OrionLX+ Automation Platform

The OrionLX+ adds new power and flexibility for larger, more challenging applications, plus adds features to simplify usage and reduce costs of ownership.

As a member of the Orion family, the OrionLX+ shares the same operating system and configuration techniques of the other Orions: OrionLX CPX, OrionLXm, Orion I/O, and OrionMX. Configurations from other Orions can run in the OrionLX+, and the same serial communication cards can be used in both the OrionLX CPX and OrionLX+.

Capabilities include hot swappable power supplies, expanded networking options, higher "Direct Video" performance, expanded application support, and significantly more power. Each is described below:

Hot Swappable Power Supplies

Single or redundant supplies can be ordered, each removable under power from the front of the OrionLX+. For higher reliability, both power supplies share the load, and are health monitored by internal Orion diagnostics.

Expanded Networking Options

Three "NovaCards" Expansion Cards are available to support a wide range of network topologies:

- NovaCard #1: Adds one 10/100/1000BaseT Ethernet port, two SFP ports, and 4 DI / 4 DO
- NovaCard #2: Add 12-port Ethernet switch 10/100/1000 BaseT
- NovaCard #3: Add PRP/HSR ports for LAN A and LAN B (10/100/1000BaseT and SFP) plus one 10/100/1000BaseT Ethernet port and one SFP port

Higher Direct Video Performance

A new "DisplayPort" video port with enhanced video support speeds up page load and supports both resistive and capacitive touch monitors for improved touch-screen performance.

Expanded Application Support

The power and flexibility enable the OrionLX+ to be applied in a broad range of applications, including:

- Substation RTU
- Security gateway
- Terminal server
- Math and Logic controller
- Protocol and Media converter
- Relay Communications processor
- FLISR controller
- SCADA
- Substation HMI
- Tile Alarm Annunciator
- Sequence-of-Events Recorder
- Data archival appliance

More Power

Six times more processing power translates into the ability to handle more points (up to 40,000), store more points and operate with much lower CPU utilization in larger applications.

Front View of OrionLX+

Other Hardware Features

- Keyboard and mouse ports
- Modular, field-replaceable serial port cards

Communications

Serial Cards

A: RS-232 Standard w/ IRIG-B
B: RS-422/485
C: ST-Fiber Optic
D: Bit Card (Bit-to-byte conversion)
E: RS-232 Isolated w/ IRIG-B
G: RS-485 w/IRIG-B
H: V-Pin Fiber Optic w/ IRIG-B

IRIG-B

Standard Built-In

SCADA Protocols

Betac/Getac
Conitel – 300/2020
CDC – Type I and II
DNP3 – Serial and IP
Harris 5000
IEC 60870 Serial and TCP
L&G 8979
Modbus – Serial and TCP
REDAC 70H
SES-92
SPS
TejasV

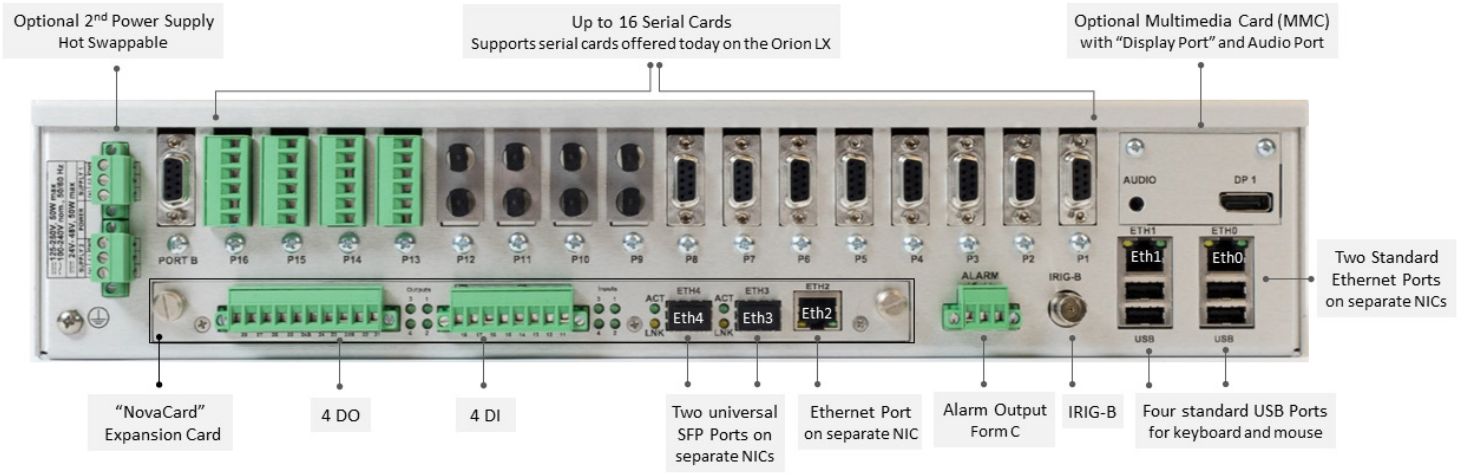
IED Protocols

ABB DPU
Allen Bradley DF1
Areva KITZ
Areva Optimho
Basler DFPR
DNP3 – Serial and IP
GE DLP
GE Moisture Meter
GridSense PAC
IEC 101, 103, and 104
IEC 61850
Keithley Meter
Modbus Serial and TCP
PG&E 2179
RFL
SEL® ASCII
SEL® Fast Meter
SEL® Fast Operate
SEL® Fast SER
SPA Bus
TransData DTO
Plus Client versions of SCADA protocols: CDC, Conitel, Harris, IEC 60870, L&G 8979 and Tejas

Other Protocols

FTP and sFTP
HTTPS
ICCP
MultiSpeak
NTP and SNTP
PPP
RADIUS
LDAP
SNMP
telnet
XML
Plus suite of other security protocols

NovaTech
AUTOMATION



Specifications

Environmental

Operating Temperature	-40°C to +70°C
Storage Temperature	-40°C to +85°C
Operating Humidity	5 to 95% non-condensing

Physical

Standard case (2U)	19W x 3.5H x 13D (in)
Weight	9.5 lbs

Connections

RS-232 w/IRIG-B	DB9 (Female)
RS-422/485	Screw terminal
RS-485 w/IRIG-B	Screw terminal
Fiber Optic (serial)	ST multimode
Fiber Optic w/IRIG-B	V-Pin multimode
Bit Card	RJ11
Ethernet	RJ45 or SFP receptacle
IRIG-B	Coax
I/O Terminals	Phoenix type, #12-24AWG
Power Terminal	Phoenix type, #10-30AWG #10 stud

IRIG-B

Input	Modulated or Unmodulated
Output (on serial ports)	Unmodulated

Processor

Intel® Atom® Quad Core	1.9GHz per core

Available SFP Transceivers

Media	Description
Fiber	Multimode SFP Transceiver, LC, 550m, 850nm, 1Gb/s
Fiber	Multimode SFP Transceiver, LC, 2km, 1300nm, 100Mb/s
Fiber	Single Mode SFP Transceiver, LC, 10km, 1310nm, 1Gb/s
Fiber	Single Mode SFP Transceiver, LC, 40km, 1310nm, 1Gb/s
Copper	RJ45 SFP Transceiver, 100m, 1Gb/s

Performance/Capabilities

IED/SCADA Points	40,000; (typical)
Refresh Rate	< 2 sec; typical

Communications

Serial	1200bps-115kbps
Ethernet	
Copper	100/1000BaseT
SFP	Supports transceivers to 1Gb
Protocols	Bit or byte
Upgrades	Via file transfer

Data Archiving & Storage

Memory	8GB SSD, plus 2GB DRAM
Database	PostgreSQL

Digital Inputs on NovaCard

Quantity	4 DI, independent, isolated
Input Range	12-48V dc / 120-250V dc Optically isolated 1ms time-stamped

Digital Outputs on NovaCard

Quantity	4 DO with 2 Form A, 2 Form C
Contact Ratings	10A MOV protected

Alarm Output

Type	Form C
Contact Ratings	10A MOV protected

Power Supplies

Input Voltage	*HV Supply*: 125/250V dc nominal and 120/240V ac nominal +/- 20% *LV Supply*: 24/48V dc nominal +/- 20%
Power Required	*HV Supply*: DC: Typical 30W, max: 50W AC: Typical 60W, max: 75W *LV Supply*: DC: Typical 30W, max: 50W
Warranty	10 Year Limited

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