



Unisys NOAAPort Gateway System

Reliable Access to Real Time Weather Data and Products

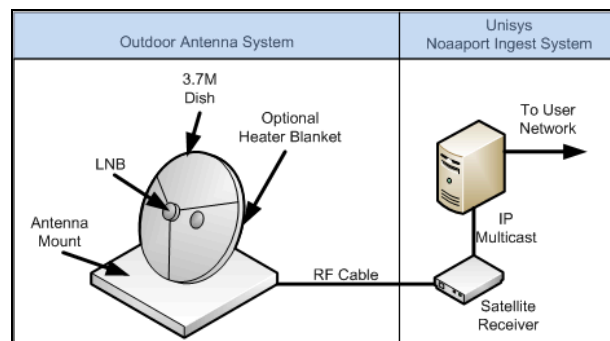
Fully Operational “Turn-Key” Access to the Expanded NWS NOAAPort Broadcast

The Unisys NOAAPort Gateway system is a fully integrated system that is configurable to receive the NWS NOAAPort broadcast data stream, to receive the Unisys Weather data stream (satellite or landline), the NOAA Weather Wire Service (NWWWS), or receive both the NOAAPort and the Unisys Weather data streams through diverse communication paths.

The Unisys NOAAPort Gateway is built, tested, and shipped from our Malvern, Pennsylvania based Weather Data Center and provided as a turn-key system fully capable to receive the 70 Mbps NWS broadcast. The system is built on an Intel platform using CentOS 6 as the Linux operating system, and supports up to 32 simultaneous users. Users connect using TCP/IP choosing between three protocols: LDM, Unisys Product Manager, or Unisys GWIP.

Each NOAAPort Gateway is configured based on the customer’s needs. Users may elect to receive the NOAAPort only, requiring hardware and associated cabling to an external satellite receive station. Users acquiring the full NOAAPort Gateway including the Unisys WeatherMAX data stream will have an option to connect to the Weather Data Center via landline. The landline option provides a redundant connection with automatic failover capability if satellite service is degraded or interrupted.

The Unisys NOAAPort Gateway ingest and processing functions are fully configurable to allow users to select products based on their needs. Alerts can be generated using Product Arrival Notification (PAN) messages, allowing users’ systems to process high priority products such as NWS advisories or warnings. Commercial weather products, such as Unisys weather radar mosaics and VAR lightning data, are also available via the Unisys WeatherMAX data stream.



A fully integrated Unisys NOAAPort Gateway System including 3.7 meter C-Band antenna, Novra S-300 DVB-S2 and DVB-S (optional) receivers, ingestor and product server.

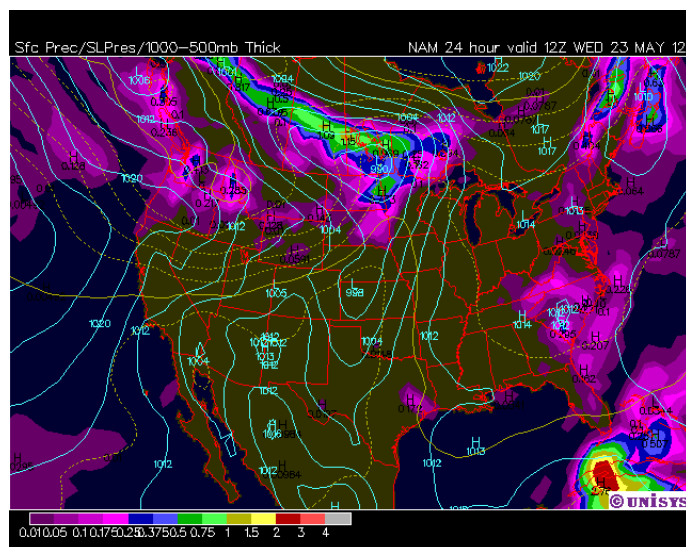
Configurable to meet our clients’ needs

The Unisys NOAAPort Gateway is pre-configured to accept several data streams, increasing the reliability to over 99.9% for weather product receipt and processing:

- **NWS NOAAPort Satellite Broadcast Network (SBN)**
This is the operational NWS broadcast feeding all NWS Weather Forecast Offices, National Centers, and other users. The Unisys NOAAPort Gateway has been tested to exceed the new 70+ Mbps broadcast standard and is configured to accept all NWS broadcast channels:
 - **NCEP/NWSTG (PID 101)** includes the NCEP models in GRIB and BUFR formats.
 - **GOES/NESDIS (PID 102)** includes all GOES Ingest and NOAAPort Interface (GINI) calibrated and navigated GOES imagery.
 - **NCEP/NWSTG2 (PID 103)** includes additional NCEP model data, BUFR products, NCEP

graphics, and National Digital Forecast Database (NDFD) grids.

- **OCONUS Imagery/Model/DCP (PID 104)** includes "Off CONUS" satellite and model data (Hawaii, Alaska, Puerto Rico)
- **NPP (PID 105)** includes granules from the Soumi-NPP polar orbiting satellite
- **Additional channels (EXP, GRW, GRE)** the Unisys NOAAPort Gateway is configurable to add new channels as they come online, including channels designated for the GOES-R NOAAPort broadcast.

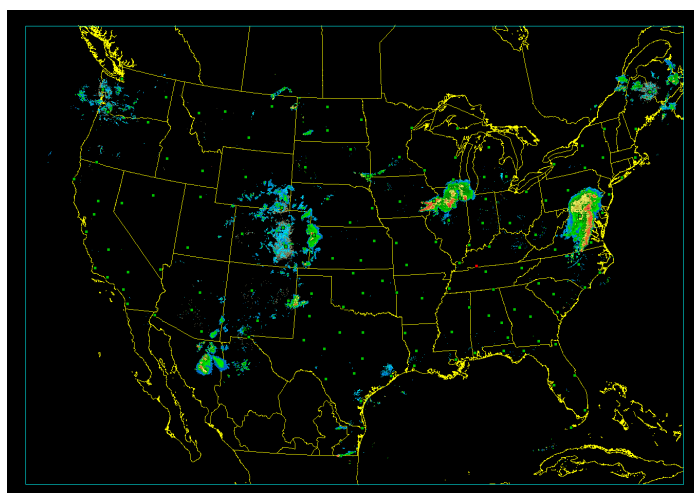
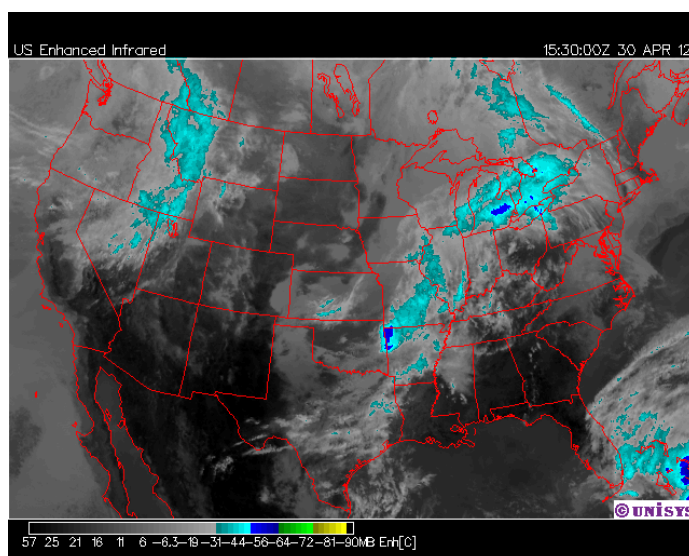


• Unisys C-Band Satellite Channel

- The Unisys C-Band channel provides backup data product services (for select products) as well as broadcast of Unisys Value Added weather products. These include the Unisys Radar Mosaics (national and regional), single site NEXRAD and TDWR products, composited satellite imagery, FAA NOTAMS and the Unisys DIFAX service.
- The Unisys C-Band service is provided on the same satellite as the NOAAPort SBN, thus requiring no additional antenna hardware for receipt.

• Unisys WeatherMAX Landline Services

- The Unisys NOAAPort Gateway is built with dual NIC cards to allow users to connect to the Unisys WeatherMAX product dissemination system via the internet. Unisys WeatherMAX distributes all data and products available over the NOAAPort SBN, Unisys C-Band, and other value added products. This allows users high reliability and redundancy. The Unisys NOAAPort Gateway includes software to "fold in" duplicate products from both streams, and to allow for automatic failovers to alternate communications methods. Landline distribution protocols include TCIP/IP, Unidata LDM, and Unisys WXP (Product Manager).



Technical Specifications

	Unisys WeatherMAX	Unisys NOAAPort NWS SBN	Unisys C-Band
Data and Products	All NOAAPort, Unisys C-Band, and additional products acquired by Unisys Weather	NWS SBN products (Model, GRIB satellite, single site NEXRAD and TDWR, NDFD, NCEP graphics)	Single site NEXRAD and TDWR, Unisys Radar Mosaics, satellite composites, FAA NOTAMS and Unisys DIFAX products
Bandwidth	100 Mbps	70 Mbps	8 Mbps
Satellite	N/A	SES-1	SES-1

Unisys NOAAPort Gateway Specifications			
System	Rack mount Dell Server, 8 core CPU		
OS	CentOS 6 Linux	Red Hat 6+ Linux (Optional)	
RAM	8 Gb		
Drives	Four 7200 RPM Drives	1 Tb each	RAID 1+0
Network	Two Gigabit NIC Cards		
Software	Unisys NOAAPort ingest v9+	Unidata LDM v6.11+	Unisys GWIP, Product Manager

For more information visit www.unisys.com or weather.unisys.com/NOAAPort

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