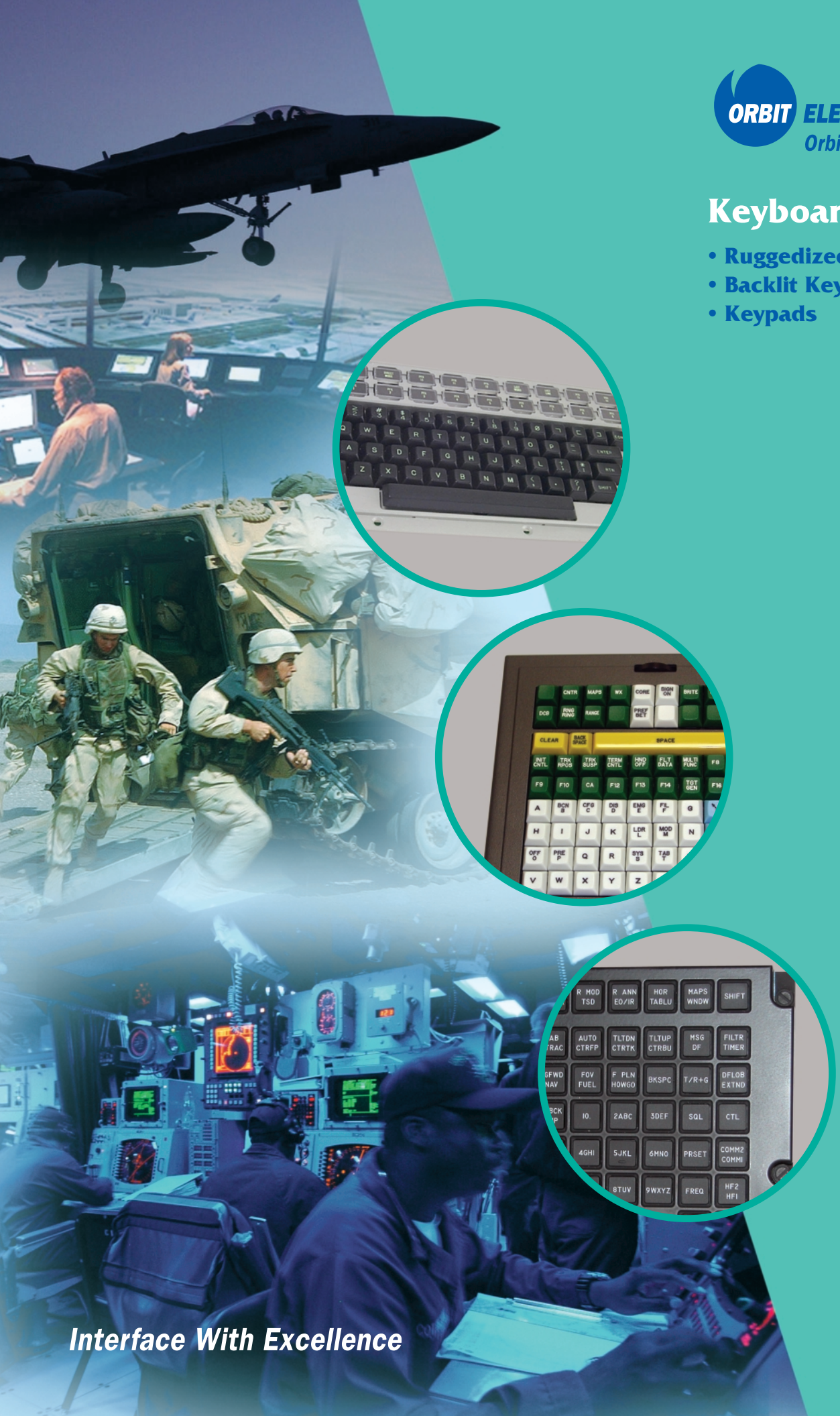
ORBIT ELECTRONICS GROUP
Orbit Instrument • Tulip

# Keyboards/Keypads

- Ruggedized Keyboards
- Backlit Keyboards
- Keypads











*Interface With Excellence*

# When Ultra-Reliability in Extreme Environments is Key, Trust Orbit Keyboards and Keypads

Orbit Electronics Group has nearly a half-century of experience in designing and engineering rugged keyboards, keypads and related software for shipboard, fixed wing and rotary wing aircraft, vehicular and land-based applications. In all branches of the armed forces, as well as in government non-military and industrial programs, our keyboards and keypads have proven able to withstand extreme levels of environmental and human abuse. Our backlit keyboards are used extensively in shipboard applications, while our sunlit readable/backlit keyboards have been incorporated into the FAA Air Traffic Control Tower Systems, as well as aircraft and helicopter systems.

Our experience in custom designing and engineering keyboards and keypads for human-machine interface requirements makes us expertly qualified to deliver products that meet the unique demands of your program. From full Mil-Spec to COTS technologies, and from new build-to-print to reverse-engineered, retro-fit and form-fit-function replacement products, whether in single units or large production runs, Orbit can provide cost-effective, ultra-reliable keyboards and keypads qualified to the most exacting standards.

***NOTE:***
***The products shown in this brochure represent only a few of the thousands of custom designs we have produced. Contact us to discuss what we can custom design and manufacture for your applications.***

## *Ruggedized Keyboards*

Orbit ruggedized keyboards are designed to meet the shock and vibration requirements of MIL-STD-810, as well as other high military standards. Thousands of these ultra-reliable keyboards are presently in use in shipboard, airborne and ground applications. Our proven units support all standard keyboard interfaces, and we can provide custom keycaps and customer-generated codes for any or all keys.

### *Part No. 60166*
Ideal for washdown applications, this splashproof, 87-key QWERTY unit maintains a watertight seal when panel-mounted. 15.4" x 7" X 2.5" in panel-mount with laptop configuration. Features 4 LED indicators and a 1" track marble.

### *Part No. 60103*
Navy surface fleet-proven for over 15 years, this 59-key QWERTY unit utilizes Orbit's gold-on-gold contacts to ensure a long service life. 14.33" x 6.77" panel-mounted, it features 28 function keys with individual illumination control.

Part No. 60339

Part No. 60166

Part No. 60103

### *Part No. 60204*
This 74-key QWERTY, 21.2" x 8.9" tabletop unit includes extended legs to allow for easier text input. Features a PS/2 interface with trackball input connector, and 48-key function keypad.

Part No. 60204

### *Part No. 60125*
This highly-economical laptop QWERTY unit features a 1" track marble, two control switches, four status indicator LEDs, and a 15-pin cannon interface connector, all in a 14.2" x 7.8" desktop design.

### *Part No. 60339*
This fully-functional standalone keyboard/pointing device is used as a kneeboard by Navy carrier aircraft co-pilots and operators. 52-key QWERTY unit features a 20-key special function keypad, 1.375" trackball and a backup force transducer as a secondary pointing device, all in a compact 7.5" x 9.5" aluminum housing.

Part No. 60125

# Backlit Keyboards

Orbit backlit keyboards have proven invaluable in military reduced-lighting command, control, communication, computer and information centers. Our advanced LED technology produces a linear variable-intensity backlight adjustment (controlled either manually or automatically, depending on the model) capable of displaying in full sunlight and in NVIS environments. The LED design also ensures that required system power is minimized. Custom keycaps, keycap legends and customer-defined codes can be specified for any or all keys.

## Part No. 60191

Designed for radar control applications, this backlit unit features 30 push-button switches, 5 rotary switches, a dimmer potentiometer, circular military I/O connector, and 2" trackball. 18.55" x 7.94" x 3.74" desktop mounted, semi-gloss black enclosure, with standard or custom interfaces.

Part No. 60191

Part No. 60211

## Part No. 60223

Proven reliable in carrier landing airborne applications, this standard QWERTY-configured keyboard features a 1.375" trackball. The 16.85" x 6.55" x 1.71" panel-mounted enclosure is ruggedly secured via twelve 6-32 captive mounting screws.

Part No. 60223

## Part No. 60211

Battle-tested through shipboard use in the Navy's Tomahawk program, this 17" x 7" QWERTY-configured unit features 90 keys, 4 LED indicators and a dimming potentiometer. Standard or custom interfaces available. Fourteen 6-32 captive mounting screws secure its panel mounted chassis.

## Part No. 60272

84-key unit designed for Air Traffic Control tower applications features five different colored keys custom arranged for customer specifications. Large overall dimming control in top center for easy adjustment of dimming to console level. Desktop or panel mount configurations available.

Part No. 60272

Flight-Panel

Custom Matrix

Backlit Matrix

# Keypads

Orbit keypads are available in models ranging from a simple row/column output, to a complex intelligent digital serial interface. We have a proven ability to provide build-to-print or custom-engineered configurations to meet any requirements, delivering highly-reliable, long-service-life units. Our military customers report that our units actually improve with use. Custom keycaps configuration, custom codes, selectable depression force and unique mechanical designs are among the features that make Orbit keypads the ideal choice.

## Flight-Panel

Proven in Navy carrier based aircraft, this 40-key backlit aircraft keyboard and pointng device is a full-feature keyboard in a flight panel design. Panel includes a force transducer, two dedicated switches and an alpha lock LED display.

High-Impact ABS

## Custom Matrix

These highly-customizable, panel-mounted keypads can feature any size matrix. Units feature engraved keycaps, and gold-on-gold contacts for extended service life. Options include backlit keycaps, custom matrix layout/interface, and matching console paint.

## Backlit Matrix

This 40-switch backlit matrix keypad is capable of illuminating individual functions, one-at-a-time if necessary. Individual keys are separated into 2 or 3 independently-controlled sections, and keycaps can be changed to meet your specific requirements. Panel-mounted units are secured with EMI gaskets for electromagnetic interference protection.

## High-Impact ABS

Orbit high-impact-resistant ABS keypads are available for a full range of applications (panel, for handheld GPS shown). Ultra-rugged switch-panel units are designed to support customer-specific electronics and software components, and can be mass-produced to meet high-quantity and/or Just-In-Time (JIT) orders.

# Superior Human-Machine Interface Solutions for Mission Critical Applications

Orbit hardware and software solutions provide the critical HMI link in many of the world's most demanding airborne, shipboard, sub-surface, ground-based and handheld mission critical applications. By delivering leading-edge hardware with extreme environmental and operational survivability, we have become the supplier of choice for military and non-military government and industrial programs requiring the highest degree of long-term operational reliability.

Orbit's longstanding relationships with government research and development laboratories help keep our engineering and design capabilities at the industry's forefront, where our solutions to technical challenges consistently result in state-of-the-art advancements to products.

**In addition to our Keyboards/Keypads, Orbit Electronics product categories include:**

- **Control Display Units**
- **Flat Panel Displays**
- **Integrated Switch Panels**
- **Cursor Controllers**

Our focus on superior customer support, and our company-wide commitment to the continuous improvement of HMI tools, enables us to deliver solutions that meet and exceed our customers' requirements for performance, reliability, longevity and economy.

**For information, or for a consultation and/or quotation, contact the Orbit Electronics Group.**

ORBIT ELECTRONICS GROUP
Orbit Instrument • Tulip


***ORBIT INSTRUMENT***
*80 Cabot Court • Hauppauge, NY 11788*
*TEL: 631 435-8300 • FAX: 631 435-8458*
*sales@orbitintl.com*

*4532 Telephone Road, Suite 103 • Ventura, CA 93003*
*TEL: 805 642-0545 • FAX: 805 642-0790*

***www.orbitintl.com***

***TULIP DEVELOPMENT LABORATORY***
*1765 Walnut Lane • Quakertown, PA 18951*
*TEL: 215 538-8820 • FAX: 215 538-8866*
*info@tuliplabs.com*

***www.tuliplabs.com***


***Interface With Excellence***