



# MeshConnect™

Empowering Wireless Connectivity



DISCOVER  
THE FAST & EASY APPROACH  
TO IMPLEMENTING  
ZigBee®

## THE **CEL** ADVANTAGE

Pairing 50+ Years of RF Expertise with the Industry's Premier ZigBee® PRO Stack from Silicon Labs



**Simplified Development with Reduced Design Risk**



**Accelerated Time to Market**



**Built on the World's Premier ZigBee Stack**



**Professional Grade Quality & Reliability**



**Technical Expertise & Support**



Home Automation



Building Automation



Light Link



Smart Energy



Learn More  
[www.cel.com/empoweringmesh](http://www.cel.com/empoweringmesh)



### THE **CEL** ADVANTAGE



#### Simplified Development with Reduced Design Risk

- Completely integrated RF & baseband solutions
- Designs eliminate need for in-house RF expertise
- Single module can be used across multiple SKUs



#### 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
  - ✓ Daintree Networks Control Scope Connected Platform



#### Built on the World's Premier ZigBee Stack

- Silicon Labs' EmberZNet PRO™ stack is the most robust, reliable and comprehensive ZigBee PRO software solution
- Development kit includes access to Ember's world class software development tools



#### Increased Reliability

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

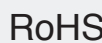


#### Technical Expertise & Support

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



#### PROFESSIONAL GRADE CERTIFIED MODULES



CONNECTED ENABLER

### PRODUCT OFFERINGS & TECHNICAL INFORMATION



MeshConnect Products ▶

		MeshConnect EM357 Mini Modules		MeshConnect EM357 USB Sticks	
		Standard	Extended Range	Standard	Extended Range
MCU	<b>Radio Parameters</b>	2405 to 2480 MHz / DSSS / IEEE 802.15.4		2405 to 2480 MHz / DSSS / IEEE 802.15.4	
	<b>Transceiver Chipset</b>	<b>Silicon Labs™ EM357</b> , 32 bit, ARM® Cortex™ - M3		<b>Silicon Labs™ EM357</b> , 32 bit, ARM® Cortex™ - M3	
	<b>Memory on Chip</b>	192 kB Flash, 12 kB RAM		192 kB Flash, 12 kB RAM	
	<b>Supplemental Memory</b>	-		1 MB Flash	
NETWORK	<b>Inputs/Outputs</b>	23		N/A	
	<b>USB</b>	-		USB 2.0 (full speed)	
	<b>Mesh Networks</b>	✓		✓	
	<b>Over-the-Air Data Rate</b>	250 kbps		250 kbps	
PERFORMANCE	<b>Over-the-Air Security</b>	128-bit AES Encryption		128-bit AES Encryption	
	<b>Software/ZigBee Stack</b>	EmberZNet PRO™ (ZigBee PRO)		EmberZNet PRO™ (ZigBee PRO)	
	<b>Tx Output Power</b>	+ 8 dBm	+ 20 dBm	+ 8 dBm	+ 20 dBm
	<b>Rx Sensitivity</b>	- 100 dBm	- 103 dBm	- 100 dBm	- 103 dBm
	<b>RF Link Budget</b>	+108 dB	+123 dB	+108 dB	+123 dB
	<b>Power Supply Voltage (V<sub>DD</sub>)</b>	2.1 to 3.6 V		4.0 to 5.25 V	
	<b>Rx Current</b>	30mA	34mA	51mA	55mA
	<b>Tx Current @ Max Power</b>	44mA	150mA	65mA	165mA
	<b>Sleep/Suspend Current</b>	1.0µA		0.24µA	
	<b>Dimensions</b>	23.9 x 16.6 x 3.9 mm (0.94 x 0.655 x 0.152 in)		52.7 x 24.9 x 9.98 mm (2.075 x 0.984 x 0.393 in)	
CERTIFICATIONS	<b>Integrated Antenna</b>	✓		✓	
	<b>RF Port for External Antenna</b>	✓		-	
	<b>Temperature Range</b>	-40°C to 85°C	-40°C to 85/110°C	-30°C to 70°C	
	<b>FCC</b>	✓	✓	✓	✓
	<b>IC</b>	✓	✓	✓	✓
	<b>CE</b>	✓	-	✓	-
	<b>RoHS</b>	✓	✓	✓	✓
<b>iControl</b>	-	✓	-	✓	
<b>Daintree ControlScope</b>	✓	✓	✓	✓	
<b>Part Numbers</b>		Z1CM357SP0-1 Z1CM357SP0-1C*	Z1CM357SP2-1/SP2-1-HT Z1CM357SP2-1C*/SP2-1C-HT*	ZM357S-USB	ZM357S-USB-LR

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