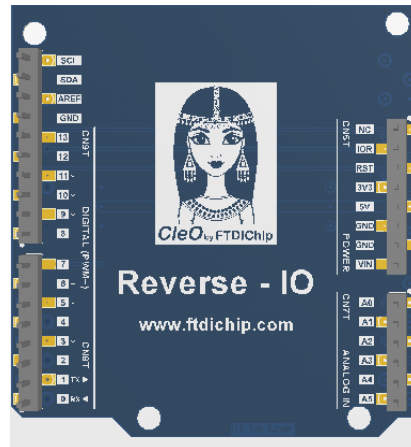


**Future Technology  
Devices International  
Limited  
Datasheet  
CleO-RIO Module**



## 1 Introduction

The CleO-RIO module is an Arduino shield adapter board giving users the flexibility to stack their Arduino board on top of the CleO35 module- the smart TFT Display.

The module is a two layer PCB with dimensions of 57.15mm X 54.35mm

## 2 Ordering Information

Part No.	Description
CleO-RIO1	CleO-Reverse I/O adapter board

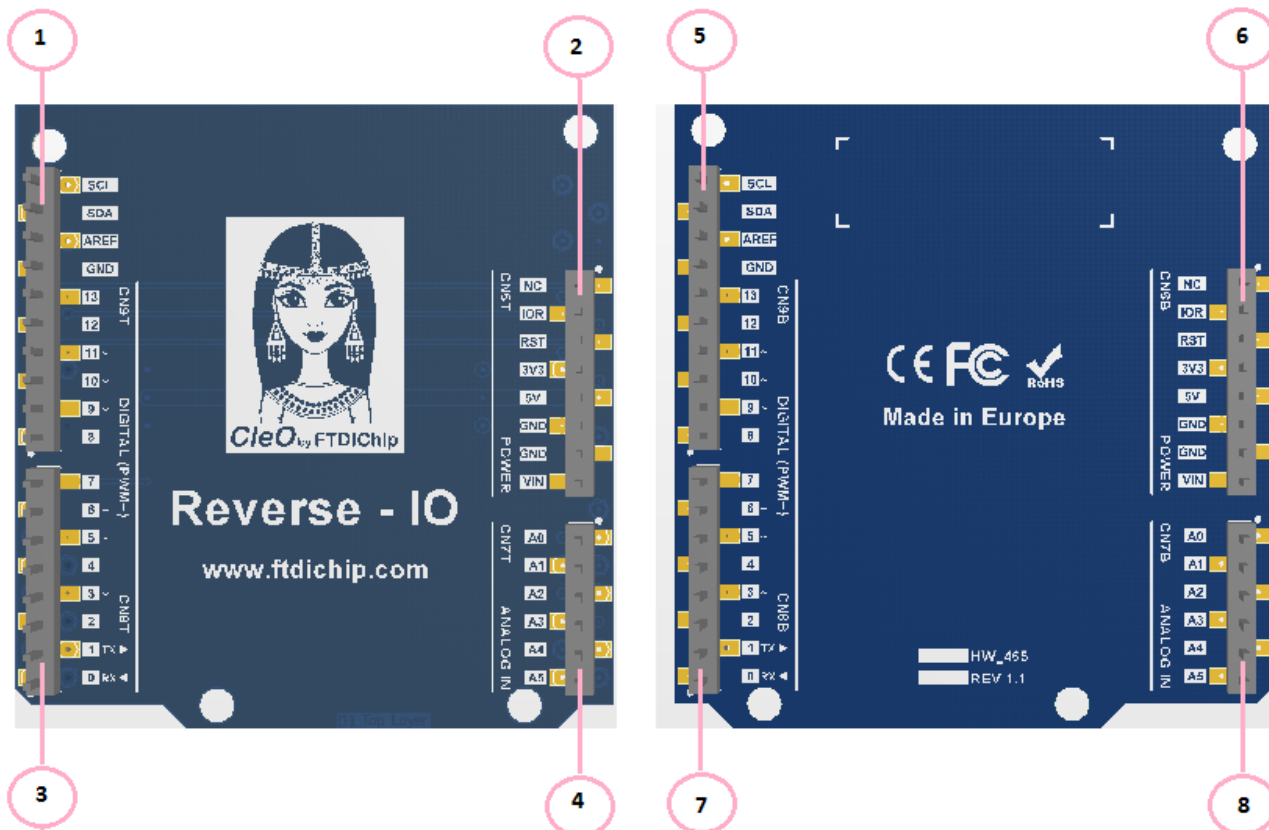
Neither the whole nor any part of the information contained in, or the product described in this manual, may be adapted or reproduced in any material or electronic form without the prior written consent of the copyright holder. This product and its documentation are supplied on an as-is basis and no warranty as to their suitability for any particular purpose is either made or implied. Future Technology Devices International Ltd will not accept any claim for damages howsoever arising as a result of use or failure of this product. Your statutory rights are not affected. This product or any variant of it is not intended for use in any medical appliance, device or system in which the failure of the product might reasonably be expected to result in personal injury. This document provides preliminary information that may be subject to change without notice. No freedom to use patents or other intellectual property rights is implied by the publication of this document. Future Technology Devices International Ltd, Unit 1, 2 Seaward Place, Centurion Business Park, Glasgow G41 1HH United Kingdom. Scotland Registered Company Number: SC136640

## **Table of Contents**

<b>1</b>	<b>Introduction .....</b>	<b>1</b>
<b>2</b>	<b>Ordering Information .....</b>	<b>1</b>
<b>3</b>	<b>Pin Out and Signal Description .....</b>	<b>3</b>
3.1	Module Description .....	3
3.2	Module Signal Description .....	4
<b>4</b>	<b>Board Schematic.....</b>	<b>6</b>
<b>5</b>	<b>Mechanical Dimensions .....</b>	<b>7</b>
<b>6</b>	<b>Contact Information.....</b>	<b>8</b>
	<b>Appendix A – References .....</b>	<b>9</b>
	Acronyms and Abbreviations .....	9
	<b>Appendix B - List of Figures and Tables .....</b>	<b>10</b>
	List of Tables .....	10
	List of Figures .....	10
	<b>Appendix C – Revision History.....</b>	<b>11</b>

### 3 Pin Out and Signal Description

#### 3.1 Module Description



**Figure 1 - CleO RIO Module Features**

No	Feature	Reference Designator
1	1x10 position 2.54mm pitch SMT header	CN9T
2	1x8 position 2.54mm pitch SMT header	CN6T
3	1x8 position 2.54mm pitch SMT header	CN8T
4	1x6 position 2.54mm pitch SMT header	CN7T
5	1x10 position 2.54mm pitch SMT header	CN9B
6	1x8 position 2.54mm pitch SMT header	CN6B
7	1x8 position 2.54mm pitch SMT header	CN8B
8	1x6 position 2.54mm pitch SMT header	CN7B

**Table 1 - CleO RIO Module Features Description**

### 3.2 Module Signal Description

The pin description of **CN9T** and **CN9B** is the same and is given in Table 2.

Pin No	Pin Name	Description
1	-	NC
2	-	NC
3	D10	SPI Chip select option3
4	MOSI	SPI data from master side
5	MISO	SPI data to master side
6	SCK	SPI clock
7	GND	Ground
8	-	NC
9	-	NC
10	-	NC

**Table 2 - CN9T and CN9B Pin Description**

The pin description of **CN8T** and **CN8B** is the same and is given in Table 3.

Pin No	Pin Name	Description
1	-	NC
2	-	NC
3	D2	FT903 Interrupt request out option 1
4	D3	FT903 Interrupt request out option 2
5	-	NC
6	D5	SPI Chip select option1
7	-	NC
8	D7	SPI Chip select option2

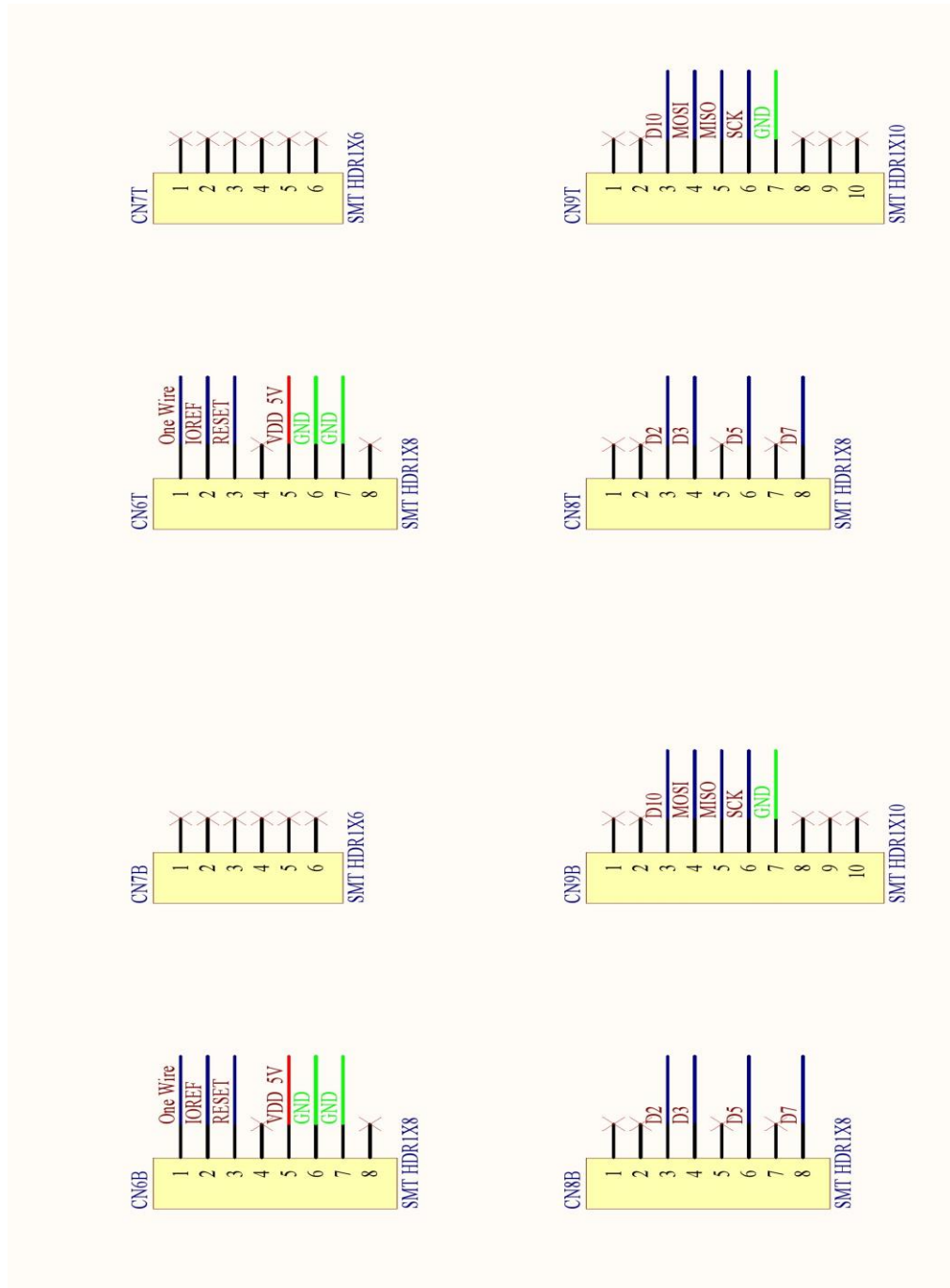
**Table 3 - CN8T and CN8B Pin Description**

The pin description of **CN6T** and **CN6B** is the same and is given in Table 4.

<b>Pin No</b>	<b>Pin Name</b>	<b>Description</b>
1	-	NC
2	IOREF	IO reference voltage supply input
3	RESET	FT903 reset signal
4	-	NC
5	VDD_5V	5V Supply
6	GND	Ground
7	GND	Ground
8	-	NC

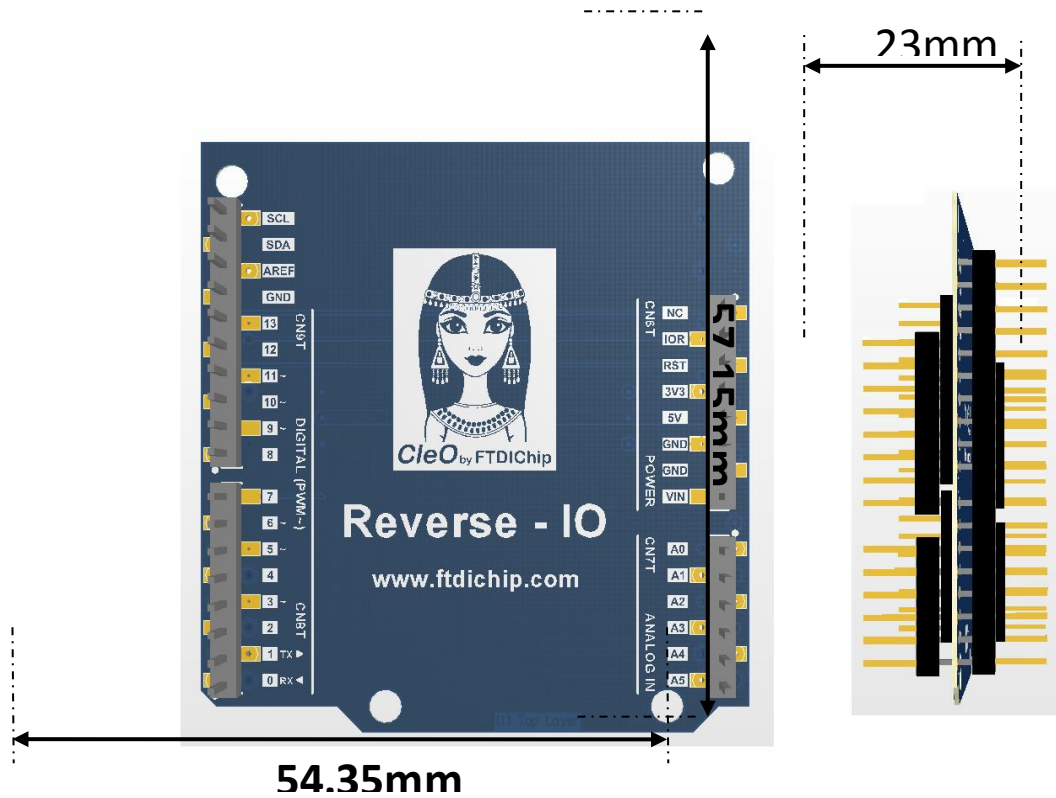
**Table 4 - CN6T and CN6B Pin Description**

## 4 Board Schematic



**Figure 2 - Reverse I/O Schematic**

## 5 Mechanical Dimensions



**Figure 3 - CleO RIO Module Dimensions**

## 6 Contact Information

### Head Office – Glasgow, UK

Future Technology Devices International Limited  
Unit 1, 2 Seaward Place, Centurion Business Park  
Glasgow G41 1HH  
United Kingdom  
Tel: +44 (0) 141 429 2777  
Fax: +44 (0) 141 429 2758

E-mail (Sales) [sales1@ftdichip.com](mailto:sales1@ftdichip.com)  
E-mail (Support) [support1@ftdichip.com](mailto:support1@ftdichip.com)  
E-mail (General Enquiries) [admin1@ftdichip.com](mailto:admin1@ftdichip.com)

### Branch Office – Tigard, Oregon, USA

Future Technology Devices International Limited (USA)  
7130 SW Fir Loop  
Tigard, OR 97223-8160  
USA  
Tel: +1 (503) 547 0988  
Fax: +1 (503) 547 0987

E-mail (Sales) [us.sales@ftdichip.com](mailto:us.sales@ftdichip.com)  
E-mail (Support) [us.support@ftdichip.com](mailto:us.support@ftdichip.com)  
E-mail (General Enquiries) [us.admin@ftdichip.com](mailto:us.admin@ftdichip.com)

### Branch Office – Taipei, Taiwan

Future Technology Devices International Limited  
(Taiwan)  
2F, No. 516, Sec. 1, NeiHu Road  
Taipei 114  
Taiwan, R.O.C.  
Tel: +886 (0) 2 8797 1330  
Fax: +886 (0) 2 8751 9737

E-mail (Sales) [tw.sales1@ftdichip.com](mailto:tw.sales1@ftdichip.com)  
E-mail (Support) [tw.support1@ftdichip.com](mailto:tw.support1@ftdichip.com)  
E-mail (General Enquiries) [tw.admin1@ftdichip.com](mailto:tw.admin1@ftdichip.com)

### Branch Office – Shanghai, China

Future Technology Devices International Limited  
(China)  
Room 1103, No. 666 West Huaihai Road,  
Shanghai, 200052  
China  
Tel: +86 21 62351596  
Fax: +86 21 62351595

E-mail (Sales) [cn.sales@ftdichip.com](mailto:cn.sales@ftdichip.com)  
E-mail (Support) [cn.support@ftdichip.com](mailto:cn.support@ftdichip.com)  
E-mail (General Enquiries) [cn.admin@ftdichip.com](mailto:cn.admin@ftdichip.com)

### Web Site

<http://ftdichip.com>

### Distributor and Sales Representatives

Please visit the Sales Network page of the [FTDI Web site](#) for the contact details of our distributor(s) and sales representative(s) in your country.

System and equipment manufacturers and designers are responsible to ensure that their systems, and any Future Technology Devices International Ltd (FTDI) devices incorporated in their systems, meet all applicable safety, regulatory and system-level performance requirements. All application-related information in this document (including application descriptions, suggested FTDI devices and other materials) is provided for reference only. While FTDI has taken care to assure it is accurate, this information is subject to customer confirmation, and FTDI disclaims all liability for system designs and for any applications assistance provided by FTDI. Use of FTDI devices in life support and/or safety applications is entirely at the user's risk, and the user agrees to defend, indemnify and hold harmless FTDI from any and all damages, claims, suits or expense resulting from such use. This document is subject to change without notice. No freedom to use patents or other intellectual property rights is implied by the publication of this document. Neither the whole nor any part of the information contained in, or the product described in this document, may be adapted or reproduced in any material or electronic form without the prior written consent of the copyright holder. Future Technology Devices International Ltd, Unit 1, 2 Seaward Place, Centurion Business Park, Glasgow G41 1HH, United Kingdom. Scotland Registered Company Number: SC136640



## **Appendix A – References**

### **Acronyms and Abbreviations**

<b>Terms</b>	<b>Description</b>
TFT	Thin Film Transistor
SPI	Serial Peripheral Interface
SMT	Surface Mount Technology

## **Appendix B - List of Figures and Tables**

### **List of Tables**

Table 1 - <i>CleO</i> RIO Module Features Description .....	3
Table 2 - CN9T and CN9B Pin Description .....	4
Table 3 - CN8T and CN8B Pin Description .....	4
Table 4 - CN6T and CN6B Pin Description .....	5

### **List of Figures**

Figure 1 - <i>CleO</i> RIO Module Features .....	3
Figure 2 - Reverse I/O Schematic.....	6
Figure 3 - <i>CleO</i> RIO Module Dimensions.....	7

## Appendix C – Revision History

Document Title: CleO- RIO Module Datasheet  
Document Reference No.: FT\_001310  
Clearance No.: FTDI#495  
Product Page: <http://www.ftdichip.com/Products/Modules/CleO.htm>  
Document Feedback: [Send Feedback](#)

Revision	Changes	Date
Version 1.0	Initial Release	2016-04-20



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.