

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	
Small FIO														
	Remote Switch	98R17500701	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓
	HDMI	98R17502000	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-
	Display Port	98R17503000	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-
	DVI	98R17504000	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-
	Reset & Remote Switch & 5VDC (SATA)	98R17500803	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓
Regular FIO														
	GPIO module (32bit)	AIS-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	✓	-	-	-	-	-	-	-	-	-	-	-
Advanced FIO														
	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	-	-	-	✓	-	✓	-	✓	-	✓	-	✓
	4 x USB	98R17701000	-	-	-	✓	-	✓	-	✓	-	✓	-	✓
	8 x USB	98R17701100	-	-	-	✓	-	✓	-	✓	-	✓	-	✓
Full FIO														
	Dual LAN	98R1790041E	-	✓	-	-	-	-	-	-	-	-	-	-
	2 x LAN & 2 x DB9	98R17511000**	-	-	-	✓	-	✓	-	✓	-	✓	-	✓
	4 x LAN & 2 x DB9	98R17512000**	-	-	-	✓	-	✓	-	✓	-	✓	-	✓
	4 x USB & 2 x DB9	98R17513000**	-	-	-	✓	-	✓	-	✓	-	✓	-	✓
Featured														
	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

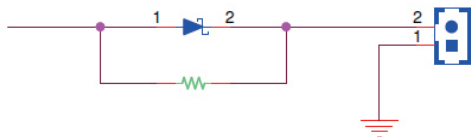
Part Number	Description
Small FIO	
98R17500701	MIC Remote Switch kit for SFIO
98R17502000	MIC HDMI kit for SFIO
98R17503000	MIC Display Port kit for SFIO
98R17504000	MIC DVI kit for SFIO
98R17500803	MIC Reset/Remote power on/off/5VDC kit FIO (SATA) for SFIO
Regular FIO	
AIIS-DIO32-00A1E**	AIIS GPIO (32 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
98R1750040E*	MIC Dual LAN kit FIO
Advanced Flex I/O	
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
98917701000	MIC 4 x USB, AFIO
98917701100***	MIC 8 x USB, AFIO
Full FIO	
98R17511000****	MIC 2 x LAN + 2 x DB9, BKT Kit
98R17512000****	MIC 4 x LAN + 2 x DB9, BKT Kit
98R17513000****	MIC 4 x USB + 2 x DB9, BKT Kit
98R1750041E*	MIC Dual LAN kit FIO
Featured	
PCA-TPM-00B1E	TPM 2.0 module (LPC)
PCA-TPMSP1-00A1	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.

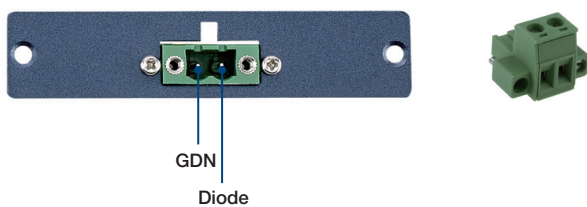
Pin Definition

98R17500101, 98R17500401, 98R17500701

Remote switch pin definition



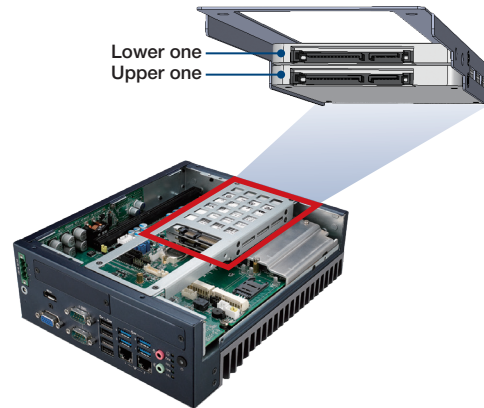
Connector pin definition



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

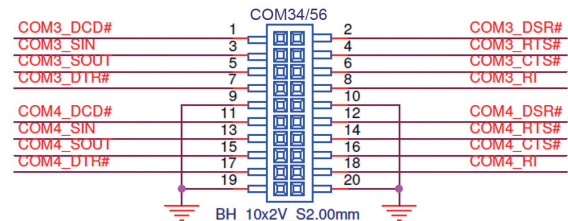


Example: Assembled inside of MIC-770

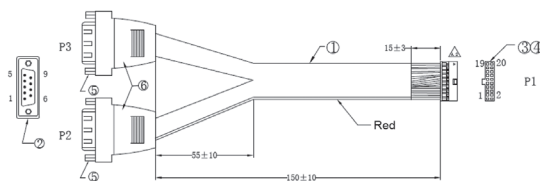
Note 1: Compatible with MIC-7 series Flex I/O and Advanced Flex I/O
 Note 2: Support 2 x 2.5" 7mm thick SSD only (HDD is not recommended)
 Note 3: SSD is not included

98R17500601

COM 34/56 pin definition

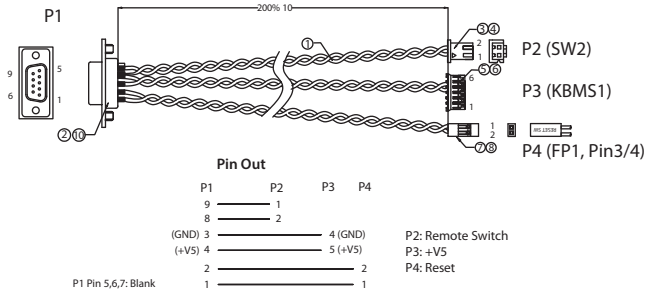


DB9 Connector pin definition



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

98R17500801

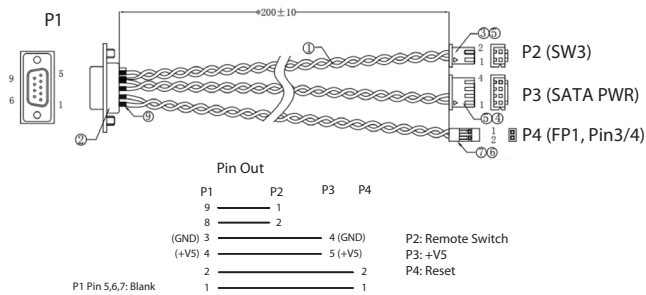


AIIS-DIO32-00A1E

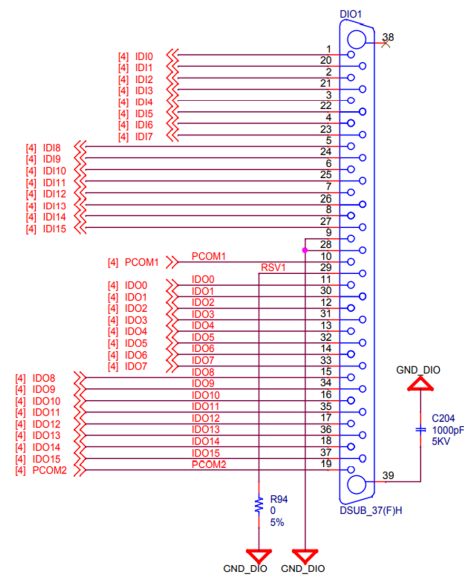
DIO pin definition

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

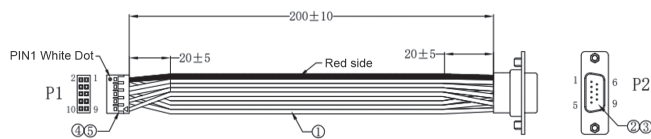
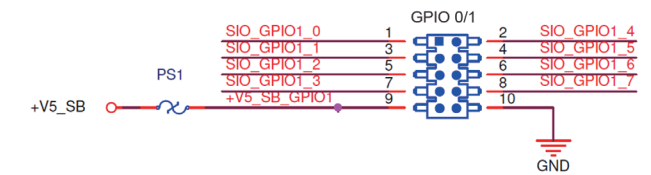


DB37 connector pin definition



98R17500901

GPIO 0/1 pin definition



PIN OUT		
P1	Red	P2
1		1
3		2
5		3
7		4
10		5
2		6
4		7
6		8
8		9

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