

General

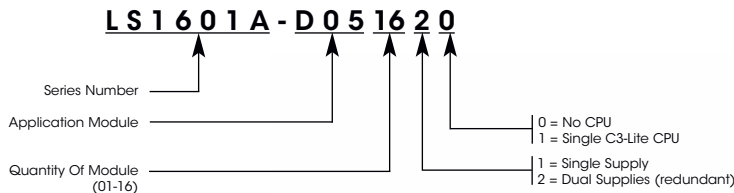
Converting signal types, buffering them, and providing distribution or switching is all part of today's system build. Our "Linker System" provides a very cost effective means to provide all these functions in one modular 3RU design. Properly configured with the appropriate modules it can be a "drop-in" replacement for legacy units from APCOM, Apogee Labs (and other companies), but with additional capability, features and with the latest in component technology.

The sixteen slot 3RU high LS1601A provides a great combination of modularity, high performance and high reliability. Our unique design allows any combination of modules to be installed from the rear of the unit. Most modules provide indicators, adjustments and test points to the user at the front, while having the actual signal connectors facing the rear.

All modules are hot-swap capable and the frame can be populated with redundant (two) power supplies to deliver the ultimate in system reliability for critical applications. A web enabled controller (C3-Lite) can be installed for remote monitor and control of various module features (switching, gain adjust, and LNB control). Digital, analog and conversion modules are available which can be mixed and matched within the same frame. The LXI certified CPU provides the user with web browser control, TCP/IP, SNMP, SNTP, realtime clock, 10/100 port and other features including unit health, voltages and fans.

System Number Definition

Must all be the same type of module. If a mix of modules are needed, contact the factory for a unique easy order part number. Example: LS1601A-xxxx



Applications

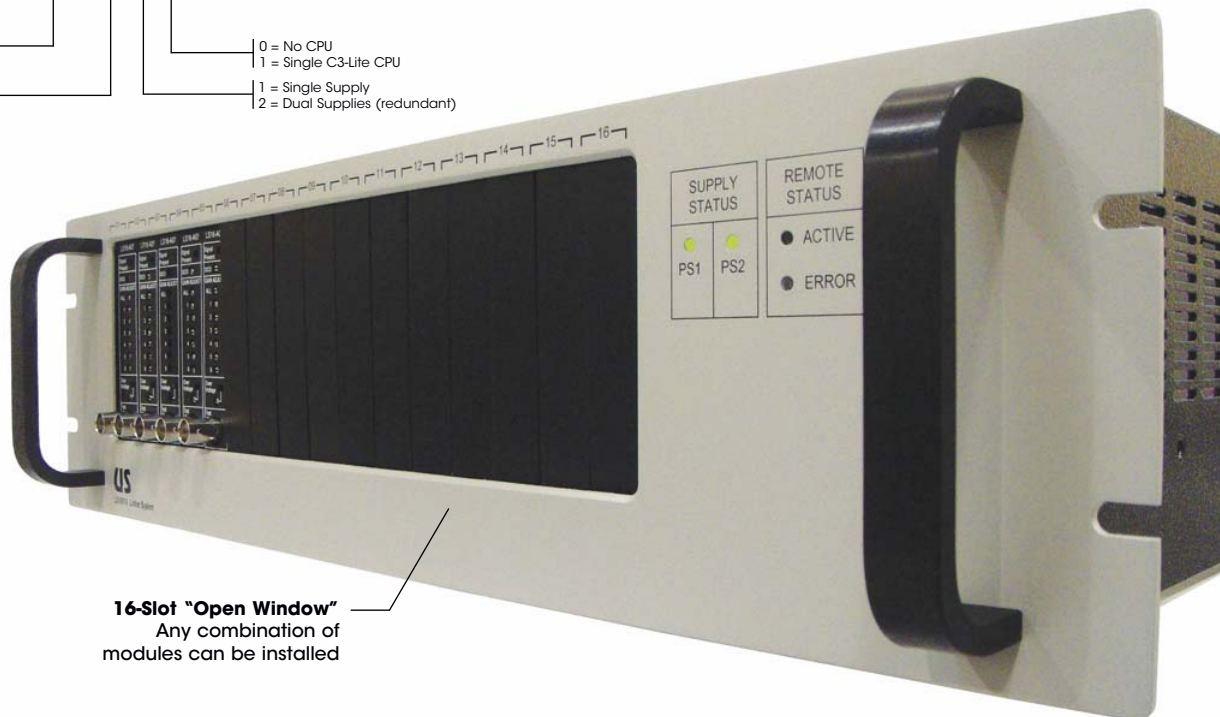
- Communication installations
- Telemetry & weapons system testing
- Antenna LNB power and 22kHz management
- Airborne surveillance systems
- Digital broadcast facilities or production studios
- Protocol or interface convertors
- Signal buffering and re-generation
- Remotely locate antennas using RF-Over Fiber
- Distribution, switching or conversion of signals
- Analog, fiber, and digital modules available

Features

- Modular rugged 3RU aluminum frame
- Full sixteen-slot capacity (supplies/CPU don't use slots)
- Built-in daisy chain bus for scalable distribution
- Monitored cooling fans (CPU not needed)
- Sum-bus available across all module slots
- Various signal connectors available
- Redundant monitored hot-swap power supplies
- Optional Ethernet M&C port (10/100) with browser
- International AC power input
- Certified CE EN61010 (LVD)
- LabVIEW drivers available



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Made in the USA

"Linker" Modules

The LS1601A has many module types available with various capabilities. Below are some popular modules and options. Contact the factory for specials.

Model	Module Description	Slots
LS16-A07	Single 1x6 DC-40MHz Analog Distribution Amplifier: BNC connectors, 75 ohm impedance, six outputs with individual gain adjustment, DC offset control, wide-band (DC-40MHz min), over voltage detector with set-point adjustment, signal detector	1
LS16-A18	Single 1x4 Wideband (50-3000MHz) Multicoupler: SMA connectors, 50 ohm impedance, isolated outputs, input gain control with -10dB to +20dB in 1/2dB steps	1
LS16-A19	Single 1x4 L-Band (850-2150MHz) Multicoupler: SMA connectors, 50 ohm impedance, isolated outputs, input gain control with -10dB to +20dB gain in 1/2dB steps, with LNB power (0V/13V/18V), LO control 22kHz on/off, LNB current monitoring	1
LS16-D05	Single 1x6 Digital Distribution & Converter: Triax/BNC connectors, jumper selectable input impedance, bal/unbal input selection, 3 differential (422) outputs and 3 single-ended outputs, front panel monitor test point (Equivalent to APCOM 5000-DDS)	1
LS16-D09	Dual 1x2 Digital TTL Distribution: BNC connectors, jumper selectable input impedance (0, 50 or 75 ohm), single-ended TTL outputs, front panel monitor test points, and signal presence indicators	1
LS16-FR1	Single Section RF-Over-Fiber Rx: FC input, SMA output connector, 50 ohm impedance, 20MHz-3000MHz, front panel coupler monitor test point, signal presence and alarm indicators	1
LS16-FR2	Dual Section RF-Over-Fiber Rx: FC inputs, SMA output connectors, 50 ohm impedance, 20MHz-3000MHz, front panel coupler monitor test point, signal presence and alarm indicators	1
LS16-FT1	Single Section RF-Over-Fiber Tx: SMA input, FC output connector, 50 ohm impedance, 20MHz-3000MHz, front panel coupler monitor test point, signal presence and alarm indicators	1
LS16-FT2	Dual Section RF-Over-Fiber Tx: SMA inputs, FC output connectors, 50 ohm impedance, 20MHz-3000MHz, front panel coupler monitor test point, signal presence and alarm indicators	1
LS16-FTR	Single RF-Over-Fiber Transceiver (Tx and Rx): SMA and FC connectors, 50 ohm impedance, 20MHz-3000MHz, front panel coupler monitor test point, signal presence and alarm indicators	1
LS16-L02	Dual Section LNB DC Power Injector: BNC connectors, 50 ohm (75 opt), LNB power (0V/13V/18V), LO control 22kHz on/off, LNB current monitoring (850-2450MHz)	1
LS16-R12	Dual 1x2 Relay: (bidirectional redundancy switch), BNC connectors, 50 ohm impedance, self-terminating	1



Specifications

CapacitySixteen application modules
 Signal connector location ...Rear facing (typically)
 Module installationFrom the rear
 Module typesDigital, analog and fiber
 Power supply sectionPlug-in type, redundant available
 Power supply monitoring ...Included
 Ethernet port10/100BaseT optional (C3-Lite)
 Status LED'sFront panel
 Front panel typeOpen window
 Configuration memoryFLASH (C3-Lite optional)
 CoolingDual fan assisted (monitored)
 AC power requirements ...90-264VAC, 47-440Hz, 160Watts (max)
 Fuse protection2A, 5mm (dual)

Weight<20lbs (configuration dependent)
 Size3.72H x 10.50D x 19.00W (3RU)
 Operating temp0 to +60C
 Non-operating temp-20 to +85C
 Humidity0 to 95% (NC @ +25C)
 MTBF>125,000 hours
 Warranty2 years
 CertificationsCE EN61010

Universal Switching's policy is one of continuous development. Consequently, the company reserves the right to vary from the descriptions and specifications shown in this publication.