



# GTM382

- PCI Express MiniCard module with HSDPA and HSUPA support
- Easy to integrate WAN module
- High speed: up to 7.2 Mbps downlink and 2 Mbps uplink (5.76 Mbps upgradeable)
- Multimode HSUPA, HSDPA, UMTS, EDGE, GPRS and GSM
- Extended Feature set: GPS and Voice
- Flexible driver design for easy software integration
- Wide range of certifications and infrastructure testing



## About GTM382 (Model: MO 0401, MO 0402, MO 0407)

The GTM382 is the fourth generation of PCI Express MiniCard module designed by Option to be compatible with mobile operator infrastructure equipment capable of supporting HSDPA data rates of up to 7.2 Mbps in downlink as well as HSUPA data rates of up to 2 Mbps in uplink (FW upgradeable to 5,76 Mbps). The GTM382 is the right solution for embedding HSUPA, HSDPA, 3G and EDGE connectivity technology into laptops and PDA devices.

The higher uplink speed enables applications with high uplink bandwidth requirements like video surveillance and file uploads. The GTM382 includes type 3 Advanced Receiver Technology (ART) bringing the benefit of Receive Diversity and Receive Equalization combined. Both are essential for maximizing the benefit of HSDPA 7.2. Backward compatibility ensures HSDPA downlink connections at lower data rates of 3.6 Mbps and 1.8 Mbps and UMTS uplink connection of 384 Kbps.

## Features

- Global connectivity with triple-band 3G and quad-band 2G
- Multimode HSUPA / HSDPA / UMTS / EDGE / GPRS / GSM module
- A-GPS / S-GPS Positioning
- CS Voice support
- Multimedia features of Qualcomm® baseband chip
- Type 3 Advanced Receiver Technology allowing Receiver Diversity and Equalization at the same time
- High-speed data with HSPA (HSDPA / HSUPA) (up to 7.2 Mbps downlink and 2 Mbps uplink, upgradeable to 5,76 Mbps) and UMTS and backward compatible with EDGE / GPRS / GSM data connectivity (up to 247 Kbps)
- Transparent hand-over between UMTS and GSM / EDGE networks
- Low power dissipation for easy embedding into devices
- Benefits from large Option experience in PC data cards
- Easy integration made possible thanks to:
  - Testing on infrastructures and networks worldwide
  - Flexible driver design providing both NDIS and modem modes for easy integration into dashboard applications
  - Future proofing through Flash Memory technology
  - Connectors for external antennas

# GTM382

## Specifications

- HSUPA / HSDPA / UMTS
  - . Multi-bands variants (bands with Rx diversity are underlined)
    - › GTM382W (MO 0402): 850 / 1900 / 2100 MHz
    - › GTM382E (MO 0401): 900 / 2100 MHz
    - › GTM382<sub>AWS</sub> (MO 0407): 850 / 1900 / 2100 / AWS MHz
  - . Power Class 3 (+24 dBm)
  - . HSUPA mode: 2 Mbps: category 5,  
(upgradeable to 5.76Mbps: Category 6)
  - . HSDPA modes:
    - › HSDPA 1.8: Categories 1-4, 11 and 12
    - › HSDPA 3.6: Categories 5 and 6
    - › HSDPA 7.2: Category 7 and 8
  - . Equalization and Rx Diversity at the same time
  - . UMTS: 384 Kbps operation in downlink, 384 Kbps in uplink
  - . Support UL and DL Compressed Modes
  - . Circuit-switched data: 64, 14.4 and 9.6 Kbps
- EDGE
  - . 850/900/1800/1900 MHz
  - . GSM Power Class 4 (2W) for 850/900 bands, GSM
  - . Power Class 1 (1W) for 1800/1900 bands
  - . EDGE class E2 (+27 dBm in 850/900 bands, +26 dBm in 1800/1900 bands)
  - . GPRS/EDGE Multislot Class 12 (4 slots Rx, 4 slots Tx)
  - . GPRS/EDGE Class B Type 1 MT
  - . GPRS CS1-CS4; EDGE MCS1-MCS9
  - . Circuit-switched data: 14.4 and 9.6 Kbps

## Assisted/Stand-alone GPS

- A-GPS and S-GPS modes, as described below:
  - . MS-based, MO or MT
  - . MS-assisted, MO or MT
  - . Stand-alone

## Voice features

- Circuit-switched voice calls over GSM/WCDMA air interfaces, MO and MT
- Controlled through AT commands
- Bi-directional PCM interface for audio streams (8-bits u-Law A-Law, 16-bits linear)
- Voice codecs: GSM/WCDMA AMR, FR, EFR, HR
- Echo Cancellation, Noise Suppression, TTY

- Tone detection/generation
- Emergency call support
- CLI Service, Alternate Line Service
- Fixed number dialling
- Supplementary services
- Phonebook
- SMS Management

## Terminal Equipment Interfaces

- USB 2.0
- AT interface with standard modem emulation
- NDIS and Modem interface drivers
  - . NDIS for OS compliance and future proofing (Vista)
  - . Modem interface to allow 3rd party application support
- EAP-SIM/EAP-AKA support
- Operating Systems supported:
  - . Windows™ 2000 SP4/XP Home/XP Professional/Vista Tablet XP Pro/Mac OS X
- PCM voice support on PCIE minicard interface

## Power Requirements

- Vcc 3.3V +/- 9%

## Hardware specifications

- Operating Temperature: -10 to +55°C
- Extended Operating Temperature: -25 to +75°C
- Storage Temperature: -40 to +85°C
- Humidity: 5 to 95% non-condensing

## Approvals & Certifications

- All applicable regulatory approvals, Operator and Infrastructure IOT
- Microsoft certified drivers
- R&TTE and FCC
- GCF
- PTCRB for GTM382<sub>AWS</sub> only
- RoHS Compliant



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