

Programming and Debug Tools Release Notes v11.8 SP4

Introduction

Microchip's Programming and Debug Tools installer is intended for laboratory and production environments where Libero[®] is not installed. The installer allows you to install the following tools:

- FlashPro and FlashPro Express
- SmartDebug
- Job Manager

Note: The Libero[®] system on chip (SoC) v11.8 SP4, and the Programming and Debug Tools v11.8 SP4 are service pack releases for the Libero SoC v11.8 to support the development of safety-critical applications for the IGLOO[®]2 and SmartFusion[®]2 families.

© 2021 Microchip Technology Inc. Release Note xA-page 1

Table of Contents

1.	Programming and Debug Tools v11.8 SP4 Software Release Notes			
	Introduction			
	1.1.	System Requirements	3	
		1.1.1. Operating System Support	3	
	1.2.	Download Libero SoC v11.8 SP4 Programming and Debug Tools	3	
2.	Revis	sion History	4	
3.	Microchip FPGA Technical Support			
	3.1.	Customer Service	5	
	3.2.	Customer Technical Support	5	
	3.3.	Website	5	
	3.4.	Outside the U.S	5	
The	e Micro	ochip Website	6	
Pro	duct C	Change Notification Service	6	
Cu	stomer	Support	6	
Mic	rochip	Devices Code Protection Feature.	6	
Leç	gal Not	ice	7	
Tra	demar	ks	7	
Qu	ality M	anagement System	8	
۱۸۸	rldwid	a Sales and Service	Q	

1. Programming and Debug Tools v11.8 SP4 Software Release Notes

1.1 System Requirements

For information about operating system support and minimum system requirements, see the System Requirements web page.

For Linux OS setup instructions, see How to Set Up Linux Environment for Libero User Guide.

1.1.1 Operating System Support

Supported

- Windows 7, Windows 8.1, and Windows 10
- RHEL 5 (see note), RHEL 6, RHEL 7, CentOS 5 (see note), CentOS 6, and CentOS 7
- SuSE 11 SP4 (Libero only, FlashPro Express, SmartDebug, and Job Manager are not supported.)

Note: RHEL 5 and CentOS 5 do not support programming using FlashPro5.

Not Supported

- · 32-bit operating systems
- · Windows XP
- · Support for the following operating systems will cease with the next major Libero SoC release:
 - RedHat Enterprise Linux 5.x through 6.5
 - CentOS 5.x through 6.5

1.2 Download Libero SoC v11.8 SP4 Programming and Debug Tools

Click the following links to download Programming and Debug Tools v11.8 SP4 on Windows and Linux operating systems:

- Program & Debug (Linux)
- Program & Debug (Windows)

Note: Installation requires administrator privileges to the system.

2. Revision History

Revision	Date	Description
Α	04/2021	Initial Revision

3. Microchip FPGA Technical Support

Microchip FPGA Products Group backs its products with various support services, including Customer Service, Customer Technical Support Center, a website, and worldwide sales offices. This section provides information about contacting Microchip FPGA Products Group and using these support services.

3.1 Customer Service

Contact Customer Service for non-technical product support, such as product pricing, product upgrades, update information, order status, and authorization.

- From North America, call 800.262.1060
- From the rest of the world, call 650.318.4460
- Fax, from anywhere in the world, 650.318.8044

3.2 Customer Technical Support

Microchip FPGA Products Group staffs its Customer Technical Support Center with highly skilled engineers who can help answer your hardware, software, and design questions about Microchip FPGA Products. The Customer Technical Support Center spends a great deal of time creating application notes, answers to common design cycle questions, documentation of known issues, and various FAQs. So, before you contact us, please visit our online resources. It is very likely we have already answered your questions.

You can communicate your technical questions through our Web portal and receive answers back by email, fax, or phone. Also, if you have design problems, you can upload your design files to receive assistance. We constantly monitor the cases created from the web portal throughout the day. When sending your request to us, please be sure to include your full name, company name, and your contact information for efficient processing of your request.

Technical support can be reached at soc.microsemi.com/Portal/Default.aspx.

For technical support on RH and RT FPGAs that are regulated by International Traffic in Arms Regulations (ITAR), log in at soc.microsemi.com/Portal/Default.aspx, go to the **My Cases** tab, and select **Yes** in the ITAR drop-down list when creating a new case. For a complete list of ITAR-regulated Microchip FPGAs, visit the ITAR web page.

You can track technical cases online by going to My Cases.

3.3 Website

You can browse a variety of technical and non-technical information on the Microchip FPGA Products Group home page, at www.microsemi.com/soc.

3.4 Outside the U.S.

Customers needing assistance outside the US time zones can either contact technical support at (https://soc.microsemi.com/Portal/Default.aspx) or contact a local sales office.

Visit About Us for sales office listings and corporate contacts.

© 2021 Microchip Technology Inc. Release Note xA-page 5

The Microchip Website

Microchip provides online support via our website at www.microchip.com/. This website is used to make files and information easily available to customers. Some of the content available includes:

- **Product Support** Data sheets and errata, application notes and sample programs, design resources, user's guides and hardware support documents, latest software releases and archived software
- General Technical Support Frequently Asked Questions (FAQs), technical support requests, online discussion groups, Microchip design partner program member listing
- Business of Microchip Product selector and ordering guides, latest Microchip press releases, listing of seminars and events, listings of Microchip sales offices, distributors and factory representatives

Product Change Notification Service

Microchip's product change notification service helps keep customers current on Microchip products. Subscribers will receive email notification whenever there are changes, updates, revisions or errata related to a specified product family or development tool of interest.

To register, go to www.microchip.com/pcn and follow the registration instructions.

Customer Support

Users of Microchip products can receive assistance through several channels:

- · Distributor or Representative
- · Local Sales Office
- Embedded Solutions Engineer (ESE)
- Technical Support

Customers should contact their distributor, representative or ESE for support. Local sales offices are also available to help customers. A listing of sales offices and locations is included in this document.

Technical support is available through the website at: www.microchip.com/support

Microchip Devices Code Protection Feature

Note the following details of the code protection feature on Microchip devices:

- · Microchip products meet the specifications contained in their particular Microchip Data Sheet.
- Microchip believes that its family of products is secure when used in the intended manner and under normal conditions.
- There are dishonest and possibly illegal methods being used in attempts to breach the code protection features
 of the Microchip devices. We believe that these methods require using the Microchip products in a manner
 outside the operating specifications contained in Microchip's Data Sheets. Attempts to breach these code
 protection features, most likely, cannot be accomplished without violating Microchip's intellectual property rights.
- · Microchip is willing to work with any customer who is concerned about the integrity of its code.
- Neither Microchip nor any other semiconductor manufacturer can guarantee the security of its code. Code
 protection does not mean that we are guaranteeing the product is "unbreakable." Code protection is constantly
 evolving. We at Microchip are committed to continuously improving the code protection features of our products.
 Attempts to break Microchip's code protection feature may be a violation of the Digital Millennium Copyright Act.
 If such acts allow unauthorized access to your software or other copyrighted work, you may have a right to sue
 for relief under that Act.

Legal Notice

Information contained in this publication is provided for the sole purpose of designing with and using Microchip products. Information regarding device applications and the like is provided only for your convenience and may be superseded by updates. It is your responsibility to ensure that your application meets with your specifications.

THIS INFORMATION IS PROVIDED BY MICROCHIP "AS IS". MICROCHIP MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND WHETHER EXPRESS OR IMPLIED, WRITTEN OR ORAL, STATUTORY OR OTHERWISE, RELATED TO THE INFORMATION INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE OR WARRANTIES RELATED TO ITS CONDITION, QUALITY, OR PERFORMANCE.

IN NO EVENT WILL MICROCHIP BE LIABLE FOR ANY INDIRECT, SPECIAL, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL LOSS, DAMAGE, COST OR EXPENSE OF ANY KIND WHATSOEVER RELATED TO THE INFORMATION OR ITS USE, HOWEVER CAUSED, EVEN IF MICROCHIP HAS BEEN ADVISED OF THE POSSIBILITY OR THE DAMAGES ARE FORESEEABLE. TO THE FULLEST EXTENT ALLOWED BY LAW, MICROCHIP'S TOTAL LIABILITY ON ALL CLAIMS IN ANY WAY RELATED TO THE INFORMATION OR ITS USE WILL NOT EXCEED THE AMOUNT OF FEES, IF ANY, THAT YOU HAVE PAID DIRECTLY TO MICROCHIP FOR THE INFORMATION. Use of Microchip devices in life support and/or safety applications is entirely at the buyer's risk, and the buyer agrees to defend, indemnify and hold harmless Microchip from any and all damages, claims, suits, or expenses resulting from such use. No licenses are conveyed, implicitly or otherwise, under any Microchip intellectual property rights unless otherwise stated.

Trademarks

The Microchip name and logo, the Microchip logo, Adaptec, AnyRate, AVR, AVR logo, AVR Freaks, BesTime, BitCloud, chipKIT, chipKIT logo, CryptoMemory, CryptoRF, dsPIC, FlashFlex, flexPWR, HELDO, IGLOO, JukeBlox, KeeLoq, Kleer, LANCheck, LinkMD, maXStylus, maXTouch, MediaLB, megaAVR, Microsemi, Microsemi logo, MOST, MOST logo, MPLAB, OptoLyzer, PackeTime, PIC, picoPower, PICSTART, PIC32 logo, PolarFire, Prochip Designer, QTouch, SAM-BA, SenGenuity, SpyNIC, SST, SST Logo, SuperFlash, Symmetricom, SyncServer, Tachyon, TimeSource, tinyAVR, UNI/O, Vectron, and XMEGA are registered trademarks of Microchip Technology Incorporated in the U.S.A. and other countries.

AgileSwitch, APT, ClockWorks, The Embedded Control Solutions Company, EtherSynch, FlashTec, Hyper Speed Control, HyperLight Load, IntelliMOS, Libero, motorBench, mTouch, Powermite 3, Precision Edge, ProASIC, ProASIC Plus, ProASIC Plus logo, Quiet-Wire, SmartFusion, SyncWorld, Temux, TimeCesium, TimeHub, TimePictra, TimeProvider, WinPath, and ZL are registered trademarks of Microchip Technology Incorporated in the U.S.A.

Adjacent Key Suppression, AKS, Analog-for-the-Digital Age, Any Capacitor, AnyIn, AnyOut, Augmented Switching, BlueSky, BodyCom, CodeGuard, CryptoAuthentication, CryptoAutomotive, CryptoCompanion, CryptoController, dsPICDEM, dsPICDEM.net, Dynamic Average Matching, DAM, ECAN, Espresso T1S, EtherGREEN, IdealBridge, In-Circuit Serial Programming, ICSP, INICnet, Intelligent Paralleling, Inter-Chip Connectivity, JitterBlocker, maxCrypto, maxView, memBrain, Mindi, MiWi, MPASM, MPF, MPLAB Certified logo, MPLIB, MPLINK, MultiTRAK, NetDetach, Omniscient Code Generation, PICDEM, PICDEM.net, PICkit, PICtail, PowerSmart, PureSilicon, QMatrix, REAL ICE, Ripple Blocker, RTAX, RTG4, SAM-ICE, Serial Quad I/O, simpleMAP, SimpliPHY, SmartBuffer, SMART-I.S., storClad, SQI, SuperSwitcher, SuperSwitcher II, Switchtec, SynchroPHY, Total Endurance, TSHARC, USBCheck, VariSense, VectorBlox, VeriPHY, ViewSpan, WiperLock, XpressConnect, and ZENA are trademarks of Microchip Technology Incorporated in the U.S.A. and other countries.

SQTP is a service mark of Microchip Technology Incorporated in the U.S.A.

The Adaptec logo, Frequency on Demand, Silicon Storage Technology, and Symmcom are registered trademarks of Microchip Technology Inc. in other countries.

GestIC is a registered trademark of Microchip Technology Germany II GmbH & Co. KG, a subsidiary of Microchip Technology Inc., in other countries.

All other trademarks mentioned herein are property of their respective companies.

© 2021, Microchip Technology Incorporated, Printed in the U.S.A., All Rights Reserved.

ISBN:

or information regarding Mic	ormation regarding Microchip's Quality Management Systems, please visit www.microchip.com/quality				



Worldwide Sales and Service

AMERICAS ASIAPACIFIC ASIAPACIFIC EUROPE 2555 West Chandler Blud Tel: 61-9868-6733 Tel: 61-9809-0000-4444 Tel: 42-9888-6733 Tel: 61-980-9000-4444 Tel: 42-772-2244-39 Tel: 61-9868-6733 Tel: 61-980-9000-4444 Tel: 42-7722-2244-39 Tel: 61-980-9000-4444 Tel: 42-7722-2244-39 Tel: 61-980-9000-4444 Tel: 42-7722-2244-39 Tel: 61-980-9000-4444 Tel: 42-7722-2244-39 Tel: 61-980-9000-9000 Tel: 61-980-9000-9000 Tel: 61-980-9000-9000 Tel: 41-480-5910 Tel: 42-480-5910 Tel: 41-480-5910 Tel: 44-480-5910 Tel: 41-980-900-9000 Tel: 41-980-900-900 Tel: 41-980-900-900 <td< th=""><th></th><th></th><th></th><th></th></td<>				
Tel: 61-2-898-6733	AMERICAS	ASIA/PACIFIC	ASIA/PACIFIC	EUROPE
Chandler, AZ 85224-6199 Tell: 480-792-7277 Tell: 481-10-8589-7000 Tell: 480-792-7277 Tell: 481-10-8589-7000 Tell: 481-68182	Corporate Office	Australia - Sydney	India - Bangalore	Austria - Wels
Tel: 48-07-32-7200	2355 West Chandler Blvd.	Tel: 61-2-9868-6733	Tel: 91-80-3090-4444	Tel: 43-7242-2244-39
Fax: 480-792-7277	Chandler, AZ 85224-6199	China - Beijing	India - New Delhi	Fax: 43-7242-2244-393
Technical Support	Tel: 480-792-7200	Tel: 86-10-8569-7000	Tel: 91-11-4160-8631	Denmark - Copenhagen
New microchip.com/ Support	Fax: 480-792-7277	China - Chengdu	India - Pune	Tel: 45-4485-5910
Veb Address:	Technical Support:	Tel: 86-28-8665-5511	Tel: 91-20-4121-0141	Fax: 45-4485-2829
Atlanta	www.microchip.com/support	China - Chongqing	Japan - Osaka	Finland - Espoo
Atlanta	Web Address:	Tel: 86-23-8980-9588	Tel: 81-6-6152-7160	Tel: 358-9-4520-820
Duluth, GA	www.microchip.com	China - Dongguan	Japan - Tokyo	France - Paris
Tel: 68-95-9614 Tel: 86-20-8756-9029 Tel: 82-35-744-4301 Tel: 49-951-9700 Tel: 49-951-1700 Tel: 49-951-1700 Tel: 49-951-1700 Tel: 49-951-1700 Tel: 49-931-9700 Tel: 49-931-9700 Tel: 49-212-376400 Tel: 49-212-376400 Tel: 50-3-7651-7906 Tel: 50-3-7651-7906 Tel: 50-3-7651-7906 Tel: 50-3-7651-7906 Tel: 50-3-7651-7906 Tel: 49-7131-72400 Tel: 49-7131-72	Atlanta	Tel: 86-769-8702-9880	Tel: 81-3-6880- 3770	Tel: 33-1-69-53-63-20
Fax: 678-957-1455	Duluth, GA	China - Guangzhou	Korea - Daegu	Fax: 33-1-69-30-90-79
Austin, TX	Tel: 678-957-9614	Tel: 86-20-8755-8029	Tel: 82-53-744-4301	Germany - Garching
Tel: 512-257-3370	Fax: 678-957-1455	China - Hangzhou	Korea - Seoul	Tel: 49-8931-9700
Boston	Austin, TX	Tel: 86-571-8792-8115	Tel: 82-2-554-7200	Germany - Haan
Westborough, MA	Tel: 512-257-3370	China - Hong Kong SAR	Malaysia - Kuala Lumpur	Tel: 49-2129-3766400
Tel: 774-760-0087	Boston	Tel: 852-2943-5100	Tel: 60-3-7651-7906	Germany - Heilbronn
Tel: 774-760-0087	Westborough, MA	China - Nanjing	Malaysia - Penang	Tel: 49-7131-72400
Tel: 68-532-8502-7355 Tel: 63-2-634-9065 Germany - Munich Itasca, II.	=	Tel: 86-25-8473-2460	Tel: 60-4-227-8870	Germany - Karlsruhe
Itasca, IL	Fax: 774-760-0088	China - Qingdao	Philippines - Manila	Tel: 49-721-625370
Itasca, IL	Chicago	Tel: 86-532-8502-7355	Tel: 63-2-634-9065	Germany - Munich
Fax: 630-285-0075	<u>-</u>	China - Shanghai	Singapore	
Tel: 86-24-2334-2829 Tel: 886-3-577-8366 Tel: 49-8031-354-560 Addison, TX China - Shenzhen Taiwan - Kaohsiung Israel - Ra'anana Tel: 972-818-7423 Tel: 86-755-8864-2200 Tel: 86-7-213-7830 Tel: 972-9-744-7705 Italy - Milan	Tel: 630-285-0071	Tel: 86-21-3326-8000		Fax: 49-89-627-144-44
Tel: 86-24-2334-2829 Tel: 86-3-577-8366 Tel: 49-8031-354-560 Addison, TX China - Shenzhen Taiwan - Kaohsiung Israel - Ra'anana Tel: 972-818-7423 Tel: 86-755-8864-2200 Tel: 86-7-213-7830 Tel: 972-9-744-7705 Taiwan - Taipei Taiwan - Taipei Tel: 98-0331-742611 Tel: 286-886-823-1526 Tel: 86-22-508-8600 Tel: 39-0331-742611 Tel: 248-848-4400 Tel: 86-27-5980-5300 Tel: 36-27-5980-5300 Tel: 39-0331-742611 Tel: 248-848-4400 Tel: 86-27-5980-5300 Tel: 36-29-8833-7252 Tel: 281-894-5983 Tel: 86-29-8833-7252 Tel: 86-29-8833-7252 Tel: 86-29-8833-7252 Tel: 84-28-5448-2100 Netherlands - Drunen Tel: 31-416-690399 Tel: 317-773-8323 China - Zhuhai Tel: 86-592-2388138 Tel: 317-773-5453 Tel: 86-756-3210040 Tel: 86-756-3210040 Tel: 34-72-284388 Poland - Warsaw Tel: 48-22-3325737 Romania - Bucharest Tel: 40-21-407-87-50 Spain - Madrid Tel: 34-91-708-08-91 Tel: 34-91-708-08-91 Tel: 34-91-708-08-91 Tel: 34-91-708-08-91 Tel: 46-8-5090-4654 UK - Wokingham Tel: 40-8735-9110 Tel: 40-8735-9110 Tel: 40-8735-9180 Tel:	Fax: 630-285-0075	China - Shenyang	Taiwan - Hsin Chu	Germany - Rosenheim
Tel: 972-818-7423 Tel: 86-755-8864-2200 Tel: 86-86-2508-8600 Tel: 39-0331-742611 Tel: 87-2580-5300 Tel: 86-2598-31-755 Tel: 86-25-7580-5300 Tel: 86-25-94-1351 Tel: 87-25860 Tel: 88-89-5983 Tel: 86-29-8833-7252 Tel: 86-29-8833-7252 Tel: 88-28-5448-2100 Tel: 88-28-5448-2100 Netherlands - Drunen Indianapolis Noblesville, IN Tel: 86-592-2388138 Tel: 86-756-3210040 Tel: 86-756-3210040 Tel: 86-756-3210040 Tel: 86-756-3210040 Tel: 86-756-3210040 Tel: 88-756-3210040 Tel: 88-756-3210040 Tel: 88-756-3210040 Tel: 88-756-3210040 Tel: 88-756-3210040 Tel: 88-756-3210040 Tel: 98-756-3253 Tel: 48-22-3325737 Romania - Bucharest Tel: 48-22-3325737 Romania - Bucharest Tel: 48-21-407-87-50 Spain - Madrid Tel: 34-91-708-08-90 Fax: 34-91-708-08-91 Tel: 68-31-704-60-40 Tel: 631-35-6000 San Jose, CA Tel: 408-735-9110 Tel: 408-735-9110 Tel: 408-735-9110 Tel: 905-695-1980	Dallas		Tel: 886-3-577-8366	
Tel: 972-818-7423 Fax: 972-818-7423 Fax: 972-818-2924 China - Suzhou Tel: 86-86-32-1526 China - Suzhou Tel: 86-86-62-508-8600 Tel: 39-0331-742611 Tel: 248-848-4000 Tel: 36-27-5980-5300 Tel: 66-2-694-1351 Tel: 66-2-694-1351 Tel: 39-049-7625286 Tel: 39-049-7625286 Tel: 39-049-7625286 Tel: 86-29-8833-7252 Tel: 84-28-5448-2100 Netherlands - Drunen Indianapolis China - Xiamen Tel: 317-773-8323 China - Zhuhai Tel: 317-773-8323 Tel: 86-592-2388138 Tel: 317-773-8523 Tel: 86-756-3210040 Tel: 86-756-3210040 Tel: 98-402-9628 Tel: 49-402-9608 Tel: 99-844-7510 New York, NY Tel: 63-1-708-08-90 Fax: 34-91-708-08-91 Tel: 63-35-9110 Tel: 408-735-9110 Tel: 408-735-9110 Tel: 408-735-9110 Tel: 995-695-1980	Addison, TX	China - Shenzhen	Taiwan - Kaohsiung	Israel - Ra'anana
Detroit Tel: 86-186-6233-1526 Tel: 886-2-2508-8600 Tel: 39-0331-742611 Novi, MI China - Wuhan Thailand - Bangkok Fax: 39-0331-466781 Tel: 248-848-84000 Tel: 86-27-5980-5300 Tel: 66-2-694-1351 Italy - Padova Tel: 39-049-7625286 Tel: 86-29-8833-7252 Tel: 86-29-8833-7252 Tel: 86-29-8833-7252 Tel: 84-28-5448-2100 Netherlands - Drunen Tel: 31-416-690399 Fax: 31-416-690340 Tel: 31-773-5453 Tel: 86-592-2388138 Tel: 317-773-5453 Tel: 86-756-3210040 Tel: 317-536-2380 Tel: 95-756-3210040 Tel: 95-273-7800 Tel: 95-273-7800 Tel: 95-273-7800 Tel: 99-844-7510 Tel: 408-735-9110 Tel: 408-735-9110 Tel: 408-735-9110 Tel: 408-735-9110 Tel: 408-735-9180 Tel: 905-695-1980 Tel: 905-695-1980 Tel: 905-695-1980 Tel: 905-695-1980 Tel: 905-695-1980 Tel: 905-895-1980 Tel: 905-893-1980 Tel: 905-893-1980 Tel: 905-893-1980 Tel: 905-893-1980	Tel: 972-818-7423	Tel: 86-755-8864-2200		Tel: 972-9-744-7705
Detroit Tel: 86-186-6233-1526	Fax: 972-818-2924	China - Suzhou	Taiwan - Taipei	Italy - Milan
Tel: 248-848-4000 Houston, TX China - Xian Tel: 281-894-5983 Tel: 86-27-5980-5300 China - Xian Tel: 281-894-5983 Tel: 86-29-8833-7252 Indianapolis China - Xiamen Noblesville, IN Tel: 38-629-8833-7252 Tel: 86-592-2388138 Tel: 86-592-2388138 Tel: 86-592-2388138 Tel: 86-592-2388138 Tel: 86-756-3210040 Tel: 317-773-8453 Tel: 86-756-3210040 Tel: 317-73-8453 Tel: 86-756-3210040 Tel: 317-73-8453 Tel: 86-756-3210040 Tel: 317-73-8453 Tel: 86-756-3210040 Tel: 317-73-8453 Tel: 86-756-3210040 Tel: 317-73-8023 Tel: 48-22-3325737 Romania - Bucharest Tel: 48-22-3325737 Romania - Bucharest Tel: 48-21-407-87-50 Spain - Madrid Tel: 34-91-708-08-90 Fax: 34-91-708-08-91 Sweden - Gothenberg Tel: 46-31-704-60-40 Sweden - Stockholm Tel: 46-8-5090-4654 UK - Wokingham Tel: 44-118-921-5800 Fax: 44-118-921-5800 Fax: 44-118-921-5800 Fax: 44-118-921-5820	Detroit	Tel: 86-186-6233-1526	Tel: 886-2-2508-8600	Tel: 39-0331-742611
Houston, TX	Novi, MI	China - Wuhan		Fax: 39-0331-466781
Houston, TX	Tel: 248-848-4000	Tel: 86-27-5980-5300	Tel: 66-2-694-1351	Italy - Padova
Indianapolis	Houston, TX	China - Xian	Vietnam - Ho Chi Minh	Tel: 39-049-7625286
Noblesville, IN Tel: 86-592-2388138 China - Zhuhai Tel: 317-773-8323 Tel: 317-773-5453 Tel: 86-756-3210040 Tel: 47-72884388 Tel: 47-72884388 Poland - Warsaw Tel: 48-22-3325737 Romania - Bucharest Tel: 40-21-407-87-50 Spain - Madrid Tel: 34-91-708-08-90 Raleigh, NC Tel: 919-844-7510 Norway - Trondheim Tel: 48-22-3325737 Romania - Bucharest Tel: 40-21-407-87-50 Spain - Madrid Tel: 34-91-708-08-90 Fax: 34-91-708-08-91 Tel: 919-844-7510 New York, NY Tel: 631-435-6000 San Jose, CA Tel: 408-735-9110 Tel: 408-436-4270 Canada - Toronto Tel: 905-695-1980	Tel: 281-894-5983	Tel: 86-29-8833-7252	Tel: 84-28-5448-2100	Netherlands - Drunen
Tel: 317-773-8323 Fax: 317-773-5453 Tel: 317-536-2380 Los Angeles Mission Viejo, CA Tel: 949-462-9523 Fax: 949-462-9608 Tel: 951-273-7800 Raleigh, NC Tel: 919-844-7510 New York, NY Tel: 631-435-6000 San Jose, CA Tel: 408-436-4270 Canada - Toronto Tel: 905-695-1980 China - Zhuhai Tel: 47-7284388 Poland - Warsaw Tel: 47-7284388 Poland - Warsaw Tel: 47-7284388 Poland - Warsaw Tel: 48-22-3325737 Romania - Bucharest Tel: 40-21-407-87-50 Spain - Madrid Tel: 34-91-708-08-90 Fax: 34-91-708-08-91 Sweden - Gothenberg Tel: 46-31-704-60-40 Sweden - Stockholm Tel: 408-436-4270 Fax: 44-118-921-5820	Indianapolis	China - Xiamen		Tel: 31-416-690399
Fax: 317-773-5453 Tel: 86-756-3210040 Tel: 47-72884388 Poland - Warsaw Tel: 48-22-3325737 Romania - Bucharest Tel: 40-21-407-87-50 Spain - Madrid Tel: 951-273-7800 Raleigh, NC Tel: 919-844-7510 New York, NY Tel: 631-435-6000 San Jose, CA Tel: 40-8-735-9110 Tel: 408-735-9110 Tel: 408-436-4270 Canada - Toronto Tel: 905-695-1980 Tel: 86-756-3210040 Tel: 47-72884388 Poland - Warsaw Tel: 48-22-3325737 Romania - Bucharest Tel: 40-21-407-87-50 Spain - Madrid Tel: 40-21-407-87-50 Spain - Madrid Tel: 34-91-708-08-90 Fax: 34-91-708-08-91 Sweden - Gothenberg Tel: 46-31-704-60-40 Sweden - Stockholm Tel: 408-436-4270 Fax: 44-118-921-5800 Fax: 44-118-921-5820	Noblesville, IN	Tel: 86-592-2388138		Fax: 31-416-690340
Fax: 317-773-5453 Tel: 86-756-3210040 Tel: 47-72884388 Tel: 317-536-2380 Poland - Warsaw Los Angeles Tel: 48-22-3325737 Mission Viejo, CA Romania - Bucharest Tel: 949-462-9523 Tel: 40-21-407-87-50 Fax: 949-462-9608 Spain - Madrid Tel: 951-273-7800 Tel: 34-91-708-08-90 Raleigh, NC Fax: 34-91-708-08-91 Tel: 919-844-7510 Sweden - Gothenberg New York, NY Tel: 46-31-704-60-40 Tel: 631-435-6000 Sweden - Stockholm Tel: 408-735-9110 Tel: 408-735-9110 Tel: 408-436-4270 UK - Wokingham Tel: 44-118-921-5800 Fax: 44-118-921-5820		China - Zhuhai		Norway - Trondheim
Los Angeles Tel: 48-22-3325737 Mission Viejo, CA Romania - Bucharest Tel: 949-462-9523 Tel: 40-21-407-87-50 Fax: 949-462-9608 Spain - Madrid Tel: 951-273-7800 Tel: 34-91-708-08-90 Raleigh, NC Fax: 34-91-708-08-91 Tel: 919-844-7510 Sweden - Gothenberg New York, NY Tel: 46-31-704-60-40 Tel: 631-435-6000 Sweden - Stockholm San Jose, CA Tel: 408-735-9110 Tel: 408-436-4270 UK - Wokingham Tel: 408-436-4270 Fax: 44-118-921-5800 Canada - Toronto Fax: 44-118-921-5820	Fax: 317-773-5453	Tel: 86-756-3210040		_
Mission Viejo, CA Tel: 949-462-9523 Fax: 949-462-9608 Tel: 951-273-7800 Raleigh, NC Tel: 919-844-7510 New York, NY Tel: 631-435-6000 San Jose, CA Tel: 408-735-9110 Tel: 408-436-4270 Canada - Toronto Tel: 905-695-1980 Romania - Bucharest Tel: 40-21-407-87-50 Spain - Madrid Tel: 40-21-407-87-50 Spain - Madrid Tel: 34-91-708-08-90 Tel: 34-91-708-08-91 Tel: 34-91-708-08-91 Sweden - Gothenberg Tel: 46-31-704-60-40 Sweden - Stockholm Tel: 46-8-5090-4654 UK - Wokingham Tel: 408-436-4270 Fax: 44-118-921-5800 Fax: 44-118-921-5820	Tel: 317-536-2380			Poland - Warsaw
Tel: 949-462-9523 Fax: 949-462-9608 Tel: 951-273-7800 Raleigh, NC Tel: 919-844-7510 New York, NY Tel: 631-435-6000 San Jose, CA Tel: 408-735-9110 Tel: 408-436-4270 Canada - Toronto Tel: 949-462-9628 Tel: 40-21-407-87-50 Spain - Madrid Tel: 34-91-708-08-90 Fax: 34-91-708-08-91 Sweden - Gothenberg Tel: 46-31-704-60-40 Sweden - Stockholm Tel: 46-8-5090-4654 UK - Wokingham Tel: 408-436-4270 Fax: 44-118-921-5820	Los Angeles			Tel: 48-22-3325737
Tel: 949-462-9523 Fax: 949-462-9608 Tel: 951-273-7800 Raleigh, NC Tel: 919-844-7510 New York, NY Tel: 631-435-6000 San Jose, CA Tel: 408-735-9110 Tel: 408-436-4270 Canada - Toronto Tel: 949-462-9628 Tel: 40-21-407-87-50 Spain - Madrid Tel: 34-91-708-08-90 Fax: 34-91-708-08-91 Sweden - Gothenberg Tel: 46-31-704-60-40 Sweden - Stockholm Tel: 46-8-5090-4654 UK - Wokingham Tel: 408-436-4270 Fax: 44-118-921-5820	Mission Viejo, CA			Romania - Bucharest
Tel: 951-273-7800 Raleigh, NC Tel: 919-844-7510 New York, NY Tel: 631-435-6000 San Jose, CA Tel: 408-735-9110 Tel: 408-436-4270 Canada - Toronto Tel: 905-695-1980 Tel: 34-91-708-08-90 Fax: 34-91-708-08-91 Sweden - Gothenberg Tel: 46-31-704-60-40 Sweden - Stockholm Tel: 46-8-5090-4654 UK - Wokingham Tel: 44-118-921-5800 Fax: 44-118-921-5820	<u>-</u>			Tel: 40-21-407-87-50
Tel: 951-273-7800 Raleigh, NC Tel: 919-844-7510 New York, NY Tel: 631-435-6000 San Jose, CA Tel: 408-735-9110 Tel: 408-436-4270 Canada - Toronto Tel: 905-695-1980 Tel: 34-91-708-08-90 Fax: 34-91-708-08-91 Sweden - Gothenberg Tel: 46-31-704-60-40 Sweden - Stockholm Tel: 46-8-5090-4654 UK - Wokingham Tel: 44-118-921-5800 Fax: 44-118-921-5820	Fax: 949-462-9608			Spain - Madrid
Raleigh, NC Fax: 34-91-708-08-91 Tel: 919-844-7510 Sweden - Gothenberg New York, NY Tel: 46-31-704-60-40 Tel: 631-435-6000 Sweden - Stockholm San Jose, CA Tel: 46-8-5090-4654 UK - Wokingham UK - Wokingham Tel: 408-436-4270 Tel: 44-118-921-5800 Canada - Toronto Fax: 44-118-921-5820	Tel: 951-273-7800			·
Tel: 919-844-7510 New York, NY Tel: 631-435-6000 San Jose, CA Tel: 408-735-9110 Tel: 408-436-4270 Canada - Toronto Tel: 905-695-1980 Sweden - Gothenberg Tel: 46-31-704-60-40 Sweden - Stockholm Tel: 46-8-5090-4654 UK - Wokingham Tel: 44-118-921-5800 Fax: 44-118-921-5820				
New York, NY Tel: 46-31-704-60-40 Tel: 631-435-6000 Sweden - Stockholm San Jose, CA Tel: 46-8-5090-4654 Tel: 408-735-9110 UK - Wokingham Tel: 408-436-4270 Tel: 44-118-921-5800 Canada - Toronto Fax: 44-118-921-5820 Tel: 905-695-1980 Fax: 44-118-921-5820	Tel: 919-844-7510			Sweden - Gothenberg
Tel: 631-435-6000 San Jose, CA Tel: 408-735-9110 Tel: 408-436-4270 Canada - Toronto Tel: 905-695-1980 Sweden - Stockholm Tel: 46-8-5090-4654 UK - Wokingham Tel: 44-118-921-5800 Fax: 44-118-921-5820				_
San Jose, CA Tel: 46-8-5090-4654 Tel: 408-735-9110 UK - Wokingham Tel: 408-436-4270 Tel: 44-118-921-5800 Canada - Toronto Fax: 44-118-921-5820 Tel: 905-695-1980 Fax: 44-118-921-5820	•			
Tel: 408-735-9110 Tel: 408-436-4270 Canada - Toronto Tel: 905-695-1980 UK - Wokingham Tel: 44-118-921-5800 Fax: 44-118-921-5820				
Tel: 408-436-4270 Tel: 44-118-921-5800 Canada - Toronto Tel: 905-695-1980 Tel: 905-695-1980				
Canada - Toronto Fax: 44-118-921-5820 Tel: 905-695-1980 Fax: 44-118-921-5820				_
Tel: 905-695-1980				