



XT METER PLATFORMS

The XT family of meters is designed to run the same firmware on all meters. Therefore the functionality among all types is similar. There are differences between PCB hardware which makes each of them unique. All Vision meters meet requirements set forth by UL with regard to design, materials and components.

The **Standard XT** meter platform is typically offered when standard features are required. The XT can be equipped with Vision's Data on Demand and Nexgrid's AMI technology. It is offered in all forms and can be equipped with a 200 amp switch in Forms 1S, 2S & 12/25S.

The **XT-L** is the Standard XT with a 4G LTE or Cat M-1 modem designed for multiple networks. Communications with the **XT-L** can be accomplished with Itron's MV-90, Vision's EndSight or 20/20 software and PrimeStone PrimeRead. The **XT-L** can be sold with or without UL approval.

Some customers require their meters to be UL approved especially in non-utility applications. Our **XT-UL** platform has all the same features as the standard XT and some enhancements in the power supply.

The **XT-E** is an enhanced version of our XT platform designed specifically for Verizon's GridWide. It has an enhanced power supply and additional circuitry for power failure. All switching circuits for the disconnect switch(s) are on the main board.



Standard XT, XT-L, XT-E & XT-UL

Communications Options



Cat M-1 Modem



Data on Demand

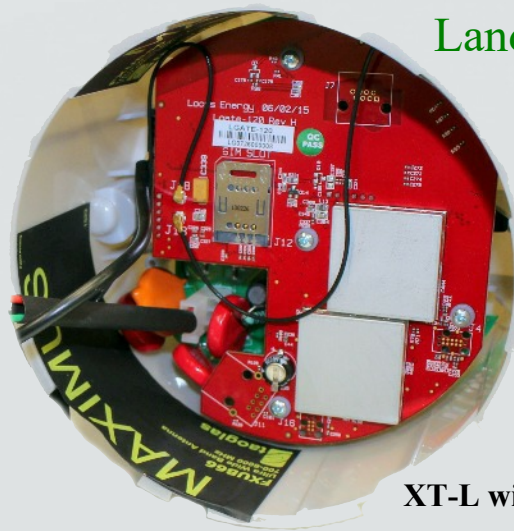


Evolution LTE

Landis + Gyr Airpoint



XT-E



XT-L with 4G or Cat M-1

LTE Modem PCB

Displayable Values

Energy Values

- KWh Delivered Total
- KVARh Delivered
- KVAh Delivered
- KWh Delivered Phase A
- KWh Delivered Phase B
- KWh Delivered Phase C
- KWh Received Total
- KVARh Received Total
- KVAh Received
- KWh Received Phase A
- KWh Received Phase B
- KWh Received Phase C
- Quadrant 1 KWh
- Quadrant 2 KWh
- Quadrant 3 KWh
- Quadrant 4 KWh
- Quadrant 1 KVARh
- Quadrant 2 KVARh
- Quadrant 3 KVARh
- Quadrant 4 KVARh

Demand

- Max KW Demand
- Max KVA Demand
- Max KVAr Demand
- Cumulative Demand
- Continuously Cumulative Demand
- Demand Reset Date
- Date, Max KW Demand
- Date, Max KVA Demand
- Date, Max KVAr

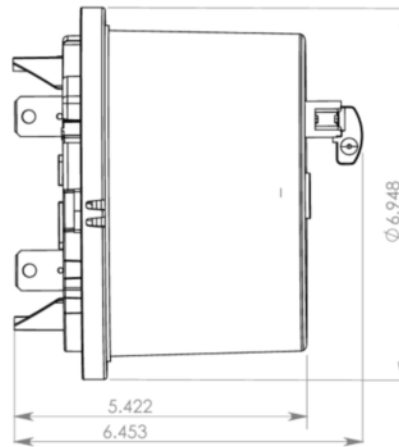
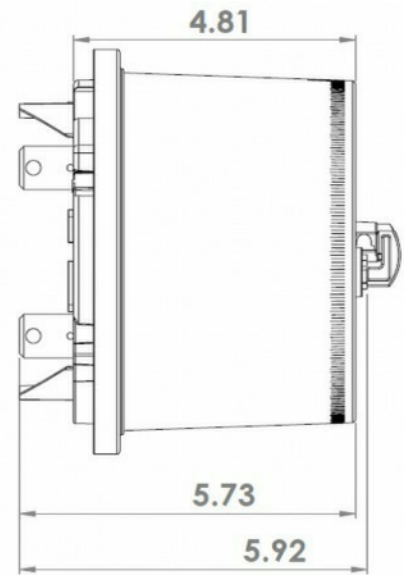
Time of Use

- KWh Rate A
- KWh Rate B
- KWh Rate C
- KWh Rate D
- Cumulative Demand
- Continuously Cumulative Demand
- Demand KW Rate A
- Demand KW Rate B
- Demand KW Rate C
- Demand KW Rate D

Volts, Amps & PF

- Voltage RMS Phase A
- Voltage RMS Phase B
- Voltage RMS Phase C
- Current RMS Phase A
- Current RMS Phase B
- Current RMS Phase C
- Phase Angle Phase A
- Phase Angle Phase B
- Phase Angle Phase C
- Power Factor Phase A
- Power Factor Phase B
- Power Factor Phase C
- Total Power Factor

XT-E
Dimensions



Standard XT, XT-L,
XT-UL



LCD Display Layout

9 N 9 J 1 P

Meter Form	Volts/Class	Platform	Communications	Options	Cover Type
1 Form 1S	A 120V/100A	1 Vision LT	A None	1 None	D Demand
2 Form 2S	B 120V/200A	2 Vision ST	B HP Airpoint Radio	2 200 A Switch	N None
3 Form 3S	C 120V/320A	3 Vision XT	C Pulsed Output FM C	3 Ext Antenna	P Polycarbonate
4 Form 4S	D 120V/20A	4 Vision XT AMI	D Pulsed Output FM A	4 Switch & Ant	L Lexan SLX
5 Form 5S	E 240V/200A	5 Vision ST AMI	E RS-485	9 100A Switch	
6 Form 6S	F 240V/320A	7 LT Shielded	F RF/Pulse FM C	0 TSTM Adpt	
9 Form 9S	G 240V/20A	8 ST Shielded	G RF/Pulse FM A	D Dual CT's	
R Form 10S	H 480V/200A	9 XT Shielded	H RF/RS-485		
P Form 11S	J 480V/320A	S XT-E (SSN)	J Data on Demand		
M Form 12S	K 480V/20A	U XT-UL	K LTE Modem		
N Form 25S	L 120-480V/200A		N Nexgrid		
Z Form 16S	M 120-480V/320A		T 3 Airpoints		
C Form 2SM	N 120-480V/20A		W 5 Airpoints		
	P 120-480V/100A		U Cat M-1		
			Z LoRa Radio		

Catalog Numbering Guide

GENERAL XT SPECIFICATIONS

- ANSI C12.18, C12.19, C12.20, & C37.90.1 Compliant
- Utilizes Magnetically Shielded Current Transformer(s) for Current Measurement
- 120-480 VAC Input Voltage
- LCD Display is soldered to the board
- 12 Channels of Load Profile,
- Time of Use
- Demand, KW & KVAR
- Reactive Metering
- Four Quadrant Metering
- Event Log
- Delivered, Received and Net Metering
- Alternate Mode with programmable display values
- Accuracy Class $\pm 0.2\%$
- Shipped with Accuracy better than $\pm 0.15\%$
- Designed for 20 Year Life
- Battery options for Display, Ram, and Clock
- Continuous Instantaneous KW
- Uses Vision 20/20 Software for Programming (included with the purchase of meters at no charge)
- 50/60 Hz $\pm 5\%$
- Utilizes Maxim Teridian Technology
- 100 & 200 Amp Switch Option
- 30 Digit User Defined Security Key
- 40 to $+85$ Degree C Operation
- 5 to 95% Relative Humidity
- Functions with Itron's MV90 System.
- Code Numbers assignable to Display Values
- All plastic materials meet or exceeds UL Requirements

XT-E ADDITIONAL SPECIFICATIONS

- Power supply capable of 10 watts @ 4 volts
- Switching circuits for high current switches on main PCB
- Zero crossing circuit for power outage detection

EVOLUTION LTE ADDITIONAL SPECS

- AES 256 Security with Certificate Handling
- Meter/Modem Power Consumption 3.6 watts idling, 6 watts at maximum transmitting
- Designed for multiple wireless systems.
- Antenna Patent licensed by Trans-Data

All XT Vision Meters Include

Time of Use
KW & KVAR Demand
Continuously Cumulative Demand
12 Channels of Load Profile
Net Metering
Reactive Metering
Four Quadrant Metering
Event Log

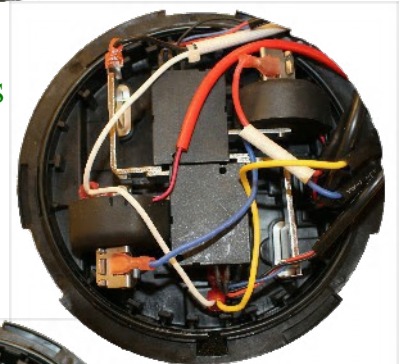
No Extra Charge for Any Features

100 Amp Form
16S Switch



200 Amp Form
2S or 12S Switch

100 Amp Form 2S
or 12S Switch



100 Amp Form
1S Switch

2020 Programming Software

This screenshot shows the 'Meter Settings' window in the Vision 2020 software. It displays various meter parameters and configuration options:

- Meter Date:** 3/15/2016
- Meter Time:** 3:53:09 PM DST ON
- Meter Temp:** 23.5°C
- TOU:** OFF
- Meter Settings #:** 0
- Firmware Version:** 4.051
- Serial Number:** 10133000
- ERT Number:** 0
- Meter Form:** 25
- Battery:** Not Installed
- Switch:** Not Installed
- Cumulative Values:**
 - Cumulative Demand: 0.000 kW
 - Cont. Cumulative Demand: 0.000 kW
- Demand Values:**
 - Max kW: 0
 - Max kVA: 0
 - Max kVAr: 0
- Summation Values:**
 - kWh del: 0.000
 - kVAh del: 0.000
 - kVArh del: 0.000
- Buttons:** Read Meter, Update Firmware, Reset Meter, Program Meter ID, Program Meter

Vision 2020 Software is capable of programming all variables in the meter. Time of Use, Demand, 12 channels of Load Profile, Net Metering, Reactive and Four Quadrant Metering are programmable. Demand can be programmed for block, rolling, cumulative and continuously cumulative. Programs can be developed and stored under a specific Meter Settings #.

2020 is very intuitive and flows easily from screen to screen. All Vision Meters are supplied with everything included. The meter is only sold in one configuration "LOADED". Thus all functions in 2020 are available to be programmed.

This screenshot shows the 'Load Profile Settings' window in the Vision 2020 software. It displays configuration options for 12 channels:

- Load Profile Settings:**
 - Number of Channels: 12
 - Interval (minutes): 15
 - Buttons: Read Load Profile Settings, Program Load Profile Settings, Reset Load Profile
- Channel Settings (1-12):**
 - Channel 1: kWh delivered
 - Channel 2: kVAh delivered
 - Channel 3: kVArh delivered
 - Channel 4: kVArh received
 - Channel 5: kWh delivered Rate A
 - Channel 6: kWh delivered Rate B
 - Channel 7: kWh delivered Rate C
 - Channel 8: kWh delivered Rate D
 - Channel 9: kVArh delivered Rate A
 - Channel 10: Min Voltage, Phase A
 - Channel 11: Max Voltage, Phase A
 - Channel 12: Avg. Demand del, kW
- Additional Settings:**
 - Number of Days: 31
 - Buttons: Read Load Profile
 - Message: Load Profile memory overwrite will occur after 42 days

2020 will run on Windows XP, 7, 8 & 10. Security is an integral part of 2020 with tasks selectable by the administrator for all users. Security between 2020 and the meter is also programmable by the administrator.

2020 is also used to communicate with Vision's XT-L LTE modem meters via the Internet.

This screenshot shows the 'Phasor Diagram' window in the Vision 2020 software. It displays meter configuration and real-time measurements:

Meter Configuration

User	Supervisor	Serial #	10306312	Meter ID	VM-10306312
Firmware Revision	4.060	Form Factor	9S	Service Type	
Transformer Factor		Line Frequency	60.10	Hardware Options	

Meter Data

Diagram

Measurements (Instant Values)

Va	239.59	Vb	239.71	Vc	239.67
Va Angle	0.00	Vb Angle	119.54	Vc Angle	238.51
Ia	2.501	Ib	2.499	Ic	2.498
Ia Angle	359.70	Ib Angle	0.30	Ic Angle	359.70
PF A	1.000	PF B	1.000	PF C	1.000
kW PhaseA	0.60	kW PhaseB	0.60	kW PhaseC	0.60
kVA PhaseA	0.60	kVA PhaseB	0.60	kVA PhaseC	0.60
kVAr PhaseA	0.00	kVAr PhaseB	0.00	kVAr PhaseC	0.00

Total Values

kWh	0.00	kVAh	0.00	kVArh	0.00	PF	1.000
-----	------	------	------	-------	------	----	-------

Legend:

- Vrms Phase A (Red), Irms Phase A (Red)
- Vrms Phase B (Green), Irms Phase B (Green)
- Vrms Phase C (Blue), Irms Phase C (Blue)

Buttons: Refresh, Save, Exit

When communicating with any XT meter it is possible to view the Phasor diagram while on site. The Phasor diagram will provide the voltage and current on all phases along with real and reactive power including the phase angle. It will also show the meter's serial number, form and version of firmware.

2020 is an ideal tool to read and store Load Profile Data. Data can be collected via the optical port, LTE modem or via the optional RS-485 port. Load Profile can also be read via Itron's MV-90 System.