

The Orion5rL is an Orion5r unit with the OrionLX CPU. The Orion5rL is an upgrade of the Orion5r product family, and is designed for an expanded range of sub-station automation and security applications.

New Software Features

- Web page User Interface
 - ◊ For enhanced configuration and diagnostic support (online operations)
- Full OrionLX Security, including:
 - ◊ Security on the front RS-232 port
 - ◊ Port-blocking firewall, authentication of multiple users and multiple access groups, VPN, and audit logging

And the same features of the OrionLX, including:

- Alias
- Text Functions
- Email
- Cascaded Orions
- New Alarm-Archive-Retentive
- PostgreSQL Database
- Expanded Capacities
- Enhanced IRIG-B and Time Management

New Hardware Features

- OrionLX CPU (replacing Orion5r CPU)
- New adaptor “carrier board” enables OrionLX CPU to fit into existing Orion5r architecture
- IRIG-B Port comes with the Orion5rL upgrade
- IRIG-B cable
- Expanded memories from the OrionLX (256MB, 1GB, 4GB) will be provided to support the Archive-Alarm-Retentive option
 - Note: Expanded memory will not be a standard part of the Orion5rL upgrade
- Watchdog

Orion5rL Configuration and Orion5r Configuration Conversion

- Existing Orion5r configurations will require minor changes to run in the Orion5rL including:
 - ◊ Ethernet addresses, user name, password
 - ◊ Removal of Archive or Web Alarms and replacement with Alarm-Archive-Retentive
- NovaTech will provide a wizard to assist in conversion of Orion5r configurations to run in the Orion5rL/ OrionLX
- Existing Orion5r Key Files will be upgraded and installed in Orion5rL processors by NovaTech production prior to shipment of the upgrade kit



Orion5rL

Communications

Serial

- 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
- F:** RS-485 w/IRIG-B
- G:** V-Pin Fiber Optic w/ IRIG-B

Ethernet

- 10/100BaseT (standard)
- Second Ethernet port: 10/100BaseT

Modem

- Internal Dial-Up

IRIG-B

- Standard Built-In

SCADA Protocols

- Betac/Getac
- Conitel - 300/20x0
- CDC-1
- DNP – Serial and IP
- Harris 5000
- L&G 8979
- Modbus – Serial and TCP
- REDAC 70H
- TejasV

IED Protocols

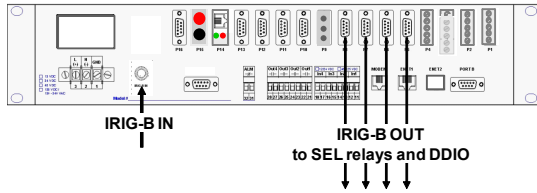
- ABB DPU
- Allen Bradley DF1
- Areva KITZ
- Areva Optimho
- Basler DFPR
- DNP3 Serial and IP
- GE DLP
- GE Moisture Meter
- IEC 870-5-103
- Keithley Meter
- Modbus Serial and TCP
- RFL
- SEL® ASCII
- SEL® Fast Meter
- SEL® Fast Operate
- SEL® Fast SER
- SPA Bus
- TransData DTO

Other Protocols

- FTP and sFTP
- HTTP
- HTTPS
- NTP
- PPP
- SNMP
- SNTP
- telnet
- XML
- Plus suite of other security protocols

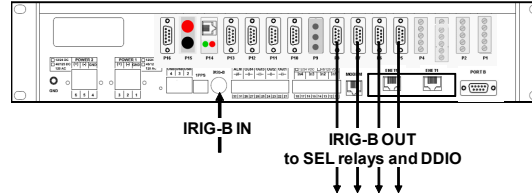


Orion5r



Orion5r amplifies and distributes IRIG-B, but does not set CPU time

OrionLX



OrionLX amplifies and distributes IRIG-B, plus accurately sets CPU time (Orion5rL works like this)

Specifications

Environmental

Fast Transient	C37.90.1 (2002)
RFI	C37.90.2 (1995)
Electrostatic Discharge	C37.90.3 (2001)
Operating Temperature	-40° C to +70° C
Operating Humidity	5 to 95% non-condensing plus other IEEE 1613

Indication LEDs

Power Supply #1	Ethernet Link and Activity
Power Supply #2	Security (Firewall)
Alarm	IRIG-B Present and Quality
Built-In Inputs	Modem Carrier Detect
Built-In Outputs	Active Configuration
RX/TX on 18 serial ports	

Physical

Standard case (2U)	19"W x 3.5H x 13D (in)
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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	ST Multimode
Fiber Optic w/IRIG-B	V-Pin Multimode
Bit Card	RJ11 (Female)
Ethernet	RJ45 (Female) or ST Fiber
Modem	RJ11 (Female)
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

CPU	Intel w/Hardware Accelerated Cryptography
Speed	533MHz
DRAM	64MB
Flash	32MB

Performance/Capabilities

IED/SCADA Points	20,000; typical
Refresh Rate	< 2 sec; typical

Communications

Serial	1200bps -115kbps
Ethernet	
Built-In Standard	10/100BaseT
Optional Second Port	10/100BaseT
Protocols	Bit or byte
Upgrades	Via file transfer

Data Archiving & Storage

Standard Memory	64MB
Expanded Memory Option	256MB, 1GB, and 4GB
Database	PostgreSQL

Internal Modem

Type	Dial-up; v.34
Speed	33.6kbps

Digital Inputs

Quantity	4 Std (Expandable)
Input Range	12 - 24V dc
	48 - 125V dc
	Optically Isolated
	1ms time-stamped

Digital Outputs

Quantity	4 Std (Expandable)
Contact Ratings	10A MOV Protected

Alarm Output

Type	Form A (default)
Contact Ratings	10A MOV Protected

Power Supplies

Input Voltage	<ul style="list-style-type: none"> • 12V dc (+/- 20%) • 24V dc (+/- 20%) • 48V dc (+/- 20%) • 12V ac / 125V dc (+/- 20%)
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Power Required

30 Watts (max)

Warranty

5 Year Limited

Contact:

NovaTech, LLC
Orion Utility Automation
13555 West 107th Street
Lenexa, KS 66215

T: 913.451.1880
F: 913.451.2845
E: orion@novatechweb.com
www.novatechweb.com