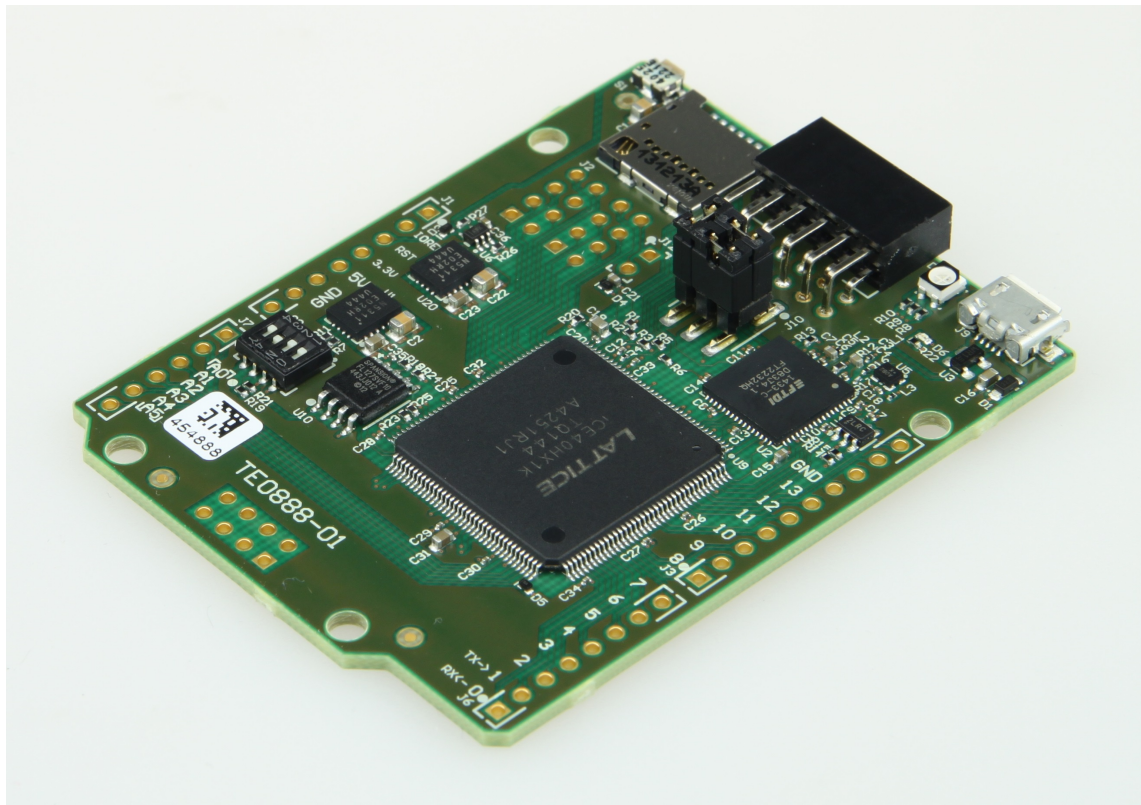


DIPSY EPT (Emulator Programmer Tool)



Compatibility with iCEstick Evaluation Kit

Feature	iCEstick	DIPSY EPT	Notes
FPGA	ICE40HX1K	ice40HX1K	optional assembly with ICE40HX4K
iceCUBE	Yes	Yes	free license
IceStorm	Yes	Yes *	HX4K is not supported by IceStorm
Total I/O in header/connector	24 (Pmod + 2 headers)	47	Pmod+Arduino+ESP8266+DIPSY headers
PIO0 - 8 I/O	J1 prototype holes	Arduino Header Digital D0..D7	
PIO1 - Pmod Slot	vertical (not fully compliant to Pmod Specification)	R/A version as per Pmod Specification	Pinout compatible
PIO2 - 8 I/O	J3 prototype holes	4 pins are in "DIPSY" header	iCEstick J3 pins not directly available
USB Connector	USB B, "stick form factor"	micro USB	Rev 2 has mini USB
USB Interface	FT2232H	FT2232H	
FTDI EEPROM	93LC56	93AA56	
FTDI ADBUS	6 pins connected	8 pins connected	more options on channel A possible
FTDI BDBUS	7 pins connected	8 pins connected	7 pins are at same locations
FTDI BCBUS	not connected	6 pins connected	Support for high speed FIFO modes

SPI Flash size	4 Mbyte	16 Mbyte	
SPI Flash type	Micron N25Q032A	Spansion S25FL127S	Supported by Diamond Programmer
SPI Flash Connection	One bit I/O only	Quad 4 Bit mode supported	
SPI Flash Programming	yes, USB	yes, USB	Supported by Diamond and open source tools
Configuration RAM Programming	not supported	yes, USB	Supported by Diamond and open source tools
Boot mode selection	SPI Flash Boot as fixed default	SPI slave or SPI Master (flash)	ICEd has DIP switches for boot mode
Multiboot support	cold boot select not supported	cold boot select on DIP Switches	
iCE CRESETB	fixed connection ADBUS7	ADBUS7 with disconnect jumper	more options when using FTDI a for custom protocols
12MHz Clock	FPGA Pin 21	FPGA Pin 21	Same as iCEstick, shared from FTDI Clock
iRDA Transceiver	available on board	not present on board	Pins are available in Arduino Analog Header
WiFi	as Pmod add-on only	ESP8266 header	ESP header can be used I/O extension with 5 I/O
LED0	LED0 red, active high	RGB LED, active low	
LED1	LED1 red, active high	RGB LED, active low	
LED2	LED2 red, active high	RGB LED, active low	
LED3	LED3 red, active high	SMD LED green, active high	
LED4	LED4 green, active high	not present	
SD Card	as Pmod add-on only	microSD socket onboard	
Reset (reconfig) button	not available	onboard reset button	