Tibbo TECHNOLOGY — Module Comparison Chart

Generation	1st generation: Where it all began...	2nd generation: Mature serial-over-IP platform, support for simple Tibbo BASIC applications			3rd generation: Full power of Tibbo BASIC programmability, support for serial-over-IP via available Tibbo BASIC applcation			
Device	EM100	EM120	EM200	EM203	EM1000	EM1202	EM1206	EM500
Highlights	Tibbo's original orange module that helped put us on the map.	An improvement over the original EM100.	Like the EM120, but with 10/100Base-T Ethernet.	Member of x20x family, mates with the RJ203 jack/magnetics. Combined footprint only 31x19mm.	2.54mm (0.1") pin pitch – ideal for prototyping. New to Tibbo BASIC? Start your quest with this module!	Stacked design minimizes footprint, device width close to that of a standard RJ45 jack.	Member of x20x family, mates with the RJ203 jack/magnetics. Combined footprint only 34.5x19mm.	Ideal for cost-sensitive applications. Minimal footprint. Width and height close to those of a standard RJ45 jack.
Can work as a serial-to-IP device?	YES				YES, through the use of available serial-over-IP Tibbo BASIC application			
Tibbo-BASIC programmable?	NO	YES, but with limited features			YES, with full power of Tibbo BASIC, its objects, and libraries			
Ethernet port	YES, 10BaseT		YES, 10/100BaseT					
Built-in magnetics	YES	NO						
Wi-Fi port	NO				EXTERNAL, requires the GA1000 Wi-Fi add-on module			YES, in the future
Serial port(s)	1				4			1
Number of I/O lines	Up to 6	Up to 9	Up to 9	Up to 4	Up to 54	Up to 32	Up to 17	Up to 8
Flash memory	64KB, used to store Serial-over-IP (SoI) firmware		128KB, for SoI or Tibbo OS (TiOS) firmware, compiled T-Basic app.		512KB or 1024KB, for TiOS firmware, compiled Tibbo BASIC application and its data			512KB, for TiOS + BASIC application
Flash disk (FD. object)	NO				YES, can take all free space in the flash memory (space not already occupied by TiOS firmware and Tibbo BASIC application)			In the future, with external flash IC
EEPROM	256 bytes, used by SoI firmware to store settings		2048 bytes, used by SoI firmware to store settings, 2042 bytes available to store T-BASIC app. data		2048 bytes, 2042 bytes available to store Tibbo BASIC application data			256 bytes, 200 bytes available to store Tibbo BASIC app. data
RTC (RTC. object)	NO, but you can connect an external RTC				YES, with internal or external backup power source	NO, but you can connect an external RTC	YES, with external backup power source	NO, but you can connect an external RTC
Display support (LCD. object)	NO, but you can connect a simple text display				YES, supports several models of graphical displays, connected externally			YES, in the future
Keypad support (KP. object)	NO, but you can connect keys to I/O lines				YES, up to 64 keys depending on the availability of I/O lines and keypad configuration			YES, in the future
Buzzer control output	NO				YES, programmable square wave output			NO
System (a.k.a. MD) button line	YES							
Status LED control lines	2, for green and red status LEDs							2, for green and red dual-function LEDs
Ethernet LED control lines	2, for link and speed mode indication							1, for link indication
PLL (speed) control	NO				YES, through hardware (jumper) or software	YES, through software only		NO
Reliable onboard reset	NO, proper external reset circuit is required for correct device operation				YES, onboard power-up, brown-out detection, and watchdog circuit			NO, external reset required
Supply voltage (nominal)	5V				3.3V, I/O lines are 5V-tolerant			
Current consumption (max)	40mA	50mA	220mA, with 100BaseT link		230mA, with PLL on and 100BaseT link			260mA, at 100BaseT
Dimensions (LxWxH)	46x28x13mm	35x27x9.1mm	32.1x18.5x7.3mm	30.1x18.1x5.5mm	38.4x28.4x5.5mm	19.1x17.1x14.6mm	33.2x18.1x5.5mm	18.5x16.0x6.5mm
Potted (sealed) enclosure	YES		NO					
Firmware upgrades	YES, through a serial port or network							YES, serial/network, including "cold upgrade"