



DISCOVER
THE FAST & EASY APPROACH
TO IMPLEMENTING
ZigBee® & Thread

THE CEL ADVANTAGE

Pairing 50+ Years of RF Expertise with the Industry's Premier Mesh Networking Stack from Silicon Labs



One Module for Multiple Standards



Accelerated Time to Market



Built on the World's Premier Mesh Networking Stack



Professional Grade Quality & Reliability



Technical Expertise And Support



THREAD GROUP
Contributor Member

Learn More

www.cel.com/empoweringmesh



THE CEL ADVANTAGE



One Module for Multiple Standards

- Drop-in compatible with CEL's Bluetooth Smart Mini Modules
- Completely integrated RF and baseband solutions
- Eliminates need for in-house RF expertise
- Single module can be used across multiple SKUs for ZigBee or Thread

Accelerated Time to Market

- Modular form reduces typical design-in time by 88%
- Designs are pre-certified to meet requirements for...

- ✓ FCC/IC/CE
- ✓ iControl Open Home Platform

- MeshWorks software platform significantly reduces software development time

Built on the World's Premier Mesh Networking Stack

- Silicon Labs' EmberZNet PRO™ and Thread stacks are the most robust, reliable and comprehensive mesh networking software solutions
- Development kit includes access to Ember's world class software development tools



Professional Grade Quality & Reliability

- All products 100% RF tested with traceability
- Extensive JESD22 qualifications
- Robust supply chain



Technical Expertise and Support

- Access to hardware and software engineers fluent in the Ember portfolio
- Guidance on developing ZigBee- and Thread-compliant solutions for various ecosystems



PROFESSIONAL GRADE CERTIFIED MODULES



PRODUCT OFFERINGS & TECHNICAL INFORMATION



MeshConnect Products ▶

	EM358x Mini Modules		EM357 Mini Modules		EM357 USB Sticks		EM358x USB Sticks				
	Standard	Extended Range	Standard	Extended Range	Standard	Extended Range	Standard	Extended Range			
MCU	Radio Parameters										
	2405 to 2480 MHz / DSSS / IEEE 802.15.4		2405 to 2480 MHz / DSSS / IEEE 802.15.4		2405 to 2480 MHz / DSSS / IEEE 802.15.4		2405 to 2480 MHz / DSSS / IEEE 802.15.4				
	Silicon Labs™ EM3588 32 bit, ARM® Cortex™ - M3		Silicon Labs™ EM357 32 bit, ARM® Cortex™ - M3		Silicon Labs™ EM357 32 bit, ARM® Cortex™ - M3		Silicon Labs™ EM3588 32 bit, ARM® Cortex™ - M3				
	512 kB Flash, 64 kB RAM		192 kB Flash, 12 kB RAM		192 kB Flash, 12 kB RAM		512 kB Flash, 64 kB RAM				
	-		-		1 MB Flash		-				
	Up to 22		Up to 22		N/A		N/A				
NETWORK	USB										
	USB 2.0 (full speed)		-		USB 2.0 (full speed)		USB 2.0 (full speed)				
	Mesh Networks										
	✓		✓		✓		✓				
	250 kbps		250 kbps		250 kbps		250 kbps				
	128-bit AES Encryption		128-bit AES Encryption		128-bit AES Encryption		128-bit AES Encryption				
Software Stacks											
EmberZNet PRO™ (ZigBee PRO & Thread) or MeshWorks		EmberZNet PRO™ (ZigBee PRO & Thread) or MeshWorks		EmberZNet PRO™ (ZigBee PRO & Thread) or MeshWorks		EmberZNet PRO™ (ZigBee PRO & Thread) or MeshWorks					
+ 8 dBm + 20 dBm		+ 8 dBm + 20 dBm		+ 8 dBm + 20 dBm		+ 8 dBm + 20 dBm					
- 100 dBm - 103 dBm		- 100 dBm - 103 dBm		- 100 dBm - 103 dBm		- 100 dBm - 103 dBm					
+108 dB +123 dB		+108 dB +123 dB		+108 dB +123 dB		+108 dB +123 dB					
2.1 to 3.6 V		2.1 to 3.6 V		4.0 to 5.25 V		4.0 to 5.25 V					
30mA 34mA		30mA 34mA		51mA 55mA		51mA 55mA					
44mA 150mA		44mA 150mA		65mA 165mA		65mA 165mA					
2.4µA		1.0µA		N/A		N/A					
23.9 x 16.6 x 3.9mm (0.94 x 0.655 x 0.152in)		23.9 x 16.6 x 3.9mm (0.94 x 0.655 x 0.152in)		52.7 x 24.9 x 9.98mm (2.075 x 0.984 x 0.393in)		52.7 x 24.9 x 9.98mm (2.075 x 0.984 x 0.393in)					
✓		✓		✓		✓					
✓		✓		-		-					
-40°C to 85°C		-40°C to 85°C -40°C to 85/110°C**		-30°C to 70°C		-30°C to 70°C					
PERFORMANCE	✓		✓		✓		✓				
	✓		✓		✓		✓				
	✓		✓		✓		✓				
	✓		✓		✓		✓				
	-		-		-		-				
	-		-		-		-				
CERTIFICATIONS	✓		✓		✓		✓				
	✓		✓		✓		✓				
	✓		-		-		-				
	✓		✓		✓		✓				
	-		-		-		-				
	-		-		-		-				
ZICM3588SP0-1 ZICM3588SP0-1C*		ZICM3588SP2-1 ZICM3588SP2-1C*		ZICM357SP0-1 ZICM357SP0-1C*		ZICM357SP2-1 ZICM357SP2-1-HT** ZICM357SP2-1C* ZICM357SP2-1C-HT**		ZM357S-USB ZM357S-USB-LR		ZM3588S-USB ZM3588S-USB-LR	

* Part numbers ending in **SP0-1C** have an RF port for external antennas and are not FCC, IC or CE certified.

Part numbers ending in **SP2-1C** have an RF port for external antennas and are FCC and IC certified for a Nearson S181AH-2450S antenna.

** Part numbers ending in HT are suited for high temperature applications up to 110 °C