OptConnect
MANAGED WIRELESS SOLUTIONS

Managed wireless connectivity for your IoT & M2M applications

Part Number	Description
EMA-L4-1-XX-A-A	ema™, LTE Cat 4 AT&T(primary), Verizon(Secondary) for North America
EMA-LA-1-US-B-A	ema™, LTE Cat 4 Verizon(primary), AT&T(secondary for US

Features

- Small form-factor
- Robust 20 pin interface
- Built in management Microcontroller Unit (MCU)
- USB and UART modem communication paths
- OptConnect ema™ emaLink interface
- Integrated TCP/IP and UDP/IP stacks

Advantages

- Automatic Connection Monitoring and Management
- Remote Diagnostics
- Supports both Verizon and AT&T LTE networks at CAT 4 speeds (150Mbps down, 50Mbps up)
- No additional Carrier Certifications required
- Firmware Update Over the Air (FOTA)
- MCU Firmware Update Over the Air (microFOTA)

OptConnect ema™

OptConnect ema™ is a fully end user certified modem with built in intelligence for autonomous monitoring, management, and self-healing. Its Embedded Managed Modem Architecture enables customers to rapidly design and deploy their cellular connected solutions while eliminating the delays and complexities of typical cellular M2M/IoT deployments. Each OptConnect ema™ comes integrated with an industry leading suite of OptConnect managed services that include:

- OptConnect SIM cards
- Cellular data plans
- Secure connectivity monitoring and management
- Device management portal
- 24x7x365 technical support
- Warranty replacement services
- Simple ready-to-use back office API cloud integrations
- Logistics
- Fast fulfillment

OptConnect ema™ is fully certified as an end user modem and eliminates the need for a customer's host board and equipment to be certified by carriers. By using the OptConnect ema™ modem, customers can introduce new board designs as often as necessary and never have to send their designs through a time consuming and costly certification process. OptConnect ema™ is a complete solution for a headache-free M2M/IoT strategy.

Technical Specifications (OptConnect ema™)

Target Region	North America (AT&T, Verizon)
Cellular Technology	
Frequency Bands	LTE: FDD B2, B4, B5, B12, B13
Fallback	3G UMTS-HSPA: B2, B5
Data Speeds	
Download Rate (Max.)	150 Mbps
Upload Rate (Max.)	50 Mbps
Fallback Speed	UMTS-HSPA: 42Mbps
Hardware	
Form Factor	20 pins, 2 rows x 10 pins Thru Hole
Dimensions	29 x 33.78 x 10.67 mm 1.14 x 1.33 x 0.42 inches
Weight	12 grams, 0.4oz
Antennas	Certified with Primary and Diversity Antennas
Antenna Connector	Hirose U.FL x 2
Internet Protocols	TCP/IP, UDP, Ethernet over USB (PPP, CDC-NCM, MBIM)
Power	
Input Voltage	3.4V to 4.2V, nominal 3.8V
Communication Mode	3GPP TS 27.005, 27.007 and Telit/OptConnect Custom AT commands Secondary OptConnect ema™ emaLink interface
I/O Voltage	1.8V - 5.5V
Continuous Avg. Current	140 mA @ 3.8V (Active Socket Dial)
Maximum Current	730 mA @ 3.8V (Active Socket Dial)
Idle Avg. Current	70 mA @ 3.8V (Idle, registered on network)
Module Off Avg. Current	20 mA @ 3.8V (Module powered off via AT command)
Interfaces	
Type	UART x 2, USB
USB Driver Support	USB 2.0
Approvals	
Regulatory Certifications	PTCRB, AT&T, Verizon ODI, FCC
Carrier	AT&T, Verizon
Compliance	RoHS compliant
Temperature Range	
Industrial Grade	-40°C to +85°C
Support and Warranty	1 Year standard warranty

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