

LP-51xx vs. LP-22xx/52xx

Hardware Comparison

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Last Modified: Apr. 2019

Specifications



LP-5141 / 5141-OD



LP-5231 series



LP-2241M

Hardware Comparison				
CPU	PXA270 (32-bit/520 MHz) or compatible	Cortex-A8 (1.0 GHz) or compatible		
SDRAM	128 MB	512 MB (DDR3)		
Flash	64 MB	512 MB		
EEPROM	16 KB	64 KB (FRAM replace EEPROM)		
SD/microSD	microSD socket with one microSD card			
RTC (Real Time Clock)	Seconds, minutes, hours, date, day of the week, month, year			
64-bit Hardware Serial Number	Yes, for software copy protection			
Dual Watchdog Timer	Yes			
LED Indicators	3	3 for LP5231/5231M 4 for LP5231PM series	3	
Rotary Switch (0 ~ 9)	Yes			
VGA & Communication Ports				
VGA Resolution	640 x 480, 800 x 600	640 x 480, 800 x 600, 1024 x 768, 1280 x 1024		
Ethernet	Connector	RJ-45 x 2	RJ-45 x 1	RJ-45 x 2
	Type	10/100 Base-TX	10/100/ 1000 Base-TX	
USB	USB 1.1 x 1	USB 2.0 x 1	USB 2.0 x 2	
COM 1/Console Port	RS-232(RxD, TxD and GND), Non-isolation			
COM 2/ttyO2	RS-485(Data+, Data-), Non-isolation			
COM 3/ttyO4	RS-232(RxD, TxD and GND), Non-isolation			
ttyO5	-	RS-485, 2500 V_{DC} Isolation		
Audio Port	Microphone-In and Earphone-Out for OD	-		

I/O Expansion			
I/O Slots	1		
I/O Boards Supported	XW-Board	XV-Board	
Mechanical			
Dimensions (W x H x D units: mm)	Plastic: 91 x 132 x 52	Plastic: 91 x 132 x 52 Metal: 117 x 126 x 58	Metal: 35 x 167 x 119
Installation	DIN-Rail mounting	DIN-Rail or Wall mounting	
Environmental			
Operating Temperature	-25°C to +75°C		
Storage Temperature	-30°C to + 80°C		
Ambient Relative Humidity	10% to 90% RH (Non-condensing)		
Input Range	+10 V _{DC} ~ +30 V _{DC}		
Redundant Power Input	Yes		
Isolation	1 kV		
Power Consumption	4.8 W		
GSM System			
Frequency Band	-	GSM: 850/900/1800/1900 MHz	
GPRS Connectivity	-	GPRS class 12/10; GPRS station class B	
Data GPRS	-	Downlink transfer: Max. 85.6 kbps; Uplink transfer: Max 42.8k bps	
3G System			
Frequency Band	-	WCDMA 850/900/1900/2100 MHz	
Data Transmission	-	WCDMA / HSPA+, Download: Max. 14.4Mbps; Upload: Max 5.76Mbps	
4G System			
Frequency Band		FDD LTE: B1/B3/B5/B7/B8/B20 TDD LTE: B38/B39/B40/B41	
Data Transmission		Download: Max 100Mbps Upload Max 50Mbps	

Expansion Memory comparison

Non-volatile Memory (FRAM and EEPROM)

The LP-22xx and LP-52xx series is equipped with 64 KB Ferroelectric Random Access Memory (FRAM).

Non-volatile storage is a type of computer memory that can be used to retrieve stored information even after the power source has been removed, i.e., when the device is turned off and then turned back on.

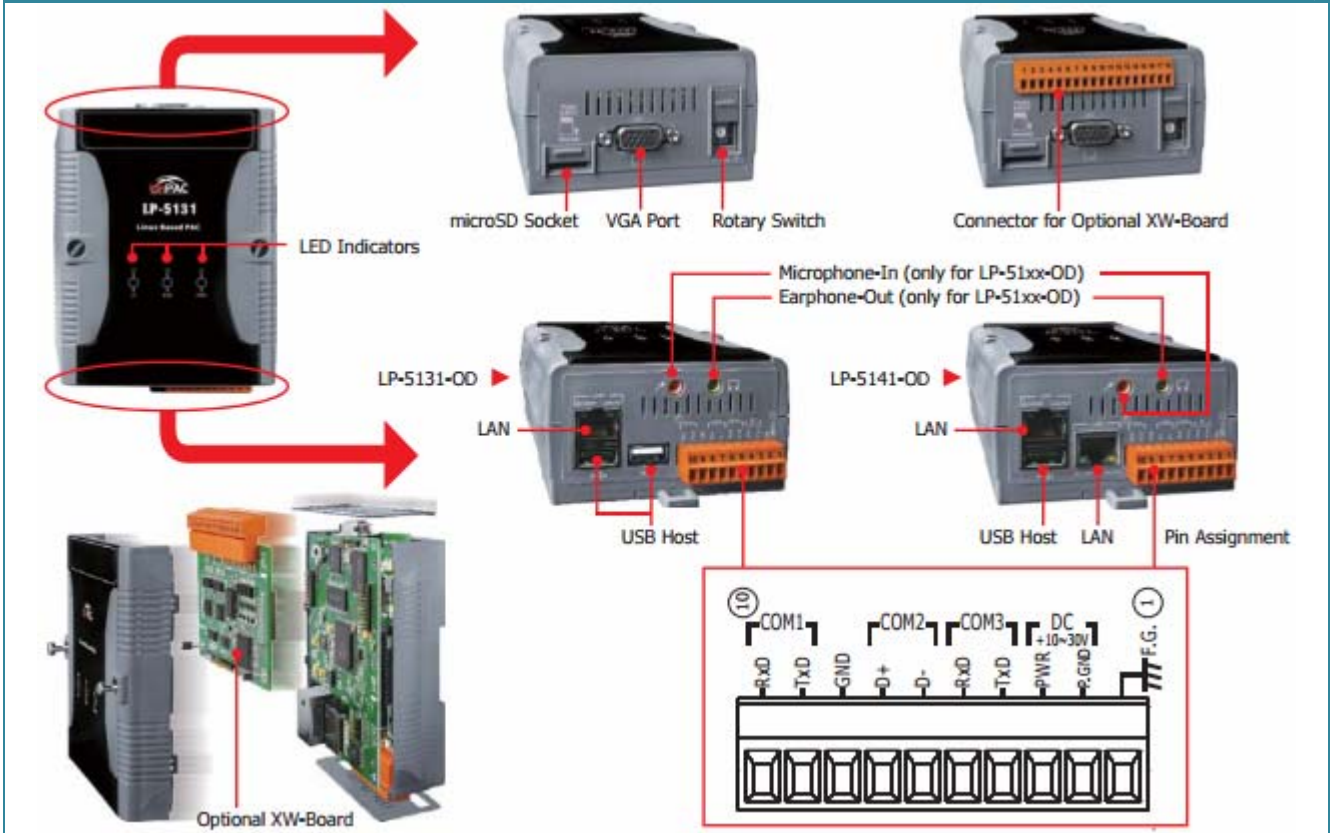
From a software perspective, the performance of FRAM and EEPROM is the same. However, FRAM is has an advantage over EEPROM when considering the read/write speed, while providing low power consumption and improved data security.

The LP-51xx series includes EEPROM storage of 16 KB.

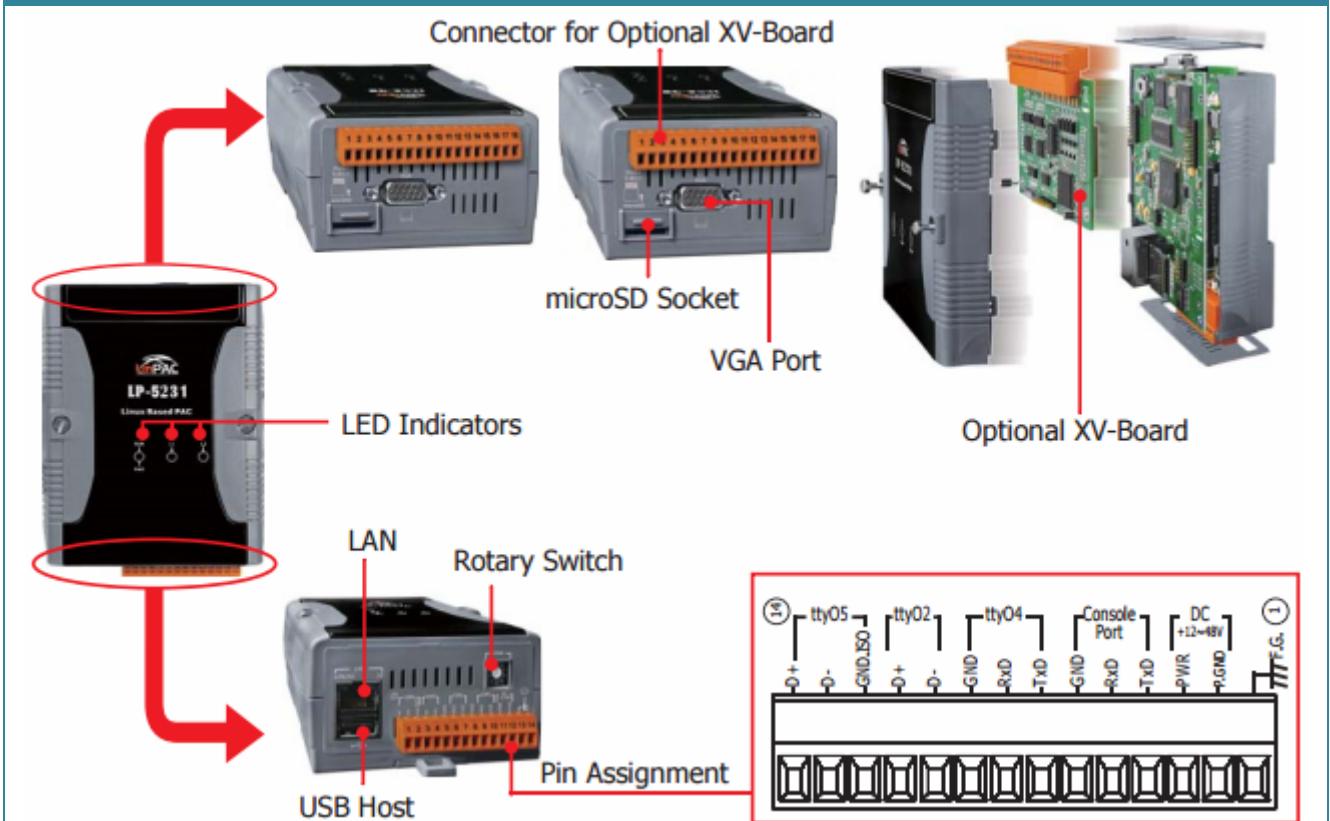
Comparison between FRAM and EEPROM		
Specification	FRAM	EEPROM
Read/Write speed	Better. Able to access or write data in a fraction of the time, with no erase latency.	-
Power	Better. Does not require high voltage to Read/Write data.	-
Data security	Better. Data retention is greater than EEPROM, with fewer write errors.	-
Write endurance	Better. Able to endure a far greater number of write/erase cycles, up to 10^{14} times.	Limited to around 100,000 cycles

Skin Overview

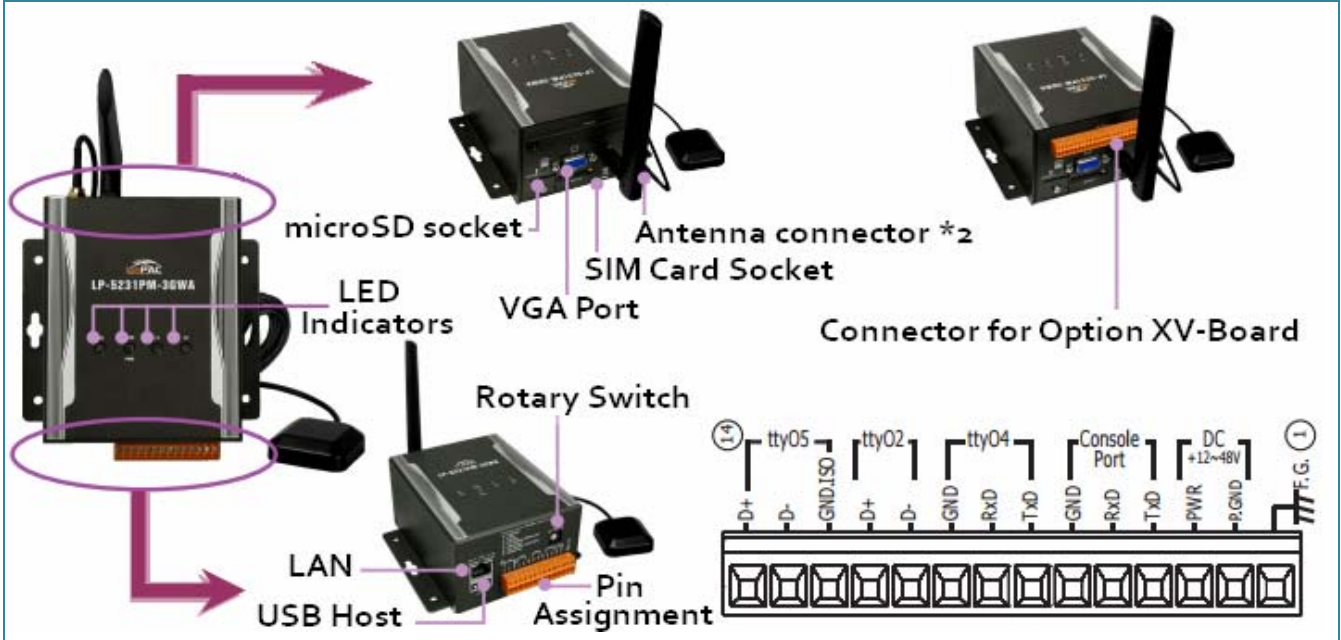
LP-51xx



LP-5231



LP-5231PM-3GWA LP-5231PM-4GE/GC



LP-2241M

