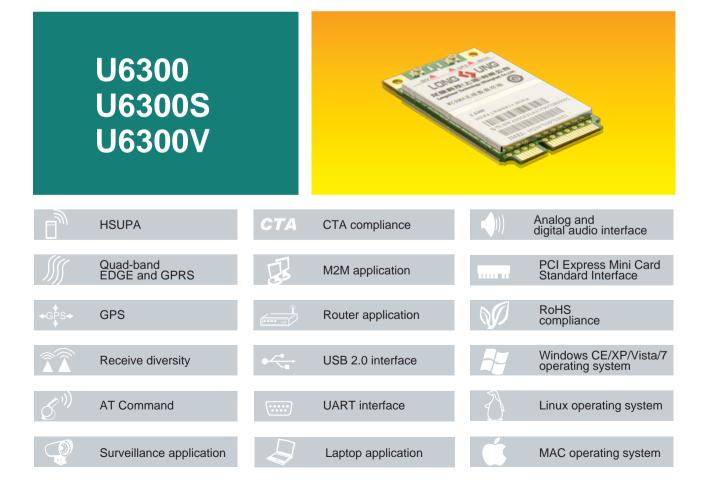# HSUPA Cellular Module

The U6300 HSUPA PCI Express Mini Card is an embedded module. It can be easily integrated into laptops for 3G mobile data application offering data, SMS solutions. The U6300V HSUPA PCI Express Mini Card can be easily integrated into laptops and other M2M devices for 3G mobile data application, offering data, voice (Optional), SMS, and other customization solutions.

U6300 and U6300V operate globally, in high performance, on 850, 1900, 2100 MHz bands on HSUPA and UMTS networks. In areas where HSPA is not available, they still enable reliable and secure data connection over UMTS at speed up to 384 Kbps or EDGE at speed up to 237 Kbps or GPRS at speed up to 85.6 Kbps.

U6300
U6300S
U6300V

HSUPA	CTA compliance	Analog and digital audio interface
Quad-band EDGE and GPRS	M2M application	PCI Express Mini Card Standard Interface
GPS	Router application	RoHS compliance
Receive diversity	USB 2.0 interface	Windows CE/XP/Vista/7 operating system
AT Command	UART interface	Linux operating system
Surveillance application	Laptop application	MAC operating system

U6300/S/V
HSUPA Cellular Module

General features:
- HSUPA uplink up to 5.76 Mbps
- HSDPA downlink up to 7.2 Mbps
- Tri-Band UMTS/HSUPA (WCDMA/FDD) 850/1900/2100 MHz *
- Single-Band UMTS/HSUPA (WCDMA/FDD) 2100 MHz **
- Revceive Diversity
- Quad-Band GSM 850/900/1800/1900 MHz
- GPS 1575.42MHz †
- EDGE (E-GPRS) multi-slot class 12
- GPRS multi-slot class 12
- UMTS/HSUPA 3GPP release 6
- GSM 3GPP release 99
- Output power:
- Class 4 (2 W) for GSM900
- Class 3 (0.25 W) for UMTS/HSUPA
- Class E2 (0.5 W) for EDGE900
- Class E2 (0.4 W) for EDGE1800
- Class 1 (1 W) for GSM1800
- Control via AT commands (Hayes 3GPP TS 27.007 and 27.005)
- SIM Application Toolkit (release 99)
- Supply voltage range: 3.3 ... 3.6V
- Power consumption:
- Sleep mode <4mA
- Power down 50 μA
- Average Supply Current < 800mA (HSUPA data transfer)
- Temperature range
- Normal Operation: -20°C to +65°C
- Restricted Operation: -30°C to +75°C
- Storage: -40°C to +85°C
- Dimensions: 51 x 30 x 4.6 mm

Approvals:
- CTA
- RoHS

Specification for HSUPA data transmission:
- HSUPA: Max. 7.2 Mbps (DL), Max. 5.76 Mbps (UL)
- HSDPA category 6/8 supported
- HSUPA category 3/5/6 supported
- Compressed mode according to 3GPP TS25.212

Specification for UMTS data transmission:
- UMTS: Max. 384 kbps (DL), Max. 384 kbps (UL)

Specification for EDGE data transmission:
- EDGE class 12: Max. 237 kbps (DL), Max. 118 kbps (UL)
- Mobile station class B
- Modulation and coding scheme MCS 1-9

Specification for GPRS data transmission:
- GPRS class 12: Max. 85.6 kbps (DL), Max. 42.8 kbps (UL)
- Mobile station class B
- Full PBCCH support
- Coding schemes CS 1-4

Specification for CSD data transmission:
- GSM data rate 14.4 kbps, V.110
- UMTS data rate 57.6 kbps, V.120
- RLP (Non-transparent mode)

Specification for SMS:
- Point-to-point MO and MT
- SMS cell broadcast
- Text and PDU mode

Specification for voice (Optional) : ⚛
- Triple-rate codec for HR, FR and EFR
- GSM & 3GPP: Adaptive multi-rate AMR
- DTMF supported

Special features:
- Improved power-saving modes
- NDIS/USB driver for Microsoft® Windows® 2000, Windows® XP, Windows® Vista32/64,Windows® 7
- RIL/NDIS/USB driver for devices based on Microsoft® Windows Mobile™ 5.0 and its Successor
- USB driver for Linux2.4.x, Linux2.6.x
- Customer IMEI as variant
- Firmware update via USB
- PC_SUITE Auto-installation

Interfaces:
- Hirose's U.FL-R-SMT 50 Ω antenna connector
- PCI Express® Mini Card Interface (Revision 1.2)
- Power supply
- USB 2.0 high speed
- UICC/SIM card interface 3 V, 1.8 V
- Flying Mode
- Network status
- Audio: 1 x analog (Optional) ⚛
- PCM (Optional) ⚛
- UART ⚛
- GPIOs ⚛

  * Only suitable for U6300 and U6300V
  ** Only suitable for U6300S
  ⚛ Only suitable for U6300V
  † Optional