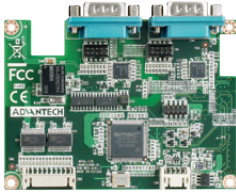


# MI/O Extension Modules



**MI/Oe-110**  
 2 x RS-232,  
 2 x RS-232/422/485  
 (with power and isolation),  
 2 x USB 2.0

## Specifications

General	
Bus Interface	MI/Oe LPC/USB
Super I/O	SCH3106
Rear I/O	
COM port	COM1/2: Both at coastline and internal box wafer, simultaneously COM1: RS-232/422/485 (With isolation. RS-485 with auto flow control). COM2: RS-232/422/485 (Supports wake on ring. Supply 5V/12V power selected by jumper. RS-485 with auto flow control).
Internal I/O	
COM port	COM3/4: RS-232 (Support wake on ring)
USB 2.0	2
Communications	
Data Bits	5, 6, 7, 8
Data Signals	RS-422: TxD+, TxD-, RxD+, RxD- RS-485: DATA+, DATA- RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, RI, GND
IRQ	Depends on MI/O CPU Board
Parity	even, odd, sticky or no
Speed	50 to 460k, 921k* and 1.5M* Baud
Stop Bits	1, 1.5, 2
Protection	
ESD	Air gap $\pm 15$ kV and contact $\pm 8$ kV for all COM ports
Isolation	2.5kV for COM1
Compatibility	
Rear I/O	MI/O-Ultra
Mechanical	MI/O-Ultra
Function	MI/O-Compact*, MI/O-Ultra*
Environment	
Dimensions	100 x 72 mm (3.9" x 2.8")
Weight	0.04 kg (0.09lb), only for board
Operational Temperature	0 ~ 60° C (32 ~ 140° F)
Operational Humidity	40° C @ 95% RH Non-Condensing
Storage Environment	-40° C ~ 85° C and 60° C @ 95% RH Non-Condensing
Power	
Power Supply Voltage	Supported by MI/O Extension SBC

\* Except for MIO-2261 and MIO-5270, other MI/O CPU boards need customized BIOS.

## Ordering Information

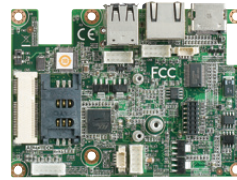
P/N	Description
MIOe-110F-00A1E	2 x RS-232/422/485, 2 x RS-232, w/ isolation, 2 x USB
MIOe-110L-00A1E	1 x RS-232/422/485, 2 x RS-232, w/o isolation, 2 x USB

## Accessories

P/N	Description	Quantity
1700018999	COM3/4 cable 22cm	1
1700019000	2 ports USB cable w/ bracket, 26cm	1

## Optional Accessories

P/N	Description
1700019414	COM1/2 internal cable 30cm



**MI/Oe-120**  
 2 x GbE, HDMI, Mini PCIe,  
 SIM holder, speaker out,  
 LPC, 2 x USB 2.0

## Specifications

General	
Bus Interface	MI/Oe PCI Express/ USB/ LPC/ Audio line-out
Ethernet controller	GbE Intel® 82583V
PCIe Switch	PLX PEX8605
USB Hub Controller	Terminus FE1.1 USB 2.0 4-port hub
Rear I/O	
GbE	1 (10/100/1000 Mbps), both at coastline and internal box wafer, simultaneously
USB 2.0	2 (Both at coastline and internal box wafer, simultaneously)
HDMI	1 (by request, only for MIO-2261)
Internal I/O	
GbE	1 (10/100/1000 Mbps)
Speaker out	1 with amplifier (Max 2.2W/ch stereo into a 3Ω load)
LPC	1 (support extra four COM ports by PCA-COM232-00A1E or PCA-COM485-00A1E, TPM module by PCA-TPM-00A1E)
Expansion	
Mini PCIe	1 (full size, with SIM holder, including of USB interface)
Compatibility	
Rear I/O	MI/O-Ultra
Mechanical	MI/O-Compact, MI/O-Ultra
Function	MI/O-Compact*, MI/O-Ultra*
Mechanical and Environmental	
Dimensions (L x W)	100 x 72 mm (3.9" x 2.8")
Weight	0.04 kg (0.09lb), only for board
Operational Temperature	Standard operating: 0 ~ 60° C (32 ~ 140° F)
Operational Humidity	40° C @ 95% RH Non-Condensing
Storage Temperature	-40° C ~ 85° C and 60° C @ 95% RH Non-Condensing
Power	
Power Supply Voltage	Supported by MI/O Extension SBC

- \* 1. HDMI: Only for MIO-2261, supported by request
- 2. LPC: Supported by OEM BIOS for PCA-COM232-00A1E, PCA-COM485-00A1E, and PCA-TPM-00A1E
- 3. MIO-5250 doesn't support MIOe-120L

## Ordering Information

P/N	Description
MIOe-120F-00A1E	2 x GbE w/ PCIe switch, 2 x USB, Mini PCIe, SIM holder, speaker-out with amplifier, LPC
MIOe-120L-00A1E	1 x GbE w/o PCIe switch, 2 x USB, Mini PCIe, SIM holder, speaker-out with amplifier, LPC

## Accessories

P/N	Description	Quantity
1700019000	2 ports USB cable w/ bracket, 26cm	1

## Optional Accessories

P/N	Description
1700019001	1 x LAN cable, 15cm
PCA-COM232-00A1E	4 x RS-232 extension module, 31.5x48mm
PCA-COM485-00A1E	4 x RS-422/485 extension module, 31.5x48mm
PCA-TPM-00A1E	TPM module, 31.5x48mm