

# Flex I/O Series

## I/O Expansion Module for MIC-7 Series



### Features

- Flexible expansion for various I/O connection
- Flex I/O expansion on the front panel for same-side cabling
- Support various display interfaces and the 3rd output
- Support I/O and intelligent alarm function
- Expand two more LAN ports
- Expand for 2 x 2.5" SSD
- Support TPM module
- MIC-7 Series compatible

### Introduction

Flex I/O series modules provide flexible expansion for MIC-7 Series so customers can enjoy display, more control, and better communication via Flex I/O. All Flex I/O are attached directly from connectors reserved on the MIC-7 series main board and installed on the front panel, making it easy to fulfill machine, factory automation, and IEM deployments.

### Flex I/O Assembly Example

#### Small Flex I/O



Default MIC-770



Small Flex I/O Remote Switch



After Assembly

#### Regular Flex I/O



Default MIC-770



Regular Flex I/O DVI



After Assembly

#### Small + Regular Flex I/O



Default MIC-770



Small Flex I/O Remote Switch



Regular Flex I/O DVI



After Assembly

#### Advanced Flex I/O



Default MIC-770



Advanced Flex I/O NVME + 4x LAN



After Assembly

#### Full Flex I/O



Default MIC-770



2x COM



4x LAN



Bracket



After Assembly

98R17500601 + 98910770350 + 98R17511000,  
98R17511000 only contain bracket.

## Compatible Table

Flex I/O	Function	Part Number	MIC-7700			MIC-770 V1		MIC-770 V2		MIC-770 V3		MIC-780		MIC-785
			MIC-7700Q-A2	MIC-7700Q-B1	MIC-7700H	MIC-770Q	MIC-770H	MIC-770W	MIC-770H	MIC-770W	MIC-770H	MIC-780W	MIC-780H	
<b>Small FIO</b>														
	Remote Switch	98R17500701	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓
	HDMI	98R17502000	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-
	Display Port	98R17503000	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-
	DVI	98R17504000	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-
	Reset & Remote Switch & 5VDC (SATA)	98R17500803	-	-	-	-	-	-	-	✓	✓	✓	✓	✓
<b>Regular FIO</b>														
	GPIO module (32bit)	AllS-DIO32-00A1E	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	DVI	98R17500001	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-
	HDMI & Remote Switch	98R17500101	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-
	HDMI	98R17500301	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-
	Remote Switch	98R17500401	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	4x COM RS-232	98R17500601	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Reset & Remote Switch & 5VDC	98R17500801	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-
	Reset & Remote Switch & 5VDC (SATA)	98R17500802	-	-	-	-	-	-	-	✓	✓	✓	✓	✓
	16 bit GPIO	98R17500901	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Display Port	98R17501001	✓	✓	✓	-	-	✓	✓	✓	✓	-	-	-
	Dual LAN	98R1790040E	✓	-	-	-	-	-	-	-	-	-	-	-
<b>Advanced FIO</b>														
	2 x Lan, i210AT	98R10770320	-	-	-	✓	-	✓	-	✓	-	✓	-	✓
	NVME +4 x Lan, i210AT	98R10770330	-	-	-	✓	-	✓	-	✓	-	✓	-	✓
	2 x Lan, i226V	98R10770340	-	-	-	✓	-	✓	-	✓	-	✓	-	✓
	NVME +4 x Lan, i226V	98R10770350	-	-	-	✓	-	✓	-	✓	-	✓	-	✓
	NVME	98R10770401	-	-	-	✓	-	✓	-	✓	-	✓	-	✓
	4 x PoE	98R10770501	-	-	-	✓	-	✓	-	✓	-	✓	-	✓
<b>Full FIO</b>														
	Dual LAN	98R1790041E	-	✓	-	-	-	-	-	-	-	-	-	-
	2 x LAN & 2 x DB9	98R17511000**	-	-	-	✓	-	✓	-	✓	-	✓	-	✓
	4 x LAN & 2 x DB9	98R17512000**	-	-	-	✓	-	✓	-	✓	-	✓	-	✓
<b>Featured</b>														
	TPM 2.0 module (LPC)	PCA-TPM-00B1E	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-
	*TPM 2.0 module (SPI)*	PCA-TPMSPI-00A1	-	-	-	-	-	-	-	✓	✓	✓	✓	✓
	2x SSD kit	98R1752020E	✓	-	-	✓	✓	✓	✓	✓	✓	-	-	-

\* H SKU does not support. Please refer to Advanced Flex I/O datasheet for more detail.  
 \*\* 98R17511000 & 98R17512000 only contain bracket.  
 Note: For the additional display port (DVI/HDMI/DP), please refer to the MIC-7 series datasheet.

## Ordering Information

Part Number	Description
<b>Small FIO</b>	
98R17500701	MIC Remote Switch kit for SFIO
98R17502000	MIC HDMI kit for SFIO
98R17503000	MIC Display Port kit for SFIO
98R17504000	MIC DVI kit for SFIO
98R17500803	MIC Reset/Remote power on/off/5VDC kit FIO (SATA) for SFIO
<b>Regular FIO</b>	
AIIS-DIO32-00A1E**	AIIS GPIO (32 bit)
98R17500001	MIC DVI kit FIO
98R17500101	MIC HDMI/Remote Switch kit FIO
98R17500301	MIC HDMI kit FIO
98R17500401	MIC Remote Switch kit FIO
98R17500601	MIC COMport kit FIO (4x COM RS-232 via 2x dual DB9 cable)
98R17500801	MIC Reset/Remote Switch/5VDC kit FIO
98R17500802	MIC Reset/Remote power on/off/5VDC kit FIO (SATA)
98R17500901	MIC GPIO kit (2x 8 bit GPIO cables)
98R17501001	MIC Display Port kit FIO
9891790040E*	MIC Dual LAN kit FIO
<b>Advanced Flex I/O</b>	
98910770320	MIC 2 x Lan, i210AT, AFIO
98910770330	MIC NVME +4 x Lan, i210AT, AFIO
98910770340	MIC 2 x Lan, i226V, AFIO
98910770350	MIC NVME +4 x Lan, i226V, AFIO
98910770401	MIC NVMe, AFIO
98910770501***	MIC 4 x PoE, i350, AFIO
<b>Full FIO</b>	
98R17511000****	MIC 2 x LAN + 2 x DB9, BKT Kit
98R17512000****	MIC 4 x LAN + 2 x DB9, BKT Kit
9891790041E*	MIC Dual LAN kit FIO
<b>Featured</b>	
PCA-TPM-00B1E	TPM 2.0 module (LPC)
PCA-TPMSPI-00A1	TPM 2.0 module (SPI)
98R1752020E	2 x 2.5" SSD kit (7mm thick)

Note: Cable/module, cover and screws are included.

\*Can't support PCA-TPM-00B1E when install 9891790040E.

\*\* Can only be placed in the small FIO location and can't be installed with other flex IO.

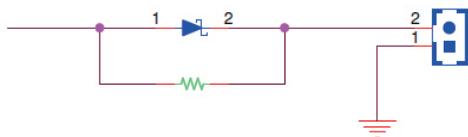
\*\*\* Can't be installed with other flex IO.

\*\*\*\* 98R17511000 & 98R17512000 only contain bracket.

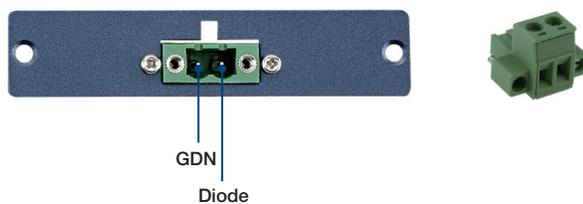
## Pin Definition

### 98R17500101, 98R17500401, 98R17500701

Remote switch pin definition



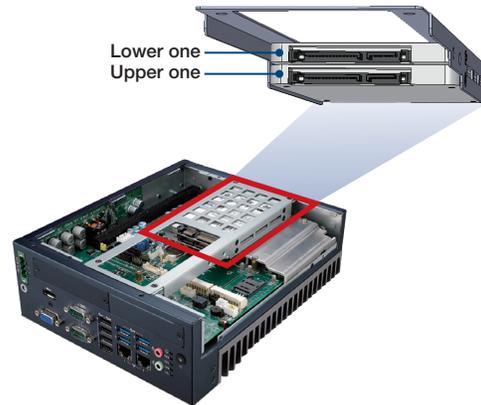
Connector pin definition



Note: 2-pin phoenix contact terminal block is included in remote switch kit. Can connect to ATX power button via cable. Remote switch supports ATX power button via 2-pin (power button is not included).

### 98R1752020E 2x 2.5" SSD kit Assembly

2 x 2.5" SSD assembled in the dual SSD tray



Example: Assembled inside of MIC-770

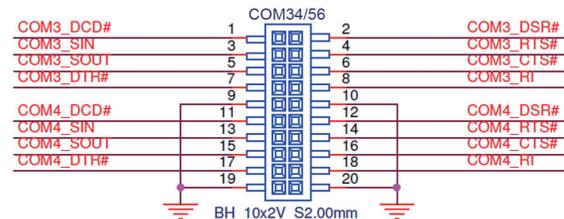
Note 1: Compatible with MIC-7 series Flex I/O and Advanced Flex I/O

Note 2: Support 2 x 2.5" 7mm thick SSD only (HDD is not recommended)

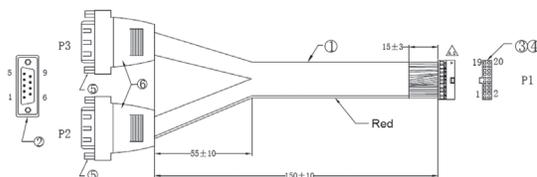
Note 3: SSD is not included

### 98R17500601

COM 34/56 pin definition

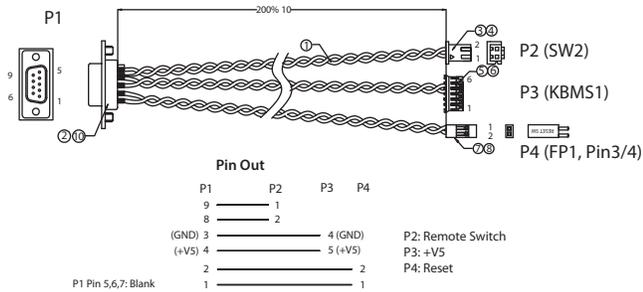


DB9 Connector pin definition



PIN OUT		
P1	WIRE COLOR	P2 P3
1		1
2		6
3		12
4		13
5		3
6		8
7		5
8		9
9		5
10		5
11		1
12		6
13		2
14		7
15		3
16		8
17		4
18		4
19		5
20		S

## 98R17500801

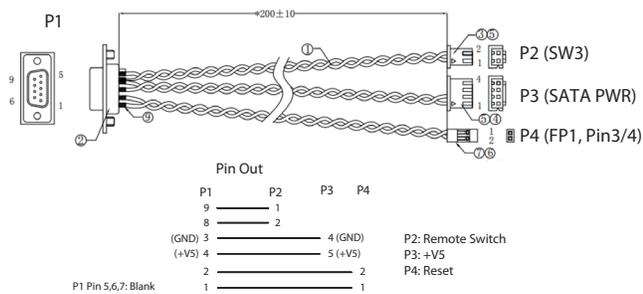


## AIIS-DIO32-00A1E

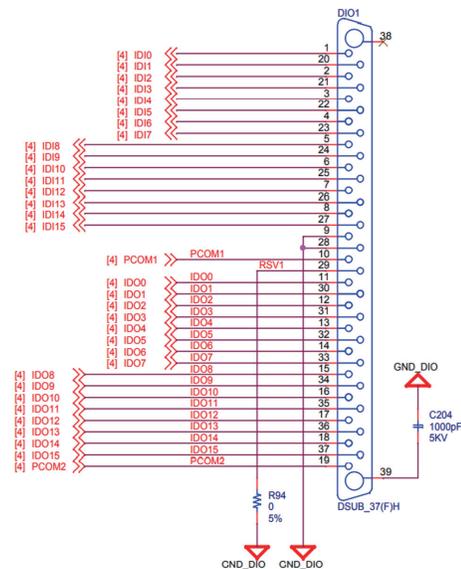
DIO pin definition

Pin01 => IDI0	Pin20 => IDI1
Pin02 => IDI2	Pin21 => IDI3
Pin03 => IDI4	Pin22 => IDI5
Pin04 => IDI6	Pin23 => IDI7
Pin05 => IDI8	Pin24 => IDI9
Pin06 => IDI10	Pin25 => IDI11
Pin07 => IDI12	Pin26 => IDI13
Pin08 => IDI14	Pin27 => IDI15
Pin09 => [GND]	Pin28 => [GND]
Pin10 => PCOM1	Pin29 => [GND]
Pin11 => IDO0	Pin30 => IDO1
Pin12 => IDO2	Pin31 => IDO3
Pin13 => IDO4	Pin32 => IDO5
Pin14 => IDO6	Pin33 => IDO7
Pin15 => IDO8	Pin34 => IDO9
Pin16 => IDO10	Pin35 => IDO11
Pin17 => IDO12	Pin36 => IDO13
Pin18 => IDO14	Pin37 => IDO15
Pin19 => PCOM2	

## 98R17500802/98R17500803

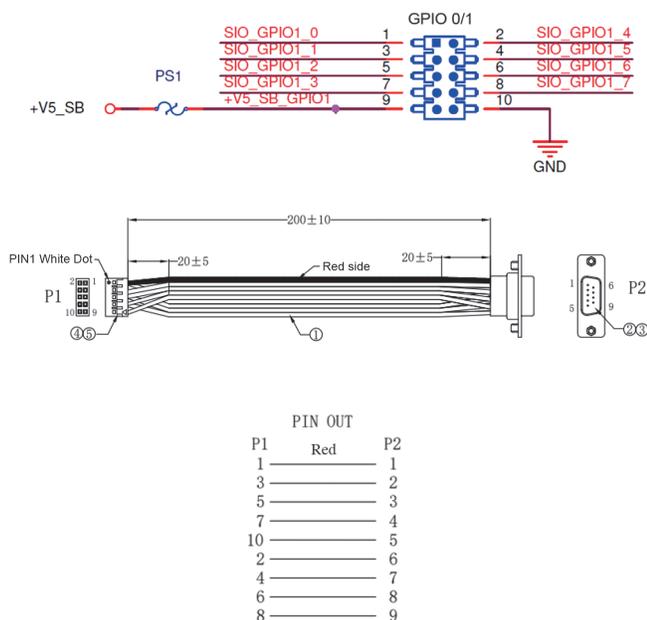


DB37 connector pin definition



## 98R17500901

GPIO 0/1 pin definition



Note 1: GPIO0 and GPIO1 pin definition are the same.  
Note 2: P1 Pin 9: Blank