

OrionLX+ Automation Platform

The OrionLX+ adds new power and flexibility for larger, more challenging applications, plus 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: OrionSX, OrionMX, OrionLXm, and Orion I/O. 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.

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

Five NovaCard Expansion Cards are available to support a wide range of network and I/O needs:

- NovaCard #0 (NC0): Adds one 10/100/1000BaseT Ethernet port and 4 DI / 4 DO:



- NovaCard #1 (NC1): Adds one 10/100/1000BaseT Ethernet port, two SFP ports, and 4 DI / 4 DO:



- NovaCard #2 (NC2): Adds 12 10/100/1000BaseT Ethernet ports:



- NovaCard #3 (NC3): Adds 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. Also adds 4 DI / 2 DO:



- NovaCard #4 (NC4): Adds 16 DI:



Front View of OrionLX+

Other Hardware Features

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

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

IED Protocols

ABB DPU
Allen Bradley DF1
Areva Optimho
DNP3 Sav5
(Secure Authentication)
IEC 60870 101/103/104
IEC 61850
Modbus
PG&E 2179
SEL® ASCII
SEL® Fast Meter
SEL® Fast Operate
SEL® Fast SER
SPA Bus
TransData DTO
Plus Client versions of SCADA protocols: CDC, Conitel, Harris, L&G 8979 and Tejas

IRIG-B

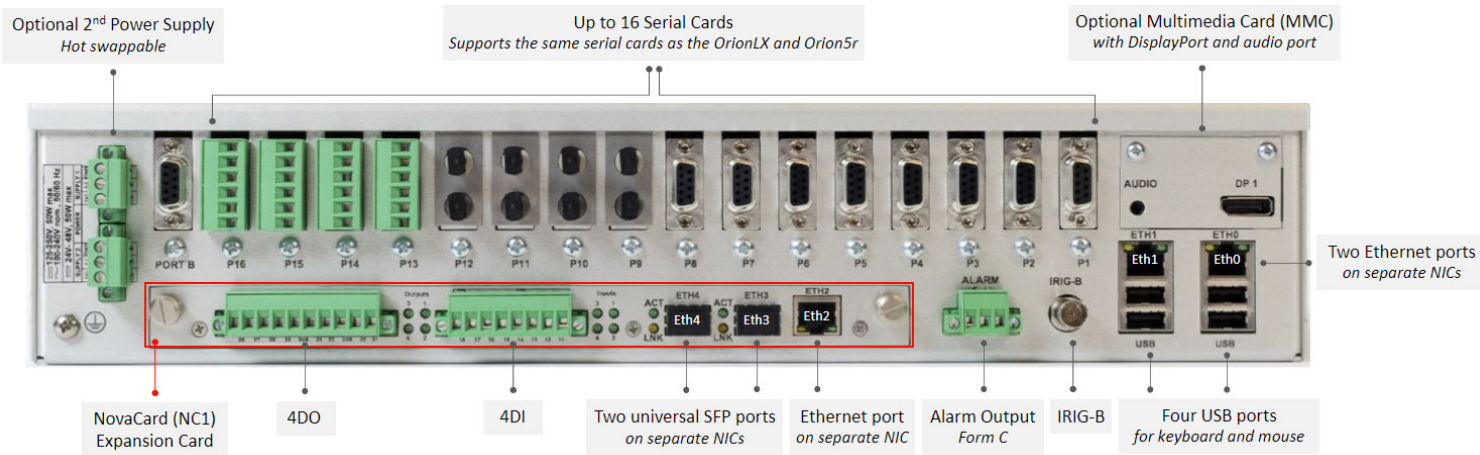
Standard Built-In

SCADA Protocols

Conitel 300/2020
CDC Type I and II
DNP3 Sav5
(Secure Authentication)
Harris 5000
IEC 60870 101/104
L&G 8979
Modbus
REDAC 70H
SES-92
SPS
TejasV

IT and Enterprise Protocols

FTP and sFTP
HTTP(S)
ICCP
LDAP
MultiSpeak
NTP and SNTP
PTP (Precision Time Protocol)
RADIUS
SNMP
telnet
XML
Plus suite of other security protocols



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
Grounding	#10 stud

IRIG-B

Input	Modulated or unmodulated
Output (on serial ports)	Unmodulated

Processor and Memory

Intel® Atom® Quad Core	1.9GHz
DRAM	2GB

Available SFP Transceivers

Model	Connector	Mode	Distance	Wavelength	Speed
SFP-MM01	LC	Multimode	550m	850nm	1Gbps
SFP-MM02	LC	Multimode	2km	1310nm	100Mbps
SFP-SM01	LC	Single mode	10km	1310nm	1Gbps
SFP-SM04	LC	Single mode	40km	1310nm	1Gbps
SFP-RJ01	RJ45	Copper	100m	N/A	1Gbps

Performance/Capabilities

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

Data Archiving & Storage

Memory	8GB
Database	PostgreSQL

Digital Inputs on NC0 / NC1

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

Digital Outputs on NC0 / NC1

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

Digital Inputs on NC3

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

Digital Outputs on NC3

Quantity	2 DO with 1 Form A, 1 Form C
Contact Ratings	10A MOV protected

Digital Inputs on NC4

Quantity	16 DI, isolated
Input Range	12-48V dc / 120-250V dc 1ms time-stamped

Alarm Output

Type	Form C
Contact Ratings	10A MOV protected

Power Supplies

Input Voltage	<i>HV Supply:</i> 125/250V dc nominal and 120/240V ac nominal +/- 20%
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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

