

# 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



After Assembly

Small Flex I/O  
Remote Switch

#### Regular Flex I/O



Default MIC-770



After Assembly

Regular Flex I/O  
DVI



Default MIC-770

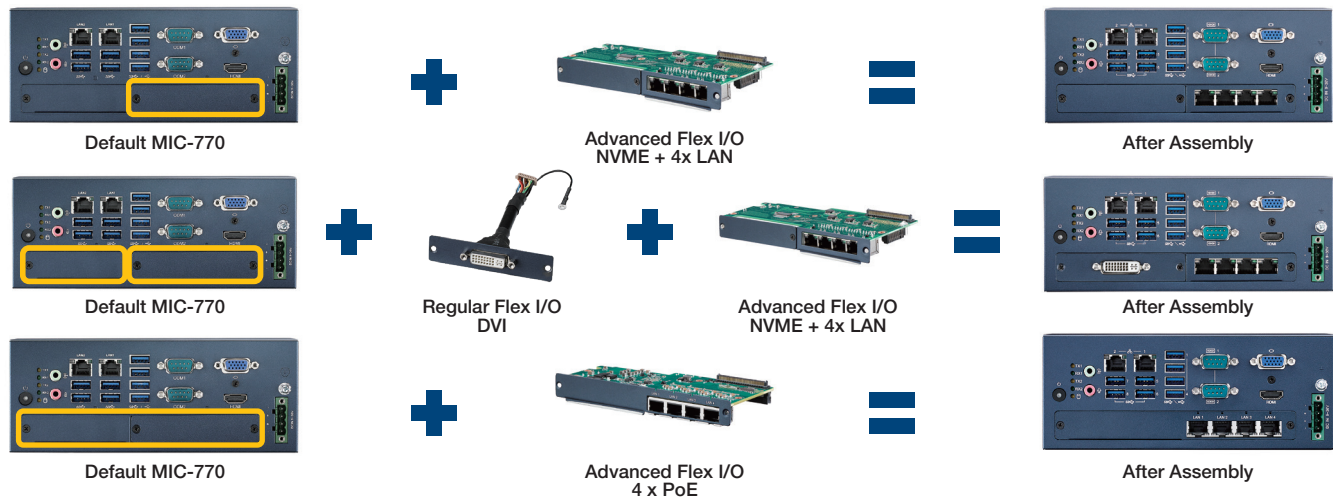


After Assembly










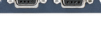








Small Flex I/O  
Remote Switch

Regular Flex I/O  
DVI

## Advanced Flex I/O



## Compatible Table

Flex I/O	Function	Part Number	MIC-7500	MIC-7700		MIC-770 V1		MIC-770 V2		MIC-770 V3		MIC-7900
				MIC-7700Q	MIC-7700H	MIC-770Q	MIC-770H	MIC-770W	MIC-770H	MIC-770W	MIC-770H	
Small FIO												
	Remote Switch	98R17500701	-	-	-	✓	✓	✓	✓	✓	✓	-
	GPIO module (32bit)	AIIS-DIO32-00A1E	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Regular FIO												
	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	8 bit	✓	✓	✓	✓	✓	✓	✓	✓	8 bit
	Display Port	98R17501001	-	✓	✓	-	-	✓	✓	✓	✓	-
	Dual LAN	98R1790040E	-	✓	-	-	-	-	-	-	-	-
	TPM 2.0 module (LPC)	PCA-TPM-00B1E	✓	✓	✓	✓	✓	✓	✓	-	-	-
	TPM 2.0 module (SPI)	PCA-TPMSPI-00A1	-	-	-	-	-	-	-	✓	✓	-
	2x SSD kit	98R1752020E	-	✓	-	✓	✓	✓	✓	✓	✓	✓
Advanced FIO*												
	NVME+ 4x LAN	98R10770301	-	-	-	✓	-	✓	-	✓	-	-
	NVME	98R10770401	-	-	-	✓	-	✓	-	✓	-	-
	4 x PoE	98R10770501	-	-	-	✓	-	✓	-	✓	-	-

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

## Ordering Information

Part Number	Description
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)
98R17500701	MIC Remote Switch kit for SFIO
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
AIIS-DIO32-00A1E**	AIIS GPIO (32 bit)
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)
<b>Advanced Flex I/O</b>	
98910770301	MIC NVMe + 4 LAN FIO
98910770401	MIC NVMe FIO
98910770501***	MIC 4 PoE FIO

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

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

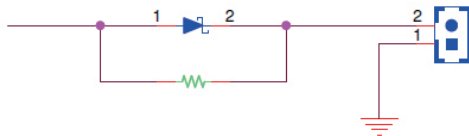
\*\* Can only be placed in the small FIO location and can't be installed with other flex IO.

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

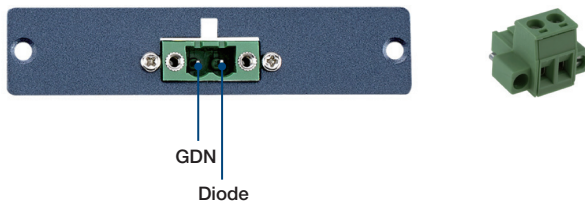
## Pin Definition

### 98R17500101, 98R17500401, 98R17500701

Remote switch pin definition



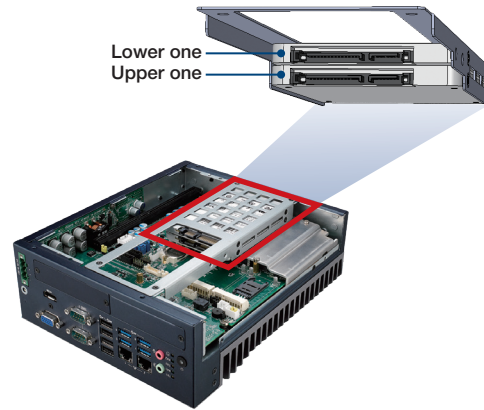
Connector pin definition



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

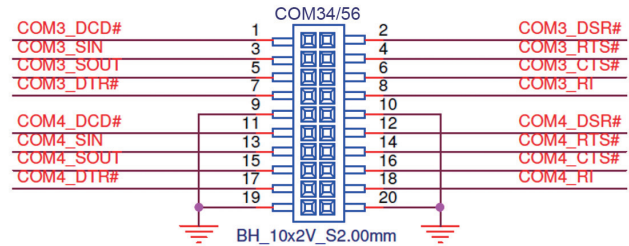
Note 1: Compatible with MIC-7 series Flex I/O and Advanced Flex I/O

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

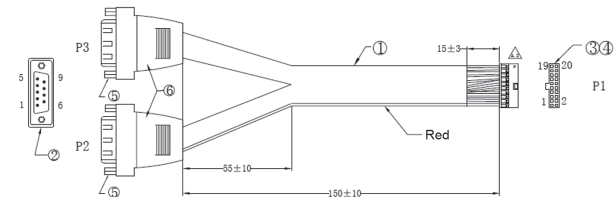
Note 3: SSD is not included

### 98R17500601

COM 34/56 pin definition



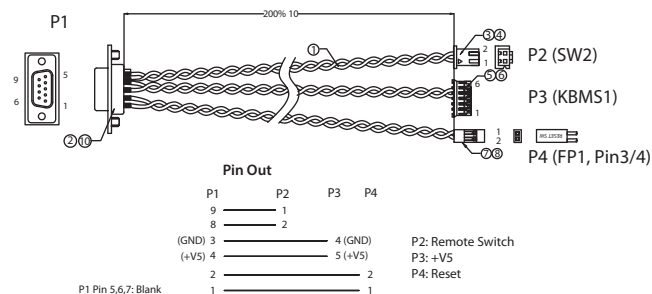
DB9 Connector pin definition



PIN OUT

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

## 98R17500801

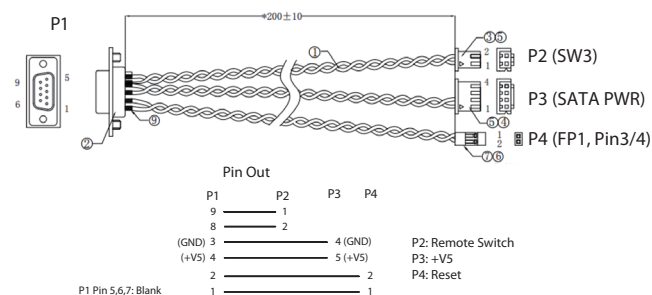


## AIIS-DIO32-00A1E

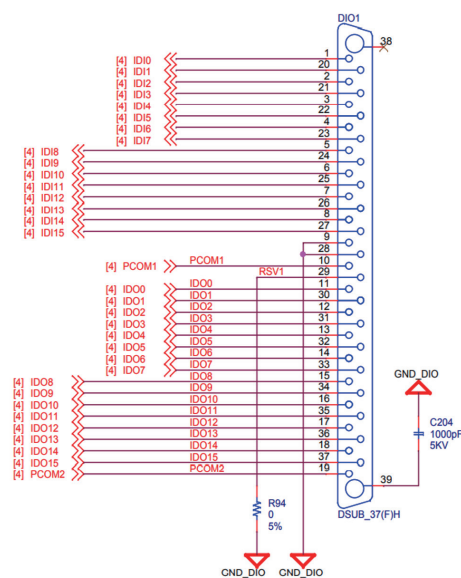
DIO pin definition

Digital In	Pin01 =>	IDI0	Digital In	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]
Digital Out	Pin11 =>	IDO0	Digital Out	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

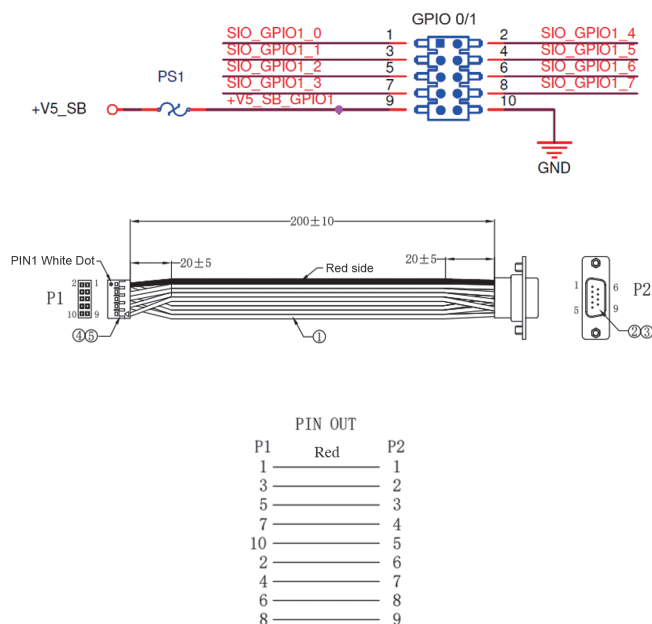


DB37 connector pin definition



## 98R17500901

GPIO 0/1 pin definition



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