and that startup co
b C cr_startup_lpc18xx.c		87 int main(void)
b is main.c		88 {
> 😂 CMSISv2p10_LPC18xx_DriverLib		<pre>89 return c_entry();</pre>
b 😂 LPC1830_Xplorer_Audio		90 }
b 😂 LPC1830_Xplorer_Blinky		91
D E LPC1830_Xplorer_Ethernet		92 #1IdeI DEBUG
D E LPC1830_Xplorer_ExtInt		93/** Abriaf Departs the
Description: PeripheralTest		95 * Where the CH
▷ 😂 LPC1830_Xplorer_Sct		96 * @param[in] file Pointer
D 10 LPC1830_Xplorer_Sdcard		97 * @param[in] line assert
▷ 😂 LPC1830_Xplorer_UartInt		98 * Greturn None
⊾ 🕾 LDC1920. Valorer HartDelling	-	99 ***********************

Fig.36



Step 23: Click Resume for free running, the LED D2 and D3 are start blinking on Xplorer.

Develop - Blinky/src/main.c - LPCXpresso		_			Manager, Str. Barriel, Spinst, P. S.
File Edit Source Refactor Navigate Search	Run	Project	Window	Help	_
📑 👻 🔚 🗟 🗟 🔞 🖉 🥖 🏂 🎽	-112	Resume		F8	🖺 🖵 👰 🖆 🙆 🔍 🗸 🖉
🎦 Project Ex 🙁 📲 Core Regi 🔀 Periphera		Suspend		trl±E2	
E	3	Step Into		F5	:++ MCU Application]
▲ Blinky	0	Step Over		F6	(Suspended: Breakpoint hit.)
⊳ 🔊 Includes	_P	Step Retu	rn	F7) main.c:89 0x100002f0
🔺 📇 src	=>]	Run to Lir	ne (Ctrl+R	
b C cr_startup_lpc18xx.c	Ŧ	Use Step I	Filters		and one garagegy, one enory p
b ic main.c	_				linker to generate wrapper (
🔈 🗁 Debug	Q	External T	ools	•	, and initialize and copy cou
📄 Blinky Debug.launch	_	8	5 <u>too</u>	lsets,	the entry point is through
📄 Blinky Release.launch		8	6 fil	e, and	that startup code will setur
CMSISv2p10_LPC18xx_DriverLib		8	7 int ma	in (voi	d)
D E LPC1830_Xplorer_Audio			- 1		
b 😂 LPC1830_Xplorer_Blinky		8	9 re	turn c	_entry();
b 😂 LPC1830_Xplorer_Ethernet					
D 100 LPC1830_Xplorer_ExtInt		9	l Lifedof	DEBU	
► CIDC1920 Valorer DerinheralTect		- 9. 0	2 #110e1	DEDU	
U Quickstart 🛛 😡= Variables 💁 Breakpoin			4 * @bri	ef	Reports the name of the s
Start here	*	<u>▲</u> 9	5 *		where the CHECK_PARAM erm

Fig.37



4.0 Restoring Xplorer to Factory Defaults

4.1 LPCLink and LPCXpresso

Download the binary files from the <u>NGX website</u> and unzip file to restore the factory defaults for the Xplorer; the user needs to flash **LPC1830_Xplorer_PeripheralTest.bin** file in Xplorer and RESET the board.

Steps to restore the factory defaults for Xplorer:

Step 1: Open LPCXpresso and click on 'Program Flash'.



Fig.38

Step 2: Click on Browse.

E	×
Program Flash	
Program target flash: LPC18xx NXP LPC1830 on	and and a second
Options	
Display progress log	Reopen on completion
Reset target on completion	Repeat on completion
Connection Options	
Speed 250	
Use JTAG interface	
Flash Driver	
Flash drive LPC1850A_4350A_SPIFI.cfx	• Browse
Code Read protect	
CRP selection None	▼
Program flash memory Erase flash memory	
Select file	Browse)
Base address	
Erase Options	
O Mass erase	 Erase only required pages
	OK Cancel

Fig.39



Step 3: Unzip the downloaded binary zip file, select the 'Bin files' folder and select *.bin extension.

Select &file	X
G Bin files	Search Bin files
Organize 🔻 New folder	i≡ • □ 0
Mame Appearance a Name	Date modified Type
🔊 Clock, Langu	—
Ease of Acces	No items match your search.
👘 Hardware and	
🕎 Network and 🗔	
Programs	
🍫 System and S	
& User Account	
🗑 Recycle Bin	
冯 all_in_one	
📕 Bin files	
🍶 Desktop 👻 🤞	• III
File name	_ [*
rite name:	
	TX5."

Fig.40

Step 4: Select LPC1830_Xplorer_PeripheralTest.bin file and click Open.

Select &file						
Correction of the second secon	esso_Binaries 🔸 Bin files 🔹 🔸	Search Bin files	٩			
Organize 🔻 New folder						
★ Favorites	Name	Date modified Type	2			
=	LPC1830_Xplorer_Audio.bin	28-05-2012 PM 05: BIN	File			
🧮 Desktop	LPC1830_Xplorer_Blinky.bin	28-05-2012 PM 05: BIN	File			
📜 Libraries	LPC1830_Xplorer_Ethernet.bin	28-05-2012 PM 05: BIN	File			
Documents	LPC1830_Xplorer_ExtInt.bin	28-05-2012 PM 05: BIN	File			
🌙 Music 🧃	LPC1830_Xplorer_PeripheralTest.bin	28-05-2012 PM 05: BIN	File			
Pictures	LPC1830_Xplorer_Sct.bin	28-05-2012 PM 05: BIN	File			
😸 Videos	LPC1830_Xplorer_Sdcard.bin	28-05-2012 PM 05: BIN	File			
🥦 Nagaraj	LPC1830_Xplorer_UartInt.bin	28-05-2012 PM 06: BIN	File			
👰 Computer	LPC1830_Xplorer_UartPolling.bin	28-05-2012 PM 05: BIN	File			
📬 Network						
ABHISHFK-11	< <u> </u>		•			
File name (IPC1830_Xplorer_PeripheralTest.b) *.bin						
Open Cancel						

Fig.41



Step 5: The base address should be 0x14000000 and click OK.

E	×		
Program Flash			
Program target flash: LPC18xx NXP LPC1830 on	6 ALLANDON		
Options			
Display progress log	Reopen on completion		
Reset target on completion	Repeat on completion		
Connection Options			
Speed 250			
🔲 Use JTAG interface			
Flash Driver			
Flash driver LPC1850A_4350A_SPIFI.cfx	▼ Browse		
Code Read protect			
CRP selection None	▼		
Program flash memory Erase flash memory			
Select file F:\Xplorer_release\Final_Release\LPC1830_Xplorer_upload\Binaries Browse			
Base address 0x14000000			
Erase Options			
Mass erase	Erase only required pages		
	OK Cancel		

Fig.42

Step 6: Wait till the download process is completed then RESET Xplorer twice to restore the 'Xplorer factory defaults'.



Fig.43



5.0 Schematic & Board Layout

5.1 Schematic

This manual will be periodically updated, but for the latest documentations please check our <u>website</u> for the latest documents. The Board schematic and sample code are available after the product has been registered on our website.

5.2 Board layout



SILKSCREEN TOP SIDE

Fig.44



Fig. 45



6.0 CHANGE HISTORY

6.1 Change History

Rev	Changes	Date (dd/mm/yy)	Ву
1.0	Initial release of the manual	29/03/2012	Ashwin Athani
1.1	 Added section for Restoring Xplorer to factory defaults in LPCXpresso Added section for setting up LPCXpresso for LPC1830 	10/04/2012	Nagaraj Baddi
1.2	• Creating a sample Blinky Project is added	12/06/2012	Nagaraj Baddi



About this document:

Revision History

Version: V1.1 author: Nagaraj Baddi

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