

# Stellar Satcom Amplifiers

## Product Guide

e2v

e2v technologies



This guide provides a quick reference to e2v technologies' range of Stellar amplifiers for use in satellite communications.

e2v's amplifiers are designed for use in fixed stations, ground stations and mobile applications worldwide. Stellar flyaway or truck based systems meet the demanding challenges faced by satellite newsgathering (SNG) and digital satellite news gathering (DSNG) teams to get their stories onto the world's TV screens as they happen, 24 hours a day.

In addition to the amplifiers, e2v also manufactures microwave switching and combining systems that provide all necessary redundancy configurations to ensure unbroken transmission.

#### Technology

As a long established manufacturer of satellite communications amplifiers with over fifty years experience in design and production of TWTs, we are able to provide high levels of RF performance, linearity and long tube life. Using the latest design technology we apply this expertise to provide compact, efficient and highly reliable amplifiers, with a host of user-friendly features.

Covering all primary satellite frequency bands, the versatile Stellar High Power Amplifiers (HPAs) can be supplied in standard or custom configurations. Frequencies range from 5.85GHz to 31GHz. Power levels of up to 8kW can be achieved through combining systems.

#### Product support

Our teams provide worldwide comprehensive support with access to technical experts 24 hours a day. Our engineers are available to discuss your needs, assist with product selection and work with you to integrate equipment successfully, ensuring longevity and reliability from our products.

- Pre-sales engineering advice for amplifier related high power RF system design
- Sales / support centers in over 60 countries
- Installation and commissioning service
- Tailored product training packages (factory or on-site)
- Product maintenance agreements
- Strategic placement stocks of spare sub-assemblies
- Hotline - 24 hour telephone diagnostic and repair support  
ROW + 44 (0)1245 355398  
USA + 1 888 433 8852
- Service engineer in-territory support available
- Loan units available for evaluation and support
- Return to factory repair service



## Stellar outdoor amplifiers

### Features

- Easy to integrate and use
- Compact and light weight
- Automatic operation over a wide range of prime power voltages
- Integral power factor correction design
- Highly reliable
- Modular design
- No scheduled maintenance required
- Rugged design suitable for transportable terminals and mounting in exposed locations
- System accessories include remote control panel, redundant and combined RF systems and windows-based PC applications software.
- Integral linearizer (option for selected products)
- Integral gain equalizer (option for selected products)
- Full RF power monitoring, including input, output and reverse power
- Wide mains input voltage range, allowing operation from worldwide prime power supplies (medium power commercial product range)



Local control panel (with redundant & combining options)



Remote control options



### Remote control options

- 1:1 redundant and phase combined systems for antenna mount applications
- Internal control of redundant switching

All amplifiers are provided with a comprehensive range of control interfaces allowing management of integrated systems and single or multiple amplifiers. Our range of 19" rack mount control panels come with a variety of options and can be configured to suit most popular applications.

## Stellar high power amplifiers

### Features

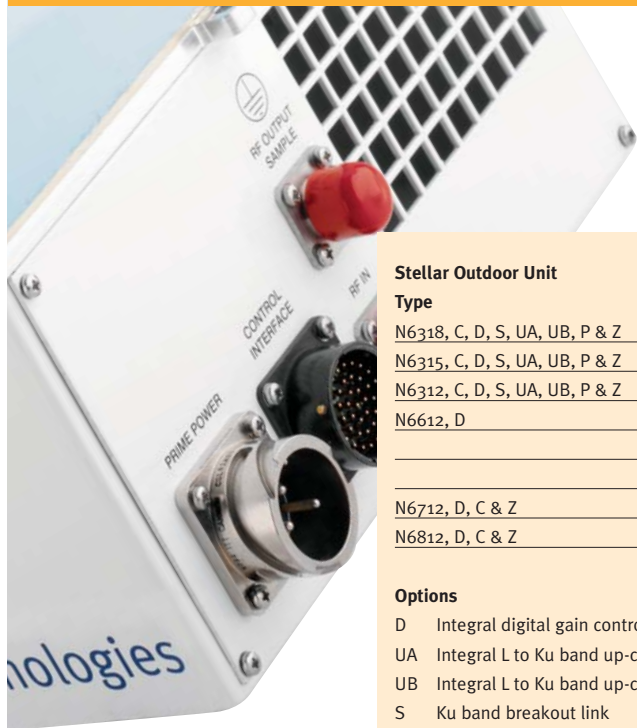
- Fully qualified and field proven
- Easy to maintain, modular, rugged design approach
- User friendly, comprehensive control & monitoring system
- Exceptionally powerful integral cooling fans, supporting operation into external ducting
- Available configured into rack systems including:
  - Mains distribution and protection system, fully wired
  - Cooling system ducting to external user interface
  - Integral RF switching / combining systems of up to four individual amplifiers (8kW)
  - Range of rack accessories, colors and styles
  - Rack cooling / venting options
  - Rugged anti-shock amplifier mounting rails and blocks
  - Comprehensive central control unit, fully wired
  - Remote main control room panel and interface
  - System level RF power monitoring, control and routing
  - Integral linearizer (option for selected products)
  - Integral gain equalizer (option for selected products)
  - Full RF power monitoring, including input, output and reverse power



### Control and monitoring systems offer

- Access to detailed information such as the “lifetime” TWT log
- Alphanumeric screen with soft key controls.
- Built-in fault and status logging with date and time record
- Serial control interfaces:  
RS422/RS485





#### Stellar Outdoor Unit

Type	Band	Frequency (GHz)	Power (W)	Size	Mounting
N6318, C, D, S, UA, UB, P & Z	Ku	13.75 - 14.5	180	203H x 436L x 213W mm	ODU
N6315, C, D, S, UA, UB, P & Z	Ku	13.75 - 14.5	150	203H x 436L x 213W mm	ODU
N6312, C, D, S, UA, UB, P & Z	Ku	13.75 - 14.5	125	203H x 436L x 213W mm	ODU
N6612, D	Tri	5.85 - 6.425	110	203H x 436L x 213W mm	ODU
		7.9 - 8.4	140		
		13.75 - 14.5	100		
N6712, D, C & Z	Ka	27.5 - 29.5	105	230H x 500L x 260W mm	ODU
N6812, D, C & Z	Ka	30.0 - 31.0	95	230H x 500L x 260W mm	ODU

#### Options

- D Integral digital gain control
- UA Integral L to Ku band up-converter (14.0 to 14.5GHz)
- UB Integral L to Ku band up-converter (13.75 to 14.5GHz)
- S Ku band breakout link
- C Low gain option
- P Sample port (RF output monitor)
- Z Integral linearizer

#### StellarCool™

STA1140	C	5.85 - 6.65	400	520H x 260L x 244W mm	ODU
STA1240	X	7.9 - 8.4	400	520H x 260L x 244W mm	ODU
STA1340	Ku	13.75 - 14.5	400	520H x 260L x 244W mm	ODU
STA1427	DBS	17.3 - 18.4	270	520H x 260L x 244W mm	ODU

All rated to 50°C plus solar gain

#### Options

- C - No Pre-Amp
- A - Integral solid state amplifier
- D - As option 'A' but includes an attenuator to provide 25dB (min.) of gain control
- Z - Integral Linearizer which incorporates the pre-amp and gain control options.
- U - Integral L band upconverter
- S - 'Break out' link. This enables bypassing of the upconverter and can be used for monitoring, set-up, redundant switching etc.

#### Switching Systems & Accessories

Type	Band	Frequency (GHz)	Description	Size/Mounting
N6080			ODU Battle override connector	
<b>19" rack mountable units</b>				
N6081-01			Single ODU controller	1U
N6081D-01			Single ODU controller with Gain control	1U
N6143			Dual ODU controller with 1:1 switch control	1U
N6143C	Ku	12.75 - 14.5	Dual ODU controller with 1:1 waveguide system	1U
N6145	Ku	12.75 - 14.5	Compact redundant combiner (CRCA) system	2U

Plus a range of fully weatherproof interconnecting cable assemblies for the ODU are available on request

#### Stellar Rack

N1400-200	X	7.9 - 8.4	2,250	14U	Rack
N6146					Remote controller for 2 to 3kW amplifiers

Detailed datasheets for each of the above items are available on request or from our website [www.e2vtechnologies.com](http://www.e2vtechnologies.com)

#### Availability

Most of these devices are available for dispatch at very short notice via our extensive distribution locations throughout the world.

bright ideas

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