

# Gridstream® Connect Cellular Residential Meters



LTE-M Cellular FOCUS AXe/AXe-SD

*Plug-and-play cellular meters that are omni-carrier capable*

## Overview

Landis+Gyr's LTE-M cellular communication for the FOCUS AXe/AXe-SD meters provides Gridstream® Connect customers with another AMI option that is feature-rich and simple to deploy. The LTE-M cellular endpoint is preconfigured to self-register with Landis+Gyr's Command Center head-end. With the turnkey option, Landis+Gyr offers a 15-year contract for connectivity services. This includes omni-carrier capability that ensures that if one cellular network fails, the meter will switch to another available carrier and continue transmitting.

## FEATURES

- Active and reactive energy and demand (TOU capable), including bi-directional measurement
- Integrates into all forms, classes, and voltages of the FOCUS AXe/AXe-SD, including remote disconnect/connect capabilities, and service limiting
- Detection, logging, and reporting of diagnostic information for each meter
- Modem, module, ZigBee, and metrology firmware can be upgraded over the cellular network with no interruption of readings during upgrades
- Two sets of load profile data with configurable intervals (1, 5, 15, 30, and 60 minutes)
- Capable of supporting TOU without a battery
- Advanced Security available

## SOFTWARE REQUIREMENTS

Deployment of an LTE-M cellular endpoint requires:

- Command Center version 7.4 or later, licensed with the Cellular Adapter
- 1132 Suite, version 5.13MR1

## FOCUS AXE MODULE OVERVIEW

The endpoint assembly contains:

- FOCUS-AXe meter
- LTE-M cellular communication module
- SIM card – Form 2FF, industrial rated
- “Under-glass,” wideband antenna for cellular radio
- Built-in antenna for ZigBee



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## PRODUCT SPECIFICATIONS

CELLULAR MODULE					
Category:	Cat-M1				
Standards:	3GPP Release 13				
Supported Bands:	2, 4, 12, 13, 25 (Cat-M1)				
Regulatory:	FCC, IC; IEC 61000-4-2, 3, 4, 5, 12, 18; ANSI C.12.20; ANSI C12.1, ANSI C37.90.1 (2002)				
ELECTRICAL					
Supply Voltage	11 - 28Vdc				
Power	5W Peak .8W Continuous				
ENVIRONMENTAL					
Parameter	Min	Max	Units	Notes	
Storage Temperature	-40	85	°C		
Operating Temperature	-40	75	°C		
Relative Humidity	0	95	%	Non-condensing	
ZIGBEE TRANSMIT POWER AND RECEIVE SENSITIVITY					
ZigBee Radio General Parameter	Value			Units	Comments
	Min	Typ	Max		
RF Frequency Range	2.405		2.475	GHz	
No. of Channels	15				
Modulation Type	O-QPSK				Comply with IEEE 802.15.4

ZIGBEE TRANSMIT POWER AND RECEIVE SENSITIVITY					
Data Rate	250			kbps	
IEEE Specification	802.15.4				
On-air Tx Time (Duty Cycle)	66			%	66ms per 100ms max
Memory RAM	12				
Flash	192			KB	
Antenna Type	Inverted F				Printed
Peak Antenna Gain	-3.07			dBi	Peak Gain
Antenna Polarization	Vertical				
ZigBee Transmitter Parameter	Value			Units	Comments
	Min	Typ	Max		
Output Power (Conducted)			19	dBm	Measured at room temperature
Frequency Stability	-40		+40	ppm	
Error Vector Magnitude		5	30	%	
Power Spectral Density/3kHz BW	6			dBm	
6 dB Bandwidth	1.59			MHz	Modulated
ZigBee Receiver Parameter	Value			Units	Comments
	Min	Typ	Max		
Sensitivity		-104	-101	dBm	At 35% PER
Adjacent Channel Rejection	40			dBc	
Image Rejection	30			dB	

### GET IN TOUCH.

For more information and nationwide warranty terms, visit us at [landisgyr.com](http://landisgyr.com) or call us at 888-390-5733.



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