

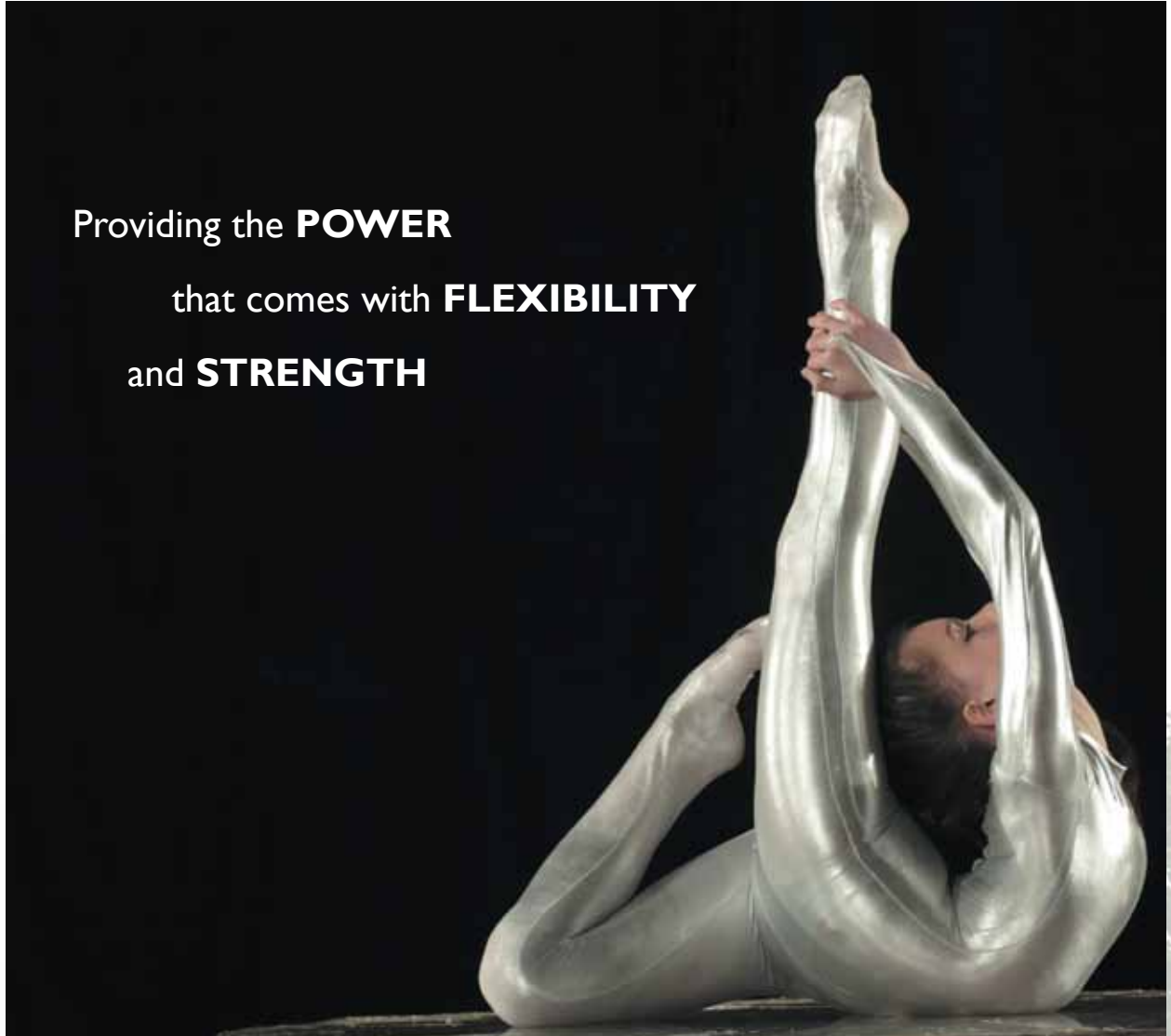


Flexible,
with strong roots



DONGAH ELECOMM

Providing the **POWER**
that comes with **FLEXIBILITY**
and **STRENGTH**



DongAh Elecomm provides flexible, high-performance power solutions that remove design limitations, reduce time-to-market, shorten design cycles and lower manufacturing costs.

As a world-class power solutions provider for more than 40 years, we have the expertise and experience to power your world-changing technologies.

CORPORATE HISTORY



- DEC'76 DongAh Electric Established
- APR'85 Presidential Commendation for contribution to electrical industry promotion
- APR'86 Kun Soo Lee named president of DongAh Elecomm
- SEP'87 Power Supply R&D Center established
- JUN'89 Presidential Commendation for TDX development
- NOV'90 Industrial Peace Award from Ministry of Labor
- JAN'91 Quality Management Class A Factory citation
- APR'91 Copper Tower Industrial Award for contribution to science and technology promotion
- OCT'93 High Frequency Transfer Control Technology registered as a new domestic technology
- MAY'95 Acquired UL/BSIISO 9001 certificate (ULA3371)
- APR'99 Silver Tower Industrial Award for contributions to the information and communication industry
- MAR'02 Rectifiers for CDMA BTS for Telecommunications Equipment Ministry of Information Industry, People's Republic of China
- APR'02 Beijing office established
- APR'02 USA branch office established
- SEP'02 Donated computers to Ho Chi Minh City National University, Foreign and Information Communication University in Vietnam
- NOV'02 Received a distinguished service award for contributions to the Vietnam communications industry
- FEB'03 Exported rectifiers to PT Telkom and Mobile-8 for mobile telecommunication in Indonesia
- JUL'03 Acquired TL 9000 Certificate (ULA3371)
- APR'04 Contract agreement established with KARI for Satellite PS Development
- JAN'05 Received CQIS quality certification from Samsung SDI
- JAN'05 Exclusive agreement established for Hybrid Auto PS Development
- JAN'05 Samsung SDI awards DongAh Elecomm CQIS Quality Certification
- AUG'05 DongAh Elecomm gains ISO14001 Certification
- SEP'05 Siemens Ultrasound names DongAh Elecomm "Class A Supplier"
- MAR'07 Korea Telecom names DongAh Elecomm their "Best Partner" Award
- SEP'07 DongAh Elecomm Selected as Best Supplier in Samsung Electronics' 6 Sigma Joint Assignment Project
- FEB'08 DongAh Elecomm SWPR-4200 Series powers the Sprint/Samsung North America WiMax
- MAR'08 DongAh Elecomm Named Korea Telecom's "Best Partner"
- MAR'08 Core Components for Hyundai's Hybrid Electric Vehicle 100% Localized
- APR'08 DongAh Elecomm recognized as Vodafone's Approved Supplier
- JAN'09 DongAh Elecomm recognized as an "Approved Strategic Supplier" to SUSKO (Siemens Ultrasound Systems Korea)
- JAN'10 DongAh Elecomm Vietnam received the ISO 9001:2008 Certification

DongAh Elecomm has become a world-class power solutions provider through:

- Dedication to meet our customers' needs for power solutions beyond the ordinary
- Continual development of new innovations for emerging technologies
- Speedy development and delivery of customer-driven solutions
- Business strategies responsive to an ever-changing business environment



Our customers have the **POWER**
that comes with **ADAPTABILITY**

DongAh is dedicated to the continued development of standard power supply products that set the standard for efficiency and power density. Our offering of standard products are great as they are, or as the starting point of a new design.

All DongAh Standard Power Supply Products are designed for:

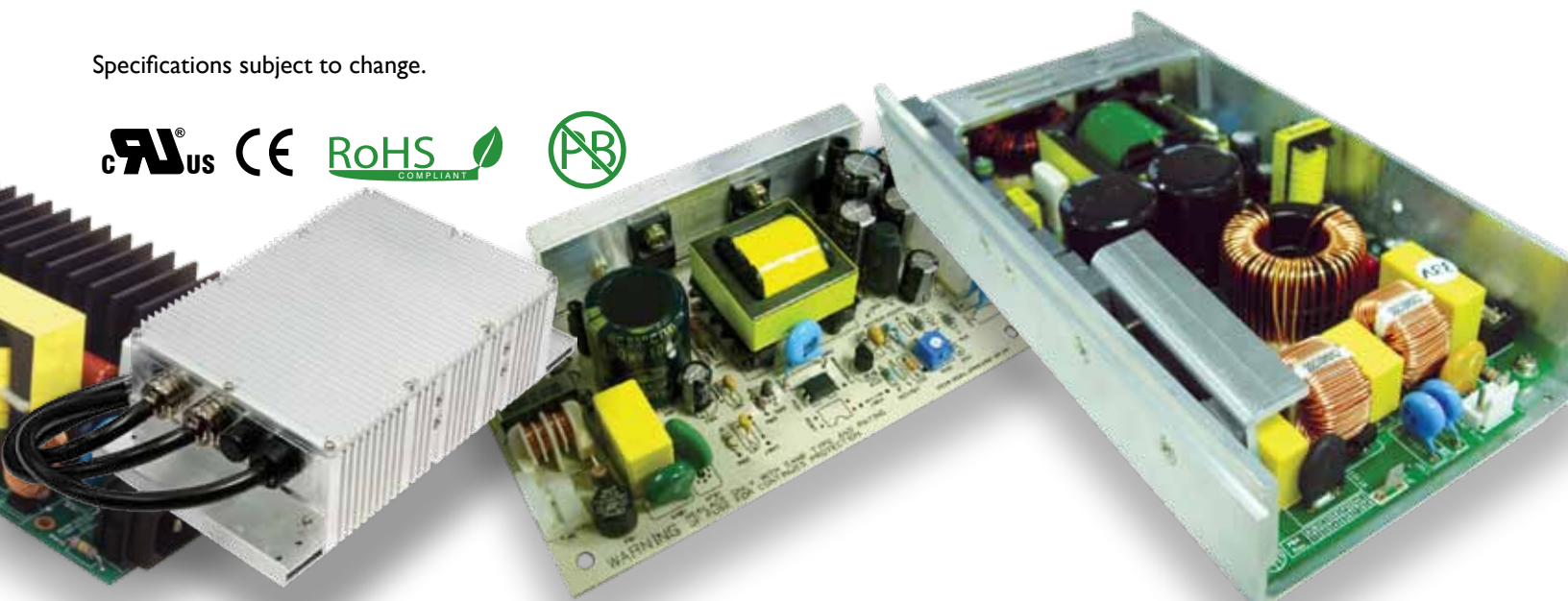
- Universal AC Input
- Low-Profile / High-Density Package Size
- High Efficiency Operation
- High Reliability
- Low cost manufacturing
- International Safety Approvals



THE POWER YOU NEED IN STANDARD PRODUCTS

Model	Power	Output	Voltage	Dimensions
PSU-5	5	Single Output	3.3-24 VDC	2.00 X 1.00 X 0.85"
PSU-15	15	Single Output	3.3-48 VDC	1.57 x 4.33 x 0.92"
PSU-25	25	Single Output	3.3-48 VDC	1.57 x 4.33 x 0.92"
PSU-30	30	Single Output	3.3-48 VDC	4.00 x 2.00 x 1.36"
PSU-40	40	Single Output	32 VDC	2.00 x 4.00 x 1.38"
PSU-40T	40	3 Outputs	3.3~12 VDC	2.00 x 4.00 x 1.20"
PSU-43/45	45	1 - 3 Outputs	5-24 VDC	3.00 x 5.00 x 1.10"
LED-60	60	Single Output	12-48 VDC	7.36 x 2.28 x 1.57"
PSU-65	65	1 - 3 Outputs	5-48 VDC	2.00 x 4.00 x 1.25"
PSU-80	80	1 - 3 Outputs	3.3-24 VDC	3.00 x 5.00 x 1.25"
PSU-100	100	1 - 3 Outputs	3.3-24 VDC	3.00 x 5.00 x 1.25"
PSU-120	120	Single Output	3.3-48 VDC	3.00 x 5.00 x 1.65"
MPSU-150	150	1 - 3 Outputs	3.3-48 VDC	6.00 x 4.00 x 1.50"
PSU-180	180	1 - 3 Outputs	3.3-48 VDC	3.20 x 5.00 x 1.65"
PSU-192	192	12-32 VDC Trimmable		6.00 x 3.88 x 1.50"
SOPS-225	225	Single Output	5-48 VDC	7.95 x 4.00 x 1.50"
MPSU-250	250	Quade Outputs	3.3-12 VDC	7.50 x 4.50 x 1.75"
PSU-350	350	Single Output	5-48 VDC	9.85 x 5.44 x 1.89"
PSU-400	400	Single Output	5-50 VDC	5.00 x 4.80 x 2.36"
PSU-750S	750	Single Output	24 / 48 VDC	13.62 x 5.06 x 2.05"

Specifications subject to change.



Our customers have the **POWER** that comes with **SPEED**

A Tailored Solution

Sprint and Samsung joined together to develop the next generation Wireless / Broadband service that will be deployed nationally. The new 4G Network service will provide wireless access nearly 4 times faster than current technology.

Samsung needed a power partner to build a complete power system consisting of AC Distribution Systems, DC Rectifiers, DC Distribution System and Battery Management with a complete menu of status & control functions as well as remote monitoring.

Partnering closely with Samsung, DongAh was able to deliver a highly reliable solution with minimal development time and money. With time and price being extremely critical, DongAh was the clear choice from a wide world of power supply manufacturers.

DongAh manufactures a number of complete power systems for Telecommunication and Data Communication applications. Our power systems are designed with complete battery management systems for truly redundant operation in indoor and outdoor environments. Software integration allows remote monitoring and control.



THE POWER YOU NEED FOR REDUNDANT OPERATION

1, 2 or 3 U?

Size & Efficiency are key ingredients in the solutions we deliver to our customers. DongAh is paving the way with higher density and higher efficiency front end and rectifier products ranging in packages from 500~4,000 Watts.

DongAh's selection of front end / rectifiers are the building blocks of today's communication systems. DongAh's technology ensures your products are built upon a strong foundation of reliability and strength.



Power Shelves

At DongAh, we understand that there is no such thing as a standard power shelf. While we have many existing products, we expect our customers to require modifications from the simple to complex. All this from a world leader of power supplies with more than 40 years experience powering world-changing technologies.

Standard features of our Power Supply & Shelf Systems include:

- Hot-Swap / N+1 Redundancy
- 500~4,000W Power Modules in 1~3U Heights
- Analog Status & Control
- I2C / PMBus Interface
- Battery Management and Control
- NEBS / Telcordia Compliance
- International Safety Approvals
- Flexible Design & Manufacturing



Our customers have the **POWER** that comes with **PERFORMANCE**



For Ultrasound Diagnostic System
AC INPUT AND DC INPUT POWER SOLUTION

THE REQUIREMENT:

Our customer was developing a next generation Ultrasound Diagnostic System that required an uncommon power solution to enable small size and mobility — the power solution needed to run on an AC Connection and from internal batteries to allow mobility. DongAh developed a two-part power system to meet the challenging electrical and mechanical requirements.

AC INPUT POWER SYSTEM:

An Isolation Transformer to provide 10 Amps of clean and safe AC Power with -48VDC and +12VDC Outputs. A complete suite of control circuits are included for battery charging, system cooling and over voltage / over current / over temperature protection. Front Panel AC Inlet, on/off switch and six LEDs for visual indication of system status and field utilization.

DC INPUT POWER SYSTEM:

Drawing -48VDC input power from either the AC Power System or Batteries, this advanced power system provides fifteen programmable and Sequenced DC Outputs. The output voltages are filtered to reduce ripple, noise, and EMI/RFI, improving our customer's ability to provide accurate, high resolution images.

DELIVERABLES:

Our customer receives a complete power system designed to fit their specific application that is qualified to International Medical Safety Standards, meets Class B EMI/RFI Standards and designed for rugged ability in a mobile cart that may experience high amounts of shock and vibration.

Our customer recognizes DongAh as a "Class A Supplier" for the design, manufacture and support of these advanced power systems



Indoor/Outdoor LED Displays

Solid State Lighting

LED Backlighting

Commercial Lighting

Every LED application has unique requirements; with DongAh Elecomm solutions, you won't need to design around the power supply.

We utilize flexible, high performance power solutions to remove limitations from your design, reduce time to market, shorten design cycles and lower manufacturing cost. We offer flexibility to meet the industry's changing requirements, with reliability to make your design investment pay.

DongAh Elecomm Power supplies come with unmatched features to make your design easy, profitable and reliable.

- Wide AC input for commercial applications
- Active PFC
- Short Circuit Protection
- IP65 level environmental rating
- Constant current or Constant Voltage for varying LED Strings
- Optional dimming function
- UL8750 (New UL Standard for LED fixtures)
- UL1310 class 2 power unit
- 100,000 hours continuous operation (ALT)



Our customers have the **POWER**
that comes with **COOL**

THE POWER YOU NEED FOR AUTOMATION CONTROL

A Cool Solution

Our customer had an issue with their integrated controller product. Their power supply was generating too much heat and failing in the field, while lead times were holding up shipments.

Our customer required a convection-cooled power supply for reduced audible noise in sensitive environments. The supply had to be cool to the touch and not dissipate extra heat into sensitive sound, video and lighting equipment. DongAh delivered!



Features include:

- Worldwide AC Input Voltages
- Enclosure and Silk-screening to match Controllers
- 13.5V @ 7A Output Capability
- Convection Cooled up to 50°C Ambient Temperature
- High Efficiency making it “Cool to the Touch”
- Increased Reliability and 2 Year Product Warranty
- Lead Times reduced to only 6 weeks
- 40% Price Reduction
- Custom Packaging with Customer Logo and Documentation



DongAh Elecomm to the Rescue!

Our customer was having catastrophic field failures with their existing power supply. They already had their product designed, so the footprint for a new power supply had to be identical. The power supply is located in a closed boxed, so convection cooling is critical. The application also required additional special power supply features.

We were able to provide our PSU-750 power supply that provides extreme performance at 1250 watts peak for five minutes. Added benefits include low cost and high reliability. Our customer was thrilled.

When the Do-It-Yourself Approach is not the Best Solution


Our customer had a company history of manufacturing their own power supplies for their printers. They did this because they thought they had the best solution for the lowest price. At the time we approached them, they had a printer application that needed update features and a cost reduction... all while maintaining the same footprint. We showed them a standard 120 watt supply that they tested the same day. They were happy with the performance; the only thing left was to fit it to their form factor. One-half of the power supply is extremely low profile, so it was a challenge. Additionally, we added capacitance on the output to accommodate their motor-controlled printers. The customer was able to sell their end product as "enhanced," and we've designed subsequent supplies for them, ending their "in-house" philosophy on power supplies.



“DongAh is an enlightened company and I am humbled and pleased to be fortunate enough to have found you. The quality of your products is the best I have seen of any power supply manufacturer I've worked with; your time to market is faster than I can go due to other suppliers being much slower than you. More important is the friendly, professional, yet informal way we work together to meet our common goals. I want to create top quality products for my company and you want to provide top quality power supplies for my products. We keep that big picture in mind and quickly resolve engineering issues with friendly ease. There is never any CYA mentality involved. We don't even bother signing documents during the development process. I completely trust you guys to do your job. I don't have to hold your hands. I tell you what I need and you deliver. I can't imagine a more perfect company or group of people to work with. Thank you for making my products successful.”

-- Steve Coffin, Engineer, Control 4
www.control4.com

Represented by:



www.dongahusa.com
www.dongahelcomm.co.kr

Worldwide Support:

sales@dongahusa.com

North America:

1300 E Lookout Dr, #210
Richardson TX 75082
Phone: (972) 497-9990
Fax: (972) 497-9991

South Korea:

167 Namgok-Ri
Yangji-Myun, YongIn-Si
KyunggiDo, South Korea
TEL: 82-31-330-8894

Vietnam:

Luong Son IZ
Hoa Son Commune
Luong Son Dist, Hoa Binh Province
Tel: +84-218-382-6781~2

Indonesia:

PT. Intra Telekom Utama,
berdomisili di Setia Budi 2 Building
Lt.2 # 201 A, Jl.H.R. Rasuna Said Kav.62
Jakarta 12920
Tel : +62-21-89840271