



FAQ / Application Note

Subject : Fintek F81216 I/O chip Serial Port fix package

FAQ Document No: _____ **Date:**2021/03/03

Model Name. All use fintek F81216 products _____ **Rev.** A2

Category: General H/W S/W Others, Super I/O

Purpose:

Fintek Super I/O chip --- F81216 have a Windows issue and Linux issue that fix it by driver and OEM BIOS.

1. Windows issue:

- It will show "COM port detected a receive Over Run Error" anymore when you use multi COM port run loopback test at the same time by test software.

2. Linux issue:

- It will fail when you run loopback test after S3/S4 wakeup.
- The transmission will occur package loss under high speed.

Environment:

M/B = EMX-BYT2-A1R, ECM-BYT2 (A1)

O.S = Windows 10 IoT Enterprise 2016 LTSC 64bit English, Ubuntu 14.04

Software= BurnIn Test 8.1, BurnIn Test Linux version 3.4

If the customers need to perform the serial port high speed transmission, please refer to the following. If you want to know more details, please contact your Sales or FAE.

1. Fix Windows issue:

- Install the super I/O patch driver, it can solve multi-Serial port testing at the same time without "COM port detected a receive Over Run Error" anymore.

2. Fix Linux issue:

- Submit a OEM BIOS request for support non-IRQ share:
 1. Set F81216 as ISA IRQ share mode (IRQ.5) & edge trigger mode (at APIC&IO-4D0) for Linux usage.
 2. Set F81216 UART IRQ as non-share for Linux OS.
- If you encountered the failure results after you flashed the above BIOS, please contact your Sales & FAE and share the Linux OS type with kernel version, we will provide the patch driver.

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Used Fintek F81216 M/B List:

Board	ACP-910PB
	ACP-945GME
	ACP-945GME-GP
	ACP-GM45
	EBM-A50M
	EBM-945GSE
	EBM-APL
	EBM-BDW
	EBM-BYT
	EBM-CDV
	EBM-CDVS
	EBM-LX800(5512)
	EBM-PNV(5814)
	EBM-QM87U
	ECM-APL
	ECM-BTR
	ECM-BYT
	ECM-LX800(3515) B2
	ECM-LX800W
	ECM-PNV(3830)
ECM-SKLU	

Board	EMX-910GMLE
	EMX-945GSE
	EMX-A55E
	EMX-BSWP
	EMX-BYT2
	EMX-GM45(9689)
	EMX-GM45B
	EMX-GM45-BF(9691)
	EMX-GM45-CN(9692)
	EMX-KBLUP
	EMX-M690T B1
	EMX-PNV
	EMX-SKLUP
	EPI-BDW
	EPI-QM87
	EPI-QM87R
	ESM-A50M(2549)

Module	ARC-BYT DB-D
	ARC-BYT DB-F
	ARC-BYT DB-G
	ARC-BYT DB-H
	ARC-BYT DB-K
	AUX-M01
	AUX-M03
	AUX-M07
	HID-2132 DB-A

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Used Fintek F81216 BOX PC List:

BOX PC

CedarView	ASM-CDV	BayTrail	ASM-BYT	Braswell	BMX-T521-BSW
	EMS-CDV		EMS-BYT		
	EES-CDV		ERS-BYT		
	ERS-CDV		ERS-BYTE		
	EPC-CDV		EPC-BYT		
	EPS-CDV		EPC-BYT2		
			VMS-BYT		
	EPS-BYT				
	BMX-T521-BYT				

BOX PC

Apollo Lake	BMX-T522-APL	QM87	EPS-QM87E	Sky Lake U	EMS-SKLU
	VMS-APL				
	EPC-APL				
	VMS-APL				



Used Fintek F81216 Panel PC List:

Panel PC

Cedar View	APC-18W7	Bay Trail	ARC-1xx9
	BFC-1xx7		APC-18W9
	BFC-xxW07		BFC-1xx9
	FPC-xxW07		LPC-1xx9
	LPC-xxx7		PPC-xxx9
	MPC-xxW7		SPC-xxx9
	MTP-1xx7		RITY102
	OPC-1xx7		RITY122
	PPC-xxx7		RITY152
	SPC-xxx7		RITY82
	UPC-28W7		
	RITY120		
	RITY150		

Panel PC

Apollo Lake	BFC-1033	Sky Lake U	ARC-1x32
	BFC-1533		HID-2132
	PPC-1733		LPC-1x32
	SPC-1533		APC-2132
	ARC-1033		
	ARC-1233		
	ARC-1533		

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