

Orbitz

Type 51

Orbitz Type 51 is an IoT device from the Orbitz Housed range. It makes use of a large battery which gives it up to a year battery life, depending on settings. It's multi-mode communications possibilities support usage in many and difficult environments. By default the Type 51 has sensors for temperature, movement and location and can easily be expanded.



PRODUCT HIGHLIGHTS

- ✓ small formfactor
- ✓ most versatile device
- ✓ longest battery life
- ✓ secure
- ✓ fastest business integration
- ✓ low cost
- ✓ device management
- ✓ firmware update over the air

USE CASES

- ✓ Asset / goods location tracking
- ✓ Cold chain temperature monitoring
- ✓ Fragile goods shock monitoring



Product Specifications Type 51

Chipset

- ARM®Cortex®-M4 32-bit processor with FPU, 64 MHz

Modem

- Quectel BG-95 / BG-96 Series

Memory

- 1 MB flash and 256 kB RAM

Battery / power supply

- Capacity LiPo 5.200mAh (from range 700 – 7000mAh)
- Battery lifetime 300 days at standard profile 6 messages per day
- USB-C connector for direct power and/or battery recharging (continuous operations supported)

Housing

- Ingress Protection rating IP54
- Impact Protection rating IK04

Operations and storage

- Operating temperature -10°C - +40°C (battery charging from 0 °C)
- Operating environment at 20% to 95% relative humidity
- Storage max 3 months at 10°C to +30°C (recommended)

Weight and dimensions

- Dimensions including housing: 90x60x33mm
- Weight: 130gram

User physical interaction

- Bi-Color LED
- Tactile Switchbutton for on/off/long press actions configurable

Standards and certifications

- Radio regulatory certification: CE, RED

Firmware

- FOTA – firmware over the air support
- LWM2M device management

Protocols

- LWM2M
- MQTT

Sensors

- Temperature sensor $\pm 0,5$ °C (default)
- 3D Accelerometer ($\pm 2/\pm 4/\pm 8/\pm 16$ g selectable full scales(default))
- 3D Magnetometer (± 50 gauss magnetic dynamic range(default))
- GNSS localization (GPS/GLONASS/BeiDou/Galileo/QZSS)
- Expandable by sensor board and/or digital / analog I/O ports

Connectivity

- LTE CatM1
 - LTE FDD: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B27/B28/B66/B85
 - Power Class 3-5
- LTE NB2
 - LTE FDD: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B28/B66/B71/B85
 - Power Class 3-5
- 2G
 - GSM/EDGE 850/900/1800/1900 MHz
 - RF output Class 4 (850/900MHz)
 - RF output Class 2 (1800/1900MHz)
- Bluetooth Low Energy v5.1
 - RF output power +8 dBm max
 - Sensitivity -103 dBm max

Security

Rich set of security features

- ARM®TrustZone® Cryptocell 310 security subsystem
- NIST SP800-90A and SP800-90B compliant random number generator
- AES-128 – ECB, CBC, CMAC/CBC-MAC, CTR, CCM/CCM*
- ChaCha20/Poly1305 AEAD supporting 128- and 256-bit key size
- SHA-1, SHA-2 up to 256 bits
- Keyed-hash message authentication code (HMAC)
- RSA up to 2048-bit key size
- SRP up to 3072-bit key size
- ECC support for most used curves, including P-256 (secp256r1) and Ed25519/Curve25519
- Application key management using derived key model
- Secure boot ready
 - Flash access control list (ACL)
 - Root-of-trust (RoT)
 - Debug control and configuration
 - Access port protection (CTRL-AP)
- Secure erase